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The following material resulting from the investigation under the above numbers is enclosed.

Issue

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	X1		Index Page(s)	
2018/02/12	X1	A210	Cert of Compliance	
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Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

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Product Type	Model/Type Reference	Report Reference #	Status
Digital Video Recorder	SVR-430	E158873-A2-UL	
Video Presenter	UF-80, UF-80DX, UF-80ST	E158873-A4-UL	
Video Presenter	SDP-900DXAN, SDP-950DXAN, SDP-950STAN	E158873-A6-UL	
Video Presenter	SDP-850, SDP-850DX	E158873-A9-UL	
Video Presenter	SDP-6500DXA	E158873-A12-UL	
Video Presenter	UF-130DX	E158873-A14-UL	
Video Presenter	UF-130ST	E158873-A15-UL	
Network Video Recorder	SNR-6400, SNR-3200, SRN-3250, SRN-6450	E158873-A16-UL	
Video Presenter	SDP-860	E158873-A18-UL	
Digital Video Recorder.	SVR-1670	E158873-A19-UL	
UTP Power Supply Unit	SPU-400	E158873-A20-UL	Withdrawn
Digital Video Recorder.	SRD-1630D, SRD-1630, SRD-1610D, SRD-1610, SRD-830D, SRD-830, SRD-1670D, SRD-1670DC, SRD-1670, SRD-1671, SRD-870D, SRD-870DC, SRD-870, SRD-871, SRD-1650D, SRD-1650DC, SRD-1650, SRD-1651, SRD-850D, SRD-850DC, SRD-850, SRD-851, SRD-1630DCP, SRD-1630DCN, SRD-1610DCP, SRD-1610DCN, SRD-830DCP, SRD-830DCN, SRD-#####\$&@	E158873-A24-UL	
Digital Presenter	SDP-760	E158873-A44-UL	
Network Camera	SNP-5300H*, SNP-6201H* (* is N or P: N = NTSC, P=PAL)	E158873-A45-UL	
Network Camera	SND-7011*, SND-5011*, SND-5061*, SND-7061*, SNV-5010*, SNZ-5200* (* is N or P: N = NTSC, P=PAL)	E158873-A46-UL	
Network Camera	SNP-5300*, SNP-6201* (* is N or P: N = NTSC, P=PAL)	E158873-A47-UL	
Digital Color Camera	SCP-3371H*, SCP-2371H*, SCP-2271H*, SCP-2373H*, SCP-2273H* (* is N or P: N = NTSC, P=PAL)	E158873-A48-UL	
Digital Color Camera	SCP-3371*, SCP-2371*, SCP-2271*, SCP-2373*, SCP-2273* (* is N or P: N = NTSC, P=PAL)	E158873-A49-UL	
Network Camera	SND-7082*, SND-7082F*, SNV-7082* (* is N or P: N = NTSC, P=PAL)	E158873-A50-UL	
Network Camera	SNB-7001*, SNB-5001*, SNB-3002* (* is N or P: N = NTSC, P=PAL)	E158873-A51-UL	
Network Camera	SNO-7082R* (* is N or P: N = NTSC, P=PAL)	E158873-A52-UL	
Network Camera	SNB-7002* (* is N or P: N = NTSC, P=PAL)	E158873-A53-UL	
DIGITAL COLOR CAMERA	SCV-2010F*, SCD-1020R*, SCD-2080R*, SCD-2020R*, SCD-2010*, SCD-2010B*, SCD-2010F*, SCB-3020*, SCB-3021*, SCB-2010*, SCO-1020R* (* is N or P: N=NTSC, P=PAL)	E158873-A54-UL	
Network Camera	SNB-6004*, SNB-6003*, SNB-5004*, SNB-5003*, SNB-7004*, SNB-6005* (* is N or P: N = NTSC, P=PAL)	E158873-A55-UL	

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Network Camera	SND-6084*, SND-6083*, SND-5084*, SND-5083*, SND-7084* (* is N or P: N = NTSC, P=PAL)	E158873-A56-UL	
DIGITAL COLOR CAMERA	SCD-2022*, SCD-2022R*, SCD-2042R* (* is N or P: N = NTSC, P=PAL)	E158873-A58-UL	
Digital Color Camera	SCB-2004*, SCB-2005* (* is N or P: N = NTSC, P=PAL);	E158873-A59-UL	
Digital Color Camera	SCD-2082*, SCV-2082R*, SCV-3083*, SCD-3083* (* is N or P: N = NTSC, P=PAL)	E158873-A60-UL	
Network Camera	SND-6084R*, SND-7084R*, SND-5084R* (* is N or P: N = NTSC, P=PAL)	E158873-A61-UL	
NETWORK CAMERA	SNO-6084R*. SNO-7084R* (* is N or P: N = NTSC, P=PAL)	E158873-A62-UL	
Network Camera	SNV-6084R*, SNV-6084*, SNV-5084*, SNV-7084*, SNV-7084R*, SNV-5084R*, SNV-6084T* (* is N or P: N = NTSC, P=PAL)	E158873-A63-UL	
Digital Color Camera	SCO-2081R* (* is N or P: N = NTSC, P=PAL)	E158873-A64-UL	
DIGITAL COLOR CAMERA	SCB-2004*D, SCB-2005*D (* is N or P: N = NTSC, P=PAL)	E158873-A65-UL	
DIGITAL VIDEO RECORDER	SRD-1673D*, SRD-1654D*, SRD-854D*, SRD-852D*, SRD-1673*, SRD-1653*, SRD-873*, SRD-1640*, SRD-840* (* is N or P, N=NTSC / P=PAL)	E158873-A66-UL	
Network Camera	SNP-6200RH*, SCP-2370RH* (* is N or P: N=NTSC,P=PAL)	E158873-A67-UL	
Network Camera	SNV-6012M* (* is N or P: N = NTSC, P=PAL)	E158873-A68-UL	
Network Camera	SNF-7010*, SNF-7010V*, SNF-7010VM* (* is N or P: N = NTSC, P=PAL)	E158873-A69-UL	
Network Camera	SNO-6011R* (* is N or P: N = NTSC, P=PAL)	E158873-A72-UL	
Network Camera	SND-6011R* (* is N or P: N = NTSC, P=PAL)	E158873-A73-UL	
Digital Video Recorder	SRD-1680D*, SRD-880D* (* is N:NTSC / P:PAL)	E158873-A74-UL	
DIGITAL COLOR CAMERA	SCZ-2373*, SCZ-2273* (* is N or P: N = NTSC, P=PAL)	E158873-A75-UL	
NETWORK CAMERA	SCO-6081R* (* is N or P: N = NTSC, P=PAL)	E158873-A76-UL	
DIGITAL COLOR CAMERA	SCV-6081R* and SCD-6081R* (* is N or P: N = NTSC, P=PAL)	E158873-A77-UL	
NETWORK VIDEO RECORDER	SRN-4000	E158873-A78-UL	
DIGITAL COLOR CAMERA	SCD-6021* (* is N or P: N = NTSC, P=PAL)	E158873-A81-UL	
NETWORK CAMERA	SNV-6013* (* is N or P: N = NTSC, P=PAL)	E158873-A83-UL	
NETWORK CAMERA	SNB-6010*, SNB-6010A*, SNB-6011*, SNB-6010B*, SNB-6011B* (* is N or P: N = NTSC, P=PAL)	E158873-A85-UL	
NETWORK CAMERA	SNP-6320H*, SNP-5430H* (* is N or P: N = NTSC, P=PAL)	E158873-A86-UL	
NETWORK CAMERA	SNP-6320*, SNP-5430* (* is N or P: N = NTSC, P=PAL)	E158873-A87-UL	
Network Video Recorder	SRN-472S, XRN-810S* (* is N or P: N = NTSC, P=PAL)	E158873-A88-UL	
Digital Video Recorder	SRD-1676D*, SRD-1656D*, SRD-876D* (* is N or P, N=NTSC/ P=PAL)	E158873-A89-UL	
DIGITAL COLOR	SCB-5000* (* is N or P: N = NTSC, P=PAL)	E158873-A90-UL	

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CAMERA			
DIGITAL COLOR CAMERA	SCB-5000*D (* is N or P: N = NTSC, P=PAL)	E158873-A91-UL	
DIGITAL COLOR CAMERA	SCD-5080* (* is N or P: N = NTSC, P=PAL)	E158873-A92-UL	
DIGITAL COLOR CAMERA	SCB-5003*, SCB-5005*, HCB-6001* (* is N or P: N = NTSC, P=PAL)	E158873-A94-UL	
DIGITAL COLOR CAMERA	SCV-5082* (* is N or P: N = NTSC, P=PAL)	E158873-A95-UL	
DIGITAL COLOR CAMERA	SCD-5083*, SCD-5083R*, SCD-5082*, SCD-5083B*, SCD-5081R* (* is N or P: N = NTSC, P=PAL)	E158873-A96-UL	
DIGITAL COLOR CAMERA	SCV-5083* (* is N or P: N = NTSC, P=PAL) SCV-5083R* (* is N or P: N = NTSC, P=PAL) SCV-5081R* (* is N or P: N = NTSC, P=PAL)	E158873-A97-UL	
NETWORK CAMERA	SNF-8010VM*, SNF-8010* (* is N or P: N = NTSC, P=PAL)	E158873-A98-UL	
DIGITAL COLOR CAMERA	SCD-5030*, SCD-5020* (* is N or P: N = NTSC, P=PAL)	E158873-A99-UL	
NETWORK CAMERA	SNO-5084R* (* is N or P: N = NTSC, P=PAL)	E158873-A100-UL	
DIGITAL COLOR CAMERA	SCO-5083R*, SCO-5081R* (* is N or P: N = NTSC, P=PAL)	E158873-A101-UL	
NETWORK CAMERA	SNP-6321*, SNP-L6233* (* is N or P: N = NTSC, P=PAL)	E158873-A102-UL	
NETWORK CAMERA	SNP-6321H*, SNP-L6233H* (* is N or P: N = NTSC, P=PAL)	E158873-A103-UL	
DIGITAL COLOR CAMERA	SCV-5085* (* is N or P: N = NTSC, P=PAL)	E158873-A104-UL	
NETWORK CAMERA	SNB-8000* (* is N or P: N = NTSC, P=PAL)	E158873-A105-UL	
NETWORK CAMERA	SNV-8080* (* is N or P: N = NTSC, P=PAL)	E158873-A106-UL	
NETWORK CAMERA	SNZ-6320	E158873-A107-UL	
NETWORK CAMERA	SNP-6320RH*, SNP-L6233RH* (* is N or P: N=NTSC,P=PAL)	E158873-A108-UL	
NETWORK CAMERA	SNP-5321H*, SNP-L5233H* (* is N or P: N = NTSC, P=PAL)	E158873-A109-UL	
NETWORK CAMERA	SNP-5321*, SNP-L5233* (* N: NTSC / P:PAL)	E158873-A110-UL	
NETWORK CAMERA	SND-L6013R*, SND-L6013*, SND-L6012*, SND-L5013* (* is N or P: N:NTSC/ P:PAL)	E158873-A111-UL	
NETWORK CAMERA	SNO-L6083R*, SNO-L5083R* (* is N or P: N = NTSC, P=PAL)	E158873-A113-UL	
Network Video Recorder	SRN-1673S*(* is N or P)	E158873-A115-UL	
NETWORK CAMERA	SNO-L6013R* (* is N or P: N = NTSC, P=PAL)	E158873-A118-UL	
NETWORK CAMERA	SND-L6083R*, SND-L5083R* (* is N or P: N = NTSC, P=PAL)	E158873-A119-UL	
Network Video Recorder	SRN-873S* (* is N or P: N = NTSC, P=PAL)	E158873-A120-UL	
NETWORK CAMERA	SNV-L6083R*, SNV-L5083R* (* is N or P: N = NTSC, P=PAL)	E158873-A121-UL	

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NETWORK CAMERA	SNB-9000* (* is N or P: N = NTSC, P=PAL)	E158873-A122-UL	
Optical PTZ Accessary	SBP-301HF, SBP-302HF	E158873-A125-UL	
Optical PTZ Accessary	SBP-300HF	E158873-A126-UL	
NETWORK CAMERA	SNV-8081R* (* is N or P: N = NTSC, P=PAL)	E158873-A127-UL	
NETWORK CAMERA	SNO-8081R* (* is N or P: N = NTSC, P=PAL)	E158873-A128-UL	
NETWORK CAMERA	SNV-6085R* (* is N or P: N = NTSC, P=PAL) SNV-6085* (* is N or P: N = NTSC, P=PAL)	E158873-A129-UL	
DIGITAL COLOR CAMERA	SCB-6003* (* is N or P: N = NTSC, P=PAL)	E158873-A130-UL	
DIGITAL COLOR CAMERA	SCO-6023R* (* is N or P: N = NTSC, P=PAL)	E158873-A132-UL	
DIGITAL COLOR CAMERA	SCV-6083R* (* is N or P: N = NTSC, P=PAL)	E158873-A133-UL	
DIGITAL COLOR CAMERA	SCV-6023R* (* is N or P: N = NTSC, P=PAL)	E158873-A135-UL	
DIGITAL COLOR CAMERA	SCD-6023R*, SCD-6013* (* is N or P: N = NTSC, P=PAL)	E158873-A136-UL	
DIGITAL COLOR CAMERA	SCD-6083R* (* is N or P: N = NTSC, P=PAL)	E158873-A137-UL	
DIGITAL COLOR CAMERA	SCO-6083R* (* is N or P: N = NTSC, P=PAL)	E158873-A138-UL	
NETWORK CAMERA	SNV-L6014RM*, SNV-L6013R* (* is N or P: N = NTSC, P=PAL)	E158873-A139-UL	
DIGITAL COLOR CAMERA	PNO-9080R* (* is N or P: N = NTSC, P=PAL)	E158873-A140-UL	
NETWORK CAMERA	PNV-9080R* (* is N or P: N = NTSC, P=PAL)	E158873-A141-UL	
NETWORK CAMERA	PND-9080R* (* is N or P: N = NTSC, P=PAL)	E158873-A142-UL	
Digital Video Recorder	SRD-1685*, SRD-894*, HRD-842* (* is N or P, N=NTSC/ P=PAL)	E158873-A143-UL	
Digital Video Recorder	SRD-1694*, HRD-1642* (* is N or P, N=NTSC/ P=PAL)	E158873-A144-UL	
Network Video Recorder (NVR)	XRN-2011*, XRN-2010*, XRN-3010*, XRN-1610* (* is N or P: N=NTSC, P=PAL)	E158873-A146-UL	
NETWORK CAMERA	QNO-7030R*, QNO-7020R*, QNO-7010R*, QNO-6030R*, QNO-6020R*, QNO-6010R*, QNO-6070R*, QNO-7080R*, QNO-6071R* (* is N or P: N = NTSC, P=PAL)	E158873-A147-UL	
NETWORK CAMERA	QND-7030R*, QND-7020R*, QND-7010R*, QND-6030R*, QND-6020R*, QND-6010R*, QND-6070R*, QND-7080R* (* is N or P: N = NTSC, P=PAL)	E158873-A148-UL	
NETWORK CAMERA	QNV-7030R*, QNV-7020R*, QNV-7010R*, QNV-6030R*, QNV-6020R*, QNV-6010R*, QNV-6070R*, QNV-7080R* (* is N or P: N = NTSC, P=PAL)	E158873-A149-UL	
Network Video Recorder	XRN-1610S* (* is N or P: N=NTSC, P=PAL)	E158873-A150-UL	
NETWORK	PNF-9010RV*, PNF-9010R*, PNF-9010RVM* (* is	E158873-A151-UL	

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CAMERA	N or P: N = NTSC, P=PAL)		
NETWORK CAMERA	PNM-9020V* (* is N or P: N = NTSC, P=PAL)	E158873-A152-UL	
Network Video Recorder	PRN-4011* (* is N or P: N=NTSC, P=PAL)	E158873-A153-UL	
DIGITAL COLOR CAMERA	HCP-6320*, HCP-6320A*, HCP-6230* (* is N or P: N = NTSC, P=PAL)	E158873-A154-UL	
DIGITAL COLOR CAMERA	HCP-6320H*, HCP-6320HA*, HCP-6230H* (* is N or P: N = NTSC, P=PAL)	E158873-A155-UL	
NETWORK CAMERA	PNP-9200RH*, XNP-6370RH*, XNP-6330RH* (* is N or P: N=NT, P=PAL)	E158873-A156-UL	
NETWORK CAMERA	XNB-8000*, XNB-6000* (* is N or P: N = NTSC, P=PAL)	E158873-A157-UL	
NETWORK CAMERA	XNO-8080R*, XNO-6080R*, XNO-6120R* (* is N or P: N = NTSC, P=PAL)	E158873-A158-UL	
NETWORK CAMERA	XNV-8040R*, XNV-8030R*, XNV-8020R*, XNV-6020*, XNV-6010*, XNV-6020R* (* is N or P: N = NTSC, P=PAL)	E158873-A159-UL	
NETWORK CAMERA	XND-8040R*, XND-8030R*, XND-8020R*, XND-6020*, XND-6010*, XND-6020R* (* is N or P: N = NTSC, P=PAL)	E158873-A160-UL	
NETWORK CAMERA	XNV-8080R* (* is N or P: N = NTSC, P=PAL) XNV-6080R* (* is N or P: N = NTSC, P=PAL) XNV-6080* (* is N or P: N = NTSC, P=PAL) XNV-6120R* (* is N or P: N = NTSC, P=PAL) XNV-6120* (* is N or P: N = NTSC, P=PAL)	E158873-A161-UL	
NETWORK CAMERA	XND-8080RV*, XND-8080R*, XND-6080RV*, XND-6080R*, XND-6080V*, XND-6080* (* is N or P: N = NTSC, P=PAL)	E158873-A162-UL	
AHD Multi Directional Camera	HCM-9020VQ* (* is N or P: N = NTSC, P=PAL)	E158873-A163-UL	
NETWORK CAMERA	XNO-8020R*, XNO-8030R*, XNO-8040R*, XNO-6010R*, XNO-6020R* (* is N or P: N = NTSC, P=PAL)	E158873-A164-UL	
NETWORK CAMERA	XNV-6011* (* is N or P: N = NTSC, P=PAL)	E158873-A165-UL	
DIGITAL COLOR CAMERA	HCD-6080R*, HCD-6070R* (* is N or P: N = NTSC, P=PAL)	E158873-A167-UL	
DIGITAL COLOR CAMERA	HCV-6080R*, HCV-6070R* (* is N or P: N = NTSC, P=PAL)	E158873-A168-UL	
NETWORK CAMERA	XNP-6120H* (* is N or P: N = NTSC, P=PAL)	E158873-A169-UL	
NETWORK CAMERA	XND-8020F*, XND-6011F* (* is N or P: N = NTSC, P=PAL)	E158873-A170-UL	
NETWORK CAMERA	PNM-9080VQ* (* is N or P: N = NTSC, P = PAL)	E158873-A172-UL	
Network Storage	SRB-160S	E158873-A173-UL	
NETWORK CAMERA	TNB-6030* (* is N or P: N = NTSC, P = PAL)	E158873-A174-UL	
NETWORK CAMERA	PNM-9081VQ* (* is N or P: N = NTSC, P = PAL)	E158873-A176-UL	
NETWORK CAMERA	XNO-6085R* (* is N or P: N = NTSC, P=PAL)	E158873-A177-UL	
NETWORK CAMERA	XNB-6005* (* is N or P: N = NTSC, P=PAL)	E158873-A178-UL	

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NETWORK VIDEO RECORDER	SNR-D5401N	E158873-A179-UL	
NETWORK CAMERA	XND-6085*, XND-6085V* (* is N or P: N = NTSC, P=PAL)	E158873-A180-UL	
NETWORK CAMERA	XNV-6085* (* is N or P: N = NTSC, P=PAL)	E158873-A181-UL	
NETWORK CAMERA	XNP-6040H* (* is N or P: N = NTSC, P=PAL)	E158873-A182-UL	
NETWORK VIDEO DECODER	SPD-150* (* is N or P: N = NTSC, P=PAL)	E158873-A184-UL	
DIGITAL COLOR CAMERA	HCB-6000*, HCB-7000* (* is N or P: N = NTSC, P=PAL)	E158873-A185-UL	
DIGITAL COLOR CAMERA	HCZ-6320* (* is N or P: N = NTSC, P=PAL)	E158873-A186-UL	
NETWORK CAMERA	XNF-8010RVM*, XNF-8010RV*, XNF-8010R* (* is N or P: N = NTSC, P=PAL)	E158873-A187-UL	
DIGITAL COLOR CAMERA	HCO-6070R*, HCO-6080R* (* is N or P: N = NTSC, P=PAL)	E158873-A188-UL	
NETWORK CAMERA	XNB-6001* (* is N or P: N = NTSC, P=PAL)	E158873-A189-UL	
DIGITAL COLOR CAMERA	HCO-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A190-UL	
LENS MODULE	SLA-T2480*, SLA-T2480V*, SLA-T4680*, SLA-T4680V* (* is N or P: N = NTSC, P=PAL)	E158873-A191-UL	
DIGITAL COLOR CAMERA	HCD-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A192-UL	
DIGITAL COLOR CAMERA	HCV-7070R* (* is N or P: N = NTSC, P=PAL)	E158873-A193-UL	
NETWORK VIDEO RECORDER	TRM-1610S	E158873-A194-UL	
LENS MODULE	SLA-T1080F* (* is N or P: N = NTSC, P=PAL)	E158873-A195-UL	
NETWORK SWITCH	SPN-10080P, SPN-10080PM	E158873-A196-UL	
ANALOG CAMERA	HCV-7010R*, HCV-7020R*, HCV-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A197-UL	
DIGITAL COLOR CAMERA	HCD-7010R*, HCD-7020R*, HCD-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A198-UL	
DIGITAL COLOR CAMERA	HCO-7010R*, HCO-7020R*, HCO-7030R* (* is N or P: N = NTSC, P=PAL)	E158873-A199-UL	
NETWORK CAMERA	XNP-6320, QNP-6230	E158873-A200-UL	
NETWORK CAMERA	XNP-6320H, XNP-6320HS, QNP-6230H	E158873-A201-UL	
NETWORK CAMERA	XNV-6013M	E158873-A205-UL	
NETWORK CAMERA	XNV-6012M, XNV-6012	E158873-A206-UL	
NETWORK CAMERA	XNV-6022R, XNV-6022RM	E158873-A207-UL	
NETWORK CAMERA	LNO-6070R	E158873-A208-UL	
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NETWORK CAMERA	LND-6070R	E158873-A213-UL	
NETWORK CAMERA	LNV-6030R, LNV-6020R, LNV-6010R	E158873-A214-UL	

CERTIFICATE OF COMPLIANCE

Certificate Number 20180213-E158873
Report Reference E158873-A210-UL
Issue Date 2018-FEBRUARY-13

Issued to: HANWHA TECHWIN CO LTD
1204 CHANGWON-DAERO SEONGSAN-GU
CHANGWON-SI GYEONGSANGNAM-DO 51542
KOREA

This is to certify that representative samples of (Information Technology Equipment Including Electrical Business Equipment)
NETWORK CAMERA
Model: LNV-6070R


Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: UL 60950-1, (Information Technology Equipment - Safety - Part 1: General Requirements), CAN/CSA C22.2 No. 60950-1-07, (Information Technology Equipment - Safety - Part 1: General Requirements)

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Listing
CCN:	NWQG, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment)
Product:	NETWORK CAMERA
Model:	LNV-6070R
Rating:	PoE (37 Vdc - 57 Vdc), 0.18 A
Applicant Name and Address:	HANWHA TECHWIN CO LTD 1204 CHANGWON-DAERO SEONGSAN-GU CHANGWON-SI GYEONGSANGNAM-DO 51542 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

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Prepared by: SeungTae Kim

Reviewed by: ManSoo Huh

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

- A. Authorization - The Authorization page may include additional Factory Identification Code markings.
- B. Generic Inspection Instructions -
 - i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
 - ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
 - iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

NETWORK CAMERA for indoor use.

Model Differences

N/A

Technical Considerations

- Equipment mobility : stationary
- Connection to the mains : No direct connection
- Operating condition : continuous
- Access location : operator accessible
- Over voltage category (OVC) : OVC I
- Mains supply tolerance (%) or absolute mains supply values : No direct connection
- Tested for IT power systems : No
- IT testing, phase-phase voltage (V) : N/A
- Class of equipment : Class III (supplied by SELV)
- Considered current rating of protective device as part of the building installation (A) : N/A
- Pollution degree (PD) : N/A
- IP protection class : IP X0
- Altitude of operation (m) : Less than 2 000
- Altitude of test laboratory (m) : Less than 2 000
- Mass of equipment (kg) : 0.514
- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of: 55 °C
- The class of laser product is: Class 1 (I)
- The product was investigated to the following additional standards: IEC 62471:2006(First Edition)
- The following are available from the Applicant upon request: Installation (Safety) Instructions / Manual

Additional Information

NEW (4788307309)

Continuous operation with IR LED on.

Additional Standards

The product fulfills the requirements of: N/A

Markings and instructions

Clause Title	Marking or Instruction Details
Power rating - Ratings	Ratings (voltage, frequency/dc, current)
Power rating - Company identification	Listee's or Recognized company's name, Trade Name, Trademark or File Number
Power rating - Model	Model Number
Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."
Installation Manual - Network Environment	The following statement or similar shall be included in the User Manual: "Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building."
Installation Manual - UL Listed PoE Source	The following statement or similar shall be included in the User Manual: "The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1."
Installation Manual - Selection of Power Supply	The Users Manual should provide simple instructions for the correct selection of a suitable Listed Class 2 Power Units, including a statement such as "This product is intended to be supplied by Power Unit marked "Class 2" or "LPS" and rated PoE(37 V - 57 V), 0.18 A."

Special Instructions to UL Representative

N/A

Production-Line Testing Requirements

Electric Strength Test Special Constructions - Refer to Generic Inspection Instructions, Part AC for further information.

Model	Component	Removable Parts	Test probe location	V rms	V dc	Test Time, s
N/A	-	-	-	-	-	-

Earthing Continuity Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Exemptions - This test is not required for the following models:

All models

Electric Strength Test Component Exemptions - The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test:

N/A

Sample and Test Specifics for Follow-Up Tests at UL

Model	Component	Material	Test	Sample(s)	Test Specifics
N/A	-	-	-	-	-

1.5.1	TABLE: list of critical components					Pass
Object/part or Description	Manufacturer/ trademark	type/model	technical data	Product Category CCN(s)	Required Marks of Conformity	Supplement ID
Transparent Dome Cover Enclosure (Plastic)	SABIC INNOVATIVE PLASTICS B V	HF1130R(f2)	Min. 2.0 mm thick, rated V-2, 130 deg. C. No openings.	QMFZ2	UL (E45329)	
External Side Enclosure (Plastic)	COVESTRO DEUTSCHLAND AG [PC RESINS]	6165 X + (z)(f1)	Min. 1.6 mm thick, rated V-0, 125 deg. C. No openings.	QMFZ2/8	UL (E41613)	
External Bottom Enclosure (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.0 mm thickness.	-	-	
Camera Cover parts (Plastic)	LOTTE ADVANCED MATERIALS CO LTD	NH-1035(+)	Min. 1.5 mm thick, rated V-0, 80 deg. C. No openings.	QMFZ2	UL (E115797)	
Transformer(T1)	SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO.,LTD	PDT2431SR	130 deg.C, See enclosure for more detail.	-	-	7-01
Opto-coupler (LS1)	LITE-ON TECHNOLOGY CORP	LTV-816	Isolation Voltage: 5 300. Max. Operation Temperature: 110 deg.C	FPQU2/8	UL (E113898)	
Rechargeable button cell battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium (Coin), Rechargeable, Max. 3.4 Vdc, Max. 300 mA	BBCV2	UL (MH15628)	
Connectors and Receptacles (Secondary circuits)	Interchangeable	Interchangeable	-	ECBT2 or RTRT2	UL	
(Alternate)	Interchangeable	Interchangeable	Copper alloy pins housed in bodies of plastic rated Min. V-2	QMFZ2	UL	
Internal Wiring (Secondary)	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 deg. C V, 80	AVLV2	UL	
LED	CYBRIGHT IR LED	XB-L5BT3BAD-80	VF =Max. 1.8 V IF=Max.100 mA, 15 EA, See enclosure for more detail.	-	-	

Thermal Pad	KOMOTECH CO LTD	GP-1	Min. 0.35 mm thickness, rated V-0, 150 deg. C	QMFZ2	USR (E245303)	
Cable	Interchangeable	Interchangeable	FEP, PTFE, PVC, TFE, neoprene, polyimide or marked VW-1; Min. 30 V, 80 deg. C	AVLV2	UL	
FPWB	Interchangeable	Interchangeable	Min. V-0, 80 deg. C.	QMFZ2 or QMTS2	UL	
PWB	Interchangeable	Interchangeable	Min. V-1, 105 deg. C.	ZPMV2	UL	
Label	Interchangeable	Interchangeable	Min. 70 deg. C if max. surface temperature not specified.	PGDQ2 or PGJ12	UL	

Enclosures

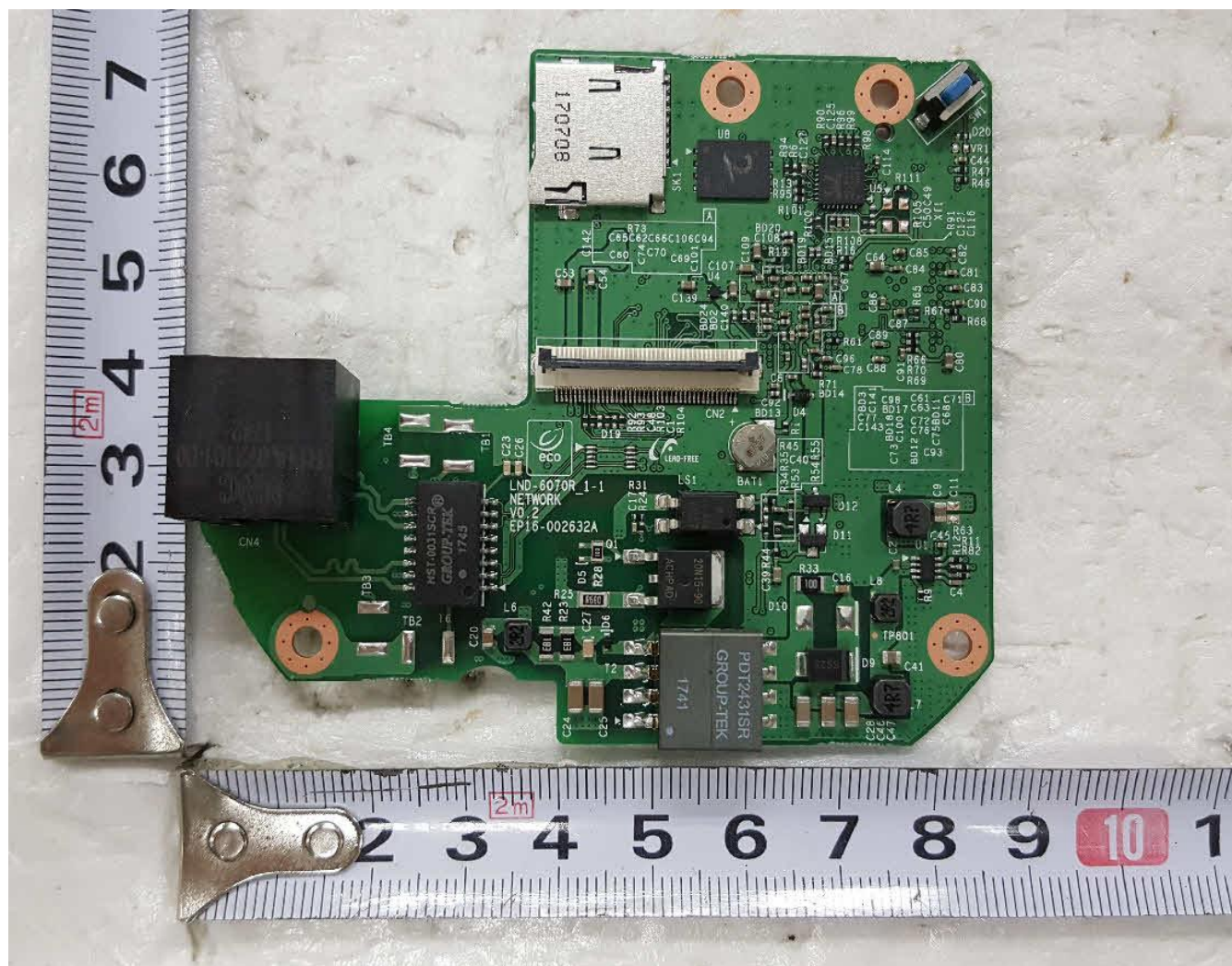
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Photographs	3-01	OverView - 4788307309
Photographs	3-02	OverView 2 - 4788307309
Photographs	3-03	Internal view 1 - 4788307309
Photographs	3-04	Internal view 2 - 4788307309
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Miscellaneous	7-06	IEC 62471, Report - 4788307309
Miscellaneous	7-07	PCB Silk & Layout - 4788307309

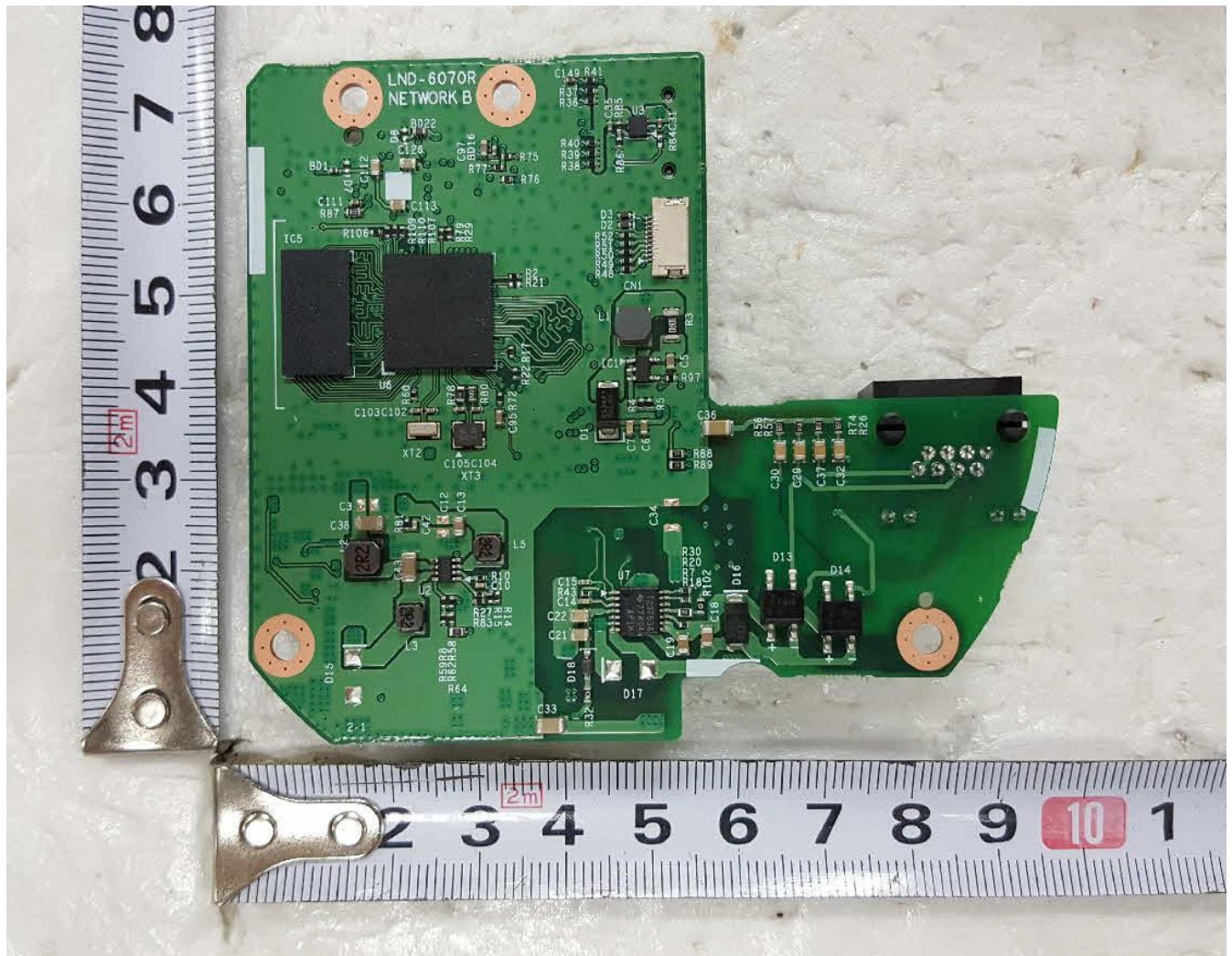






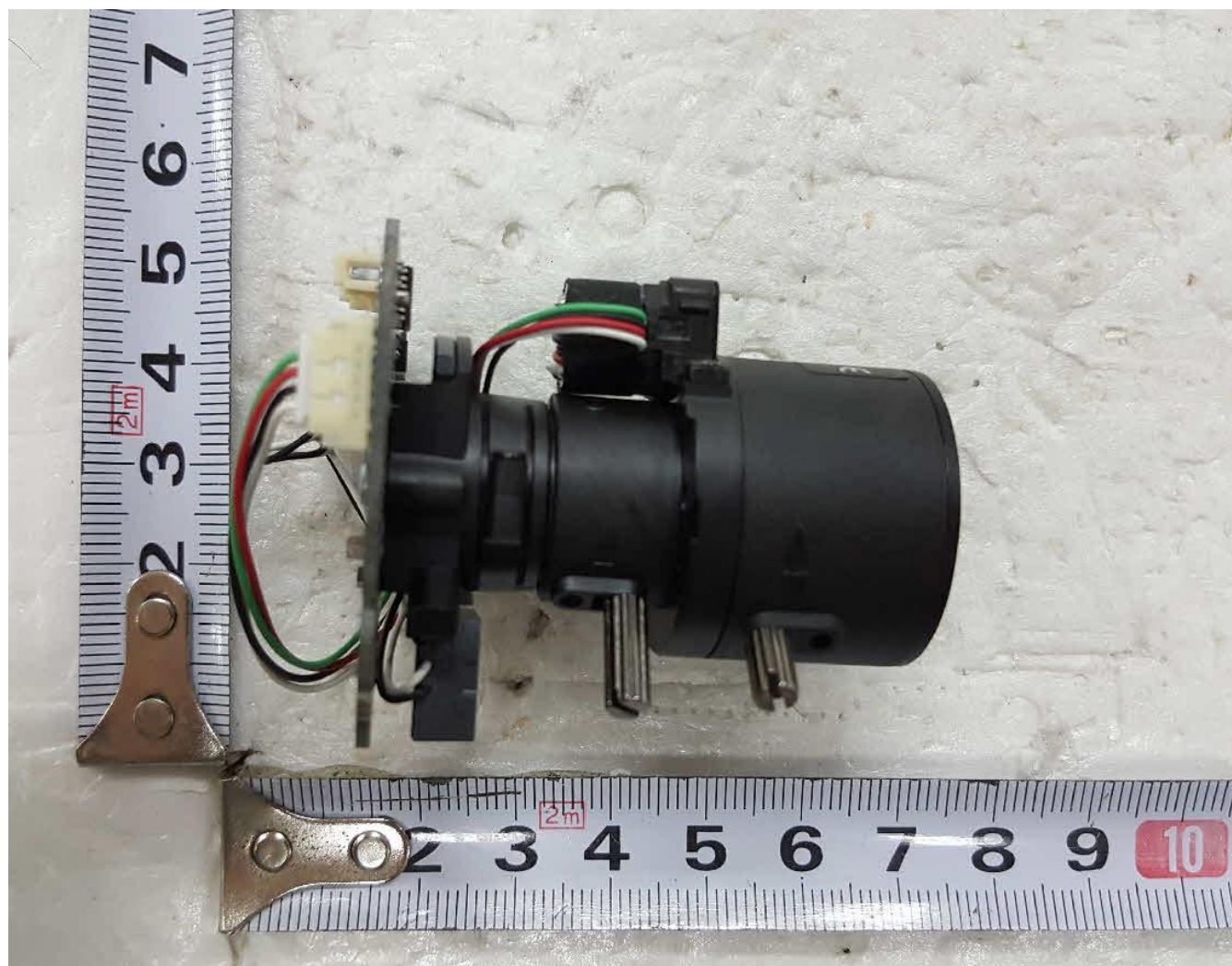




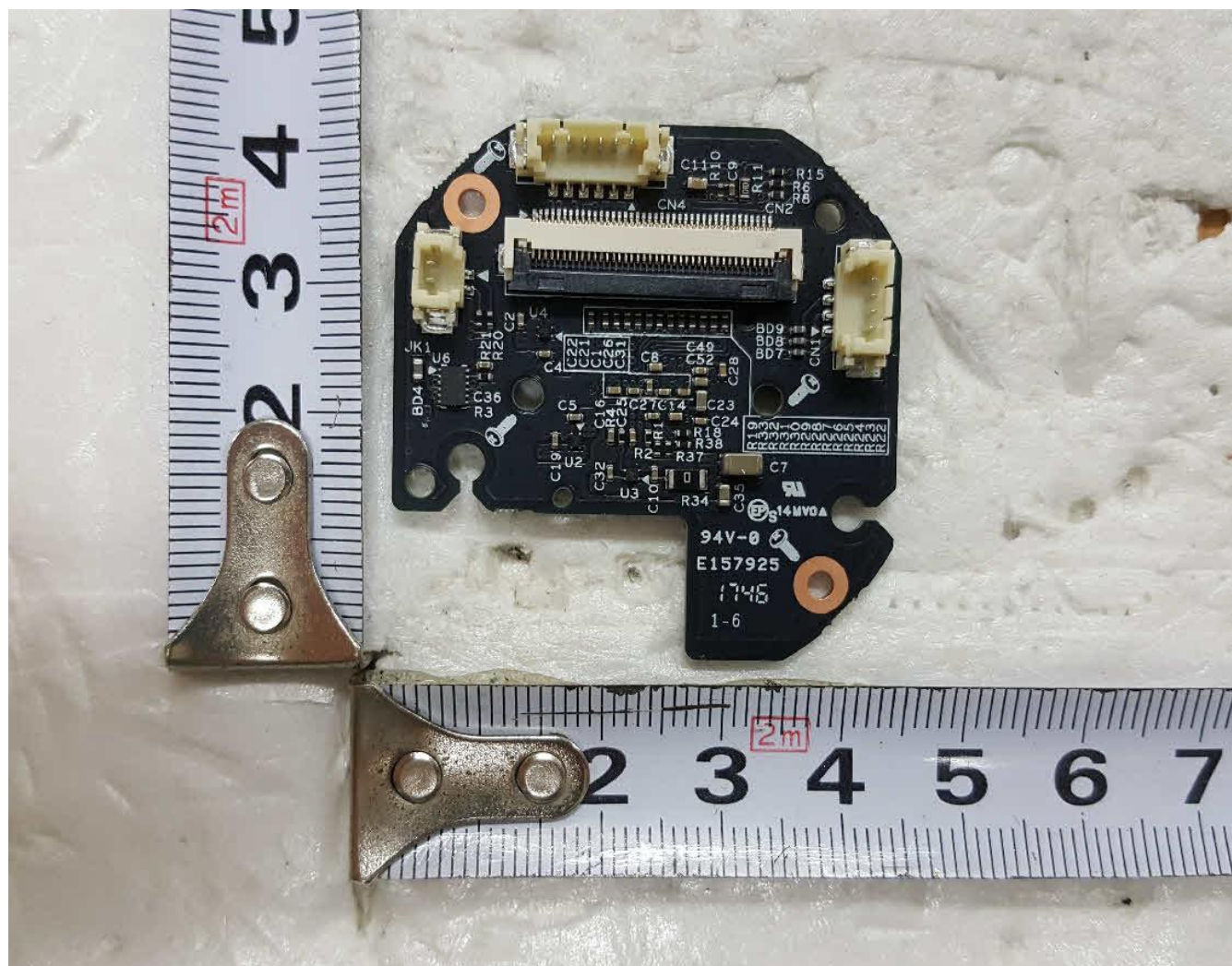


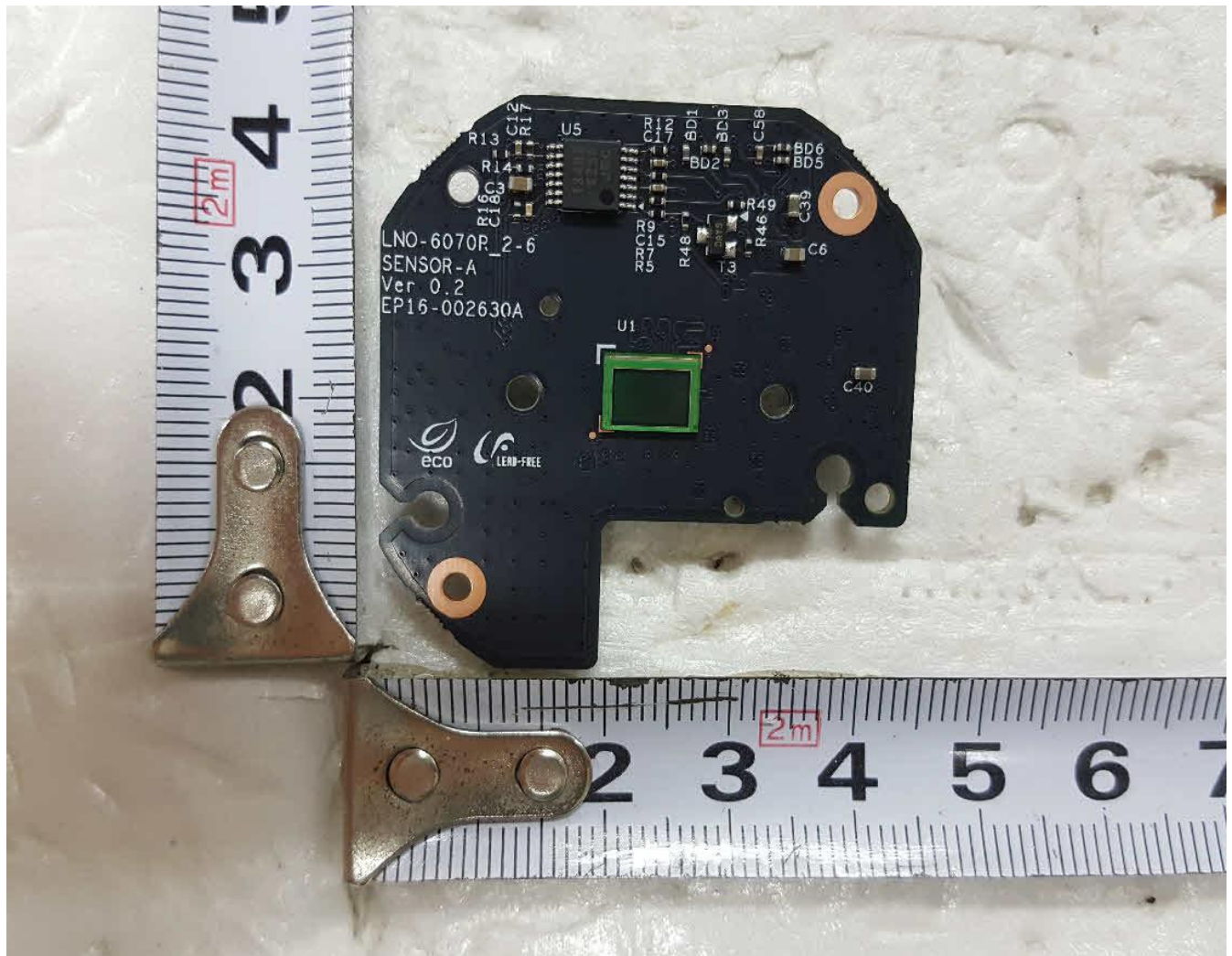












WISeNeT

NETWORK CAMERA

User Manual

LND-6010R/LND-6020R/LND-6030R/LND-6070R
LNO-6010R/LNO-6020R/LNO-6030R/LNO-6070R
LNV-6010R/LNV-6020R/LNV-6030R/LNV-6070R

CE

Network Camera

User Manual

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❖ Design and specifications are subject to change without prior notice.

❖ The initial administrator ID is "admin" and the password should be set when logging in for the first time.

Please change your password every three months to safely protect personal information and to prevent the damage of the information theft.

Please, take note that it's a user's responsibility for the security and any other problems caused by mismanaging a password.

overview

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean the contaminated area on the product surface with a soft, dry cloth or a damp cloth.
(Do not use a detergent or cosmetic products that contain alcohol, solvents or surfactants or oil constituents as they may deform or cause damage to the product.)
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/ accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from PoE, 0.18A.
16. If you use excessive force when installing the product, the camera may be damaged and malfunction. If you forcibly install the product using non-compliant tools, the product may be damaged.
17. Do not install the product in a place where chemical substances or oil mist exists or may be generated. As edible oils such as soybean oil may damage or warp the product, do not install the product in the kitchen or near the kitchen table.
This may cause damage to the product.
18. When installing the product, be careful not to allow the surface of the product to be stained with chemical substance.
Some chemical solvents such as cleaner or adhesives may cause serious damage to the product's surface.
19. If you install/disassemble the product in a manner that has not been recommended, the production functions/ performance may not be guaranteed.
Install the product by referring to "Installation & connection" in the user manual.
20. Installing or using the product in water can cause serious damage to the product.



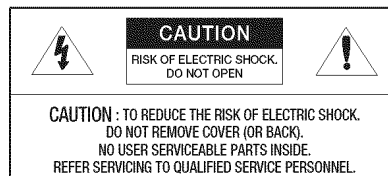
WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECT THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

Apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

To prevent injury, this apparatus must be securely attached to the Wall/ceiling in accordance with the installation instructions.

CAUTION



EXPLANATION OF GRAPHICAL SYMBOLS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

overview

Class I construction

An apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.

Battery

Batteries(battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

Disconnection Device

Disconnect the main plug from the apparatus, if it's defected. And please call a repair man in your location.

When used outside of the U.S., it may be used HAR code with fittings of an approved agency is employed.

CAUTION

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the instructions.

These servicing instructions are for use by qualified service personnel only.

To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Please use the input power with just one camera and other devices must not be connected.

The ITE is to be connected only to PoE networks without routing to the outside plant.

The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802-3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1.

Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.

Please read the following recommended safety precautions carefully.

- Do not place this apparatus on an uneven surface.
- Do not install on a surface where it is exposed to direct sunlight, near heating equipment or heavy cold area.
- Do not place this apparatus near conductive material.
- Do not attempt to service this apparatus yourself.
- Do not place a glass of water on the product.
- Do not install near any magnetic sources.
- Do not block any ventilation openings.
- Do not place heavy items on the product.
- Please wear protective gloves when installing/removing the camera.
The high temperature of the product surface may cause a burn.

User's Manual is a guidance book for how to use the products.

The meaning of the symbols are shown below.

- Reference : In case of providing information for helping of product's usages
- Notice : If there's any possibility to occur any damages for the goods and human caused by not following the instruction

※ Please read this manual for the safety before using of goods and keep it in the safe place.

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overview

PRODUCT FEATURES

- **Dustproof/Waterproof (IP66) (LNO-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)**
The dustproof and waterproof design makes you feel at ease when installing the product outdoors or exposing it to rain.
- **IR mode**
If the IR indicator turns on, the product switches to the IR mode for preventing an object from being too bright, which helps you identify the object in near distance.
- **Supports 2 megapixel resolution videos**
- **Multi-Streaming**
This network camera can display videos in different resolutions and qualities simultaneously using different CODECs.
- **Web Browser-based Monitoring**
Using the Internet web browser to display the image in a local network environment.
- **Alarm**
When an event occurs, related videos are sent to the user's registered e-mail and FTP server or stored on the Micro SD memory card.
- **Tampering Detection**
Detects tampering attempts on video monitoring.
- **Motion Detection**
Detects motion from the camera's video input.
- **ONVIF Compliance**
This product supports ONVIF Profile S&G.
For more information, refer to www.onvif.org.



RECOMMENDED PC SPECIFICATIONS







- CPU : Intel(R) Core(TM) i7 3.4 GHz or higher
 - Supported OS : Windows, Mac OS X
 - **Plug-in free web viewer**
Supported web browsers : Google Chrome, MS Edge, Mozilla Firefox(Window 64bit only), Apple Safari(Mac OS X only)
 - **Plug-in Webviewer**
Supported web browsers : MS Explorer
 - VGA : PCIe 256MB GDDR3 video graphics card or higher
- ※ For detailed version information on the OS and the browser, please refer to the appendix.

RECOMMENDED MICRO SD/SDHC/SDXC MEMORY CARD SPECIFICATIONS

- Recommended capacity : 16GB ~ 32GB (MLC Type)
- For your camera, we recommend you use a memory card from the following manufacturers:
Micro SD/SDHC/SDXC Memory Card : Sandisk, Transcend









WHAT'S INCLUDED (LND-6010R/6020R/6030R/6070R)

Please check if your camera and accessories are all included in the product package.
(As for each sales country, accessories are not the same.)

Appearance	Item Name	Quantity	Description
	Camera	1	
	Instruction book, Installer S/W CD	1	
	Quick Guide (Optional)	1	
	Warranty card (Optional)	1	
	Template	1	Product installation guide
	Tapping Screw	2	Used for installation on the wall or ceiling

WHAT'S INCLUDED (LNO-6010R/6020R/6030R/6070R)











Please check if your camera and accessories are all included in the product package.
(As for each sales country, accessories are not the same.)

Appearance	Item Name	Quantity	Description	Model Name
	Camera	1		LNO-6010R/6020R/ 6030R/6070R
	Instruction book, Installer S/W CD	1		Use for all models
	Quick Guide (Optional)	1		
	Warranty card (Optional)	1		
	Template	1	Product installation guide	
	Tapping Screw	3	Used for installation on the wall or ceiling	
	RJ45 waterproof accessory	1	Used to install in humid places	LNO-6070R
	Card-type moisture absorbent	1	Attached when installed.	

overview

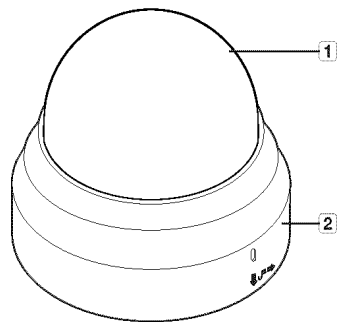
WHAT'S INCLUDED (LNV-6010R/6020R/6030R/6070R)

Please check if your camera and accessories are all included in the product package.
(As for each sales country, accessories are not the same.)

Appearance	Item Name	Quantity	Description	Model Name
	Camera	1		LNV-6010R/6020R/ 6030R/6070R
	Instruction book, Installer SW CD	1		Use for all models
	Quick Guide (Optional)	1		
	Warranty card (Optional)	1		
	Template	1	Product installation guide	
	Star-shaped wrench	1	Used for the assembly and disassembly of dome covers	
	Card-type moisture absorbent	1	Attached when installed.	
	Cable bush	1	Used to connect the LAN cable with a diameter of Ø7~8.5.	
	Tapping Screw	2	Used for installation on the wall or ceiling	LNV-6010R/ 6020R/6030R
		3		LNV-6070R

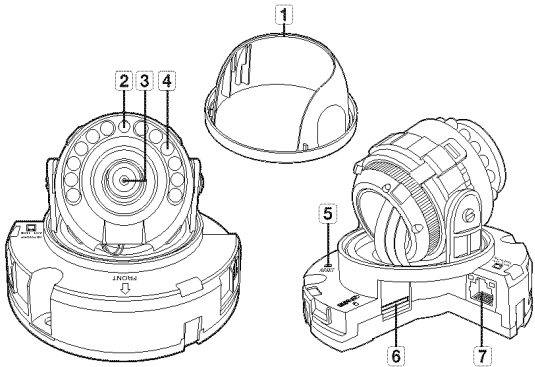
AT A GLANCE (LND-6010R/6020R/6030R)

Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components

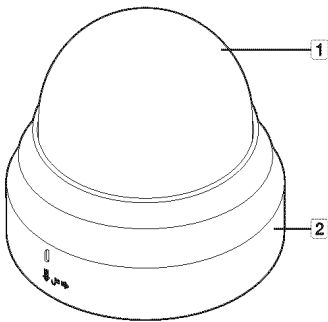


Item	Description
1 Inside cover	Protective cover for the main body.
2 Illumination Sensor	Detects incoming light to control the IR LED.
3 Lens	Lens for the camera.
4 IR LED	These infrared LED's are controlled by the illumination sensor.
5 Reset Button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
6 Micro SD Memory Card Compartment	Compartment for the Micro SD memory card.
7 PoE connector	Supply power through the Ethernet cable and connect to the network.

overview

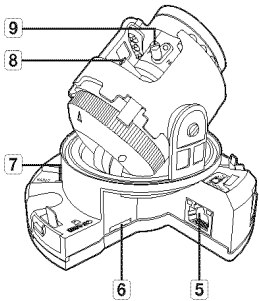
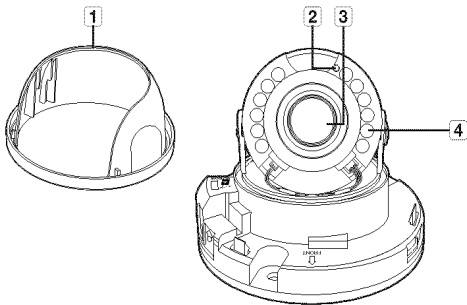
AT A GLANCE (LND-6070R)

Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components

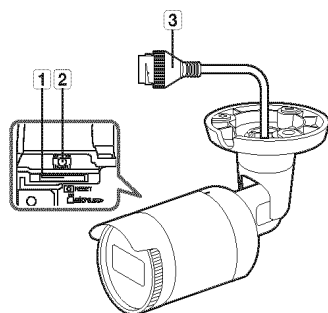


Item	Description
1 Inside cover	Protective cover for the main body.
2 Illumination Sensor	Detects incoming light to control the IR LED.
3 Lens	Lens for the camera.
4 IR LED	These infrared LED's are controlled by the illumination sensor.
5 PoE connector	Supply power through the Ethernet cable and connect to the network.
6 Micro SD Memory Card Compartment	Compartment for the Micro SD memory card.
7 Reset Button	<p>The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system.</p> <p>ⓘ If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.</p>
8 Zoom control lever	T Zoom in (Tele)
	W Zoom out (Wide)
	<p>Release the lever and move it to left or right to zoom the lens in or out.</p> <p>Turn the lever clockwise to fix the adjusted position to prevent it from being moved.</p>
9 Focus control lever	N Focusing on a near object (Near)
	F Focusing on a far object (Far)
	<p>Release the lever and move it to left or right to adjust the lens focus.</p> <p>Turn the lever clockwise to fix the adjusted position to prevent it from being moved.</p>

overview

AT A GLANCE (LNO-6010R/6020R/6030R)

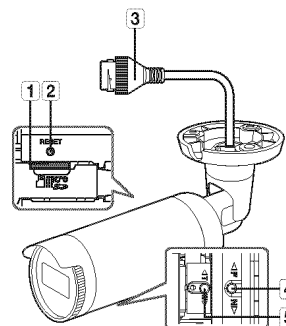
Appearance



Item	Description
1 Micro SD card slot	(Internal space of the product) This is a slot in which you can insert a Micro SD card.
2 Reset button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
3 PoE connector	Supply power through the Ethernet cable and connect to the network.

AT A GLANCE (LNO-6070R)

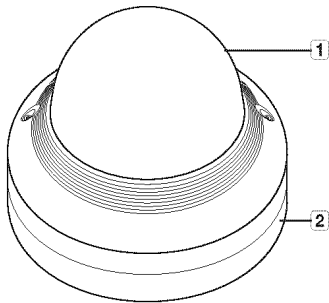
Appearance



Item	Description
1 Micro SD card slot	(Internal space of the product) This is a slot in which you can insert a Micro SD card.
2 Reset button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
3 PoE connector	Supply power through the Ethernet cable and connect to the network.
4 Focus control lever	N Focusing on a near object (Near)
	F Focusing on a far object (Far)
5 Zoom control lever	Release the lever and move it to left or right to adjust the lens focus. Turn the lever clockwise to fix the adjusted position to prevent it from being moved.
	T Zoom in (Tele)
	W Zoom out (Wide)
5 Zoom control lever	Release the lever and move it to left or right to zoom the lens in or out. Turn the lever clockwise to fix the adjusted position to prevent it from being moved.

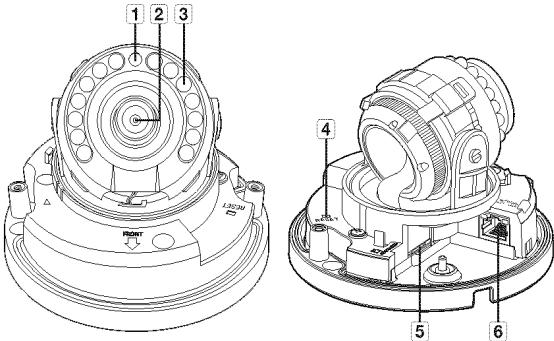
AT A GLANCE (LNV-6010R/6020R/6030R)

Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components

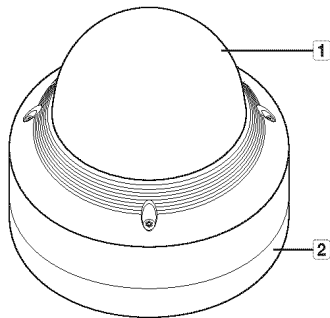


Item	Description
1 Illumination Sensor	Detects incoming light to control the IR LED.
2 Lens	Lens for the camera.
3 IR LED	These infrared LED's are controlled by the illumination sensor.
4 Reset button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system. If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.
5 Micro SD Memory Card Compartment	Compartment for the Micro SD memory card.
6 PoE connector	Supply power through the Ethernet cable and connect to the network.

overview

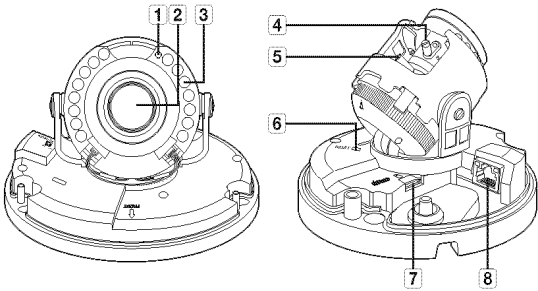
AT A GLANCE (LNV-6070R)


Appearance



Item	Description
1 Dome cover	Case cover used to protect the lens and the main unit.
2 Camera Case	Housing part that covers the camera body.

Components



Item	Description	
1 Illumination Sensor	Detects incoming light to control the IR LED.	
2 Lens	Lens for the camera.	
3 IR LED	These infrared LED's are controlled by the illumination sensor.	
4 Focus control lever	N	Focusing on a near object (Near)
	F	Focusing on a far object (Far)
5 Zoom control lever	T	Zoom in (Tele)
	W	Zoom out (Wide)
6 Reset button	The button restores all camera settings to the factory default. Press and hold for about 5 seconds to reboot the system.  If you reset the camera, the network settings will be adjusted so that DHCP can be enabled. If there is no DHCP server in the network, you must run the IP Installer program to change the basic network settings such as IP address, Subnet mask, Gateway, etc., before you can connect to the network.	
7 Micro SD Memory Card Compartment	Compartment for the Micro SD memory card.	
8 PoE connector	Supply power through the Ethernet cable and connect to the network.	

installation & connection

INSTALLATION (LND-6010R/6020R/6030R/6070R)

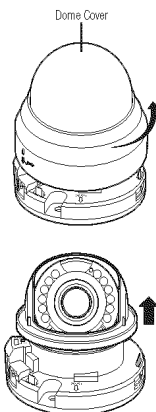
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.
- For the manual variable focal lens camera, features such as focus and zoom should be adjusted before installation. When adjusting these, be sure to prevent foreign substances from becoming attached.

Disassembling

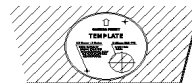
1. Use one hand to hold the camera's bottom part and turn the cover counterclockwise with another hand to separate it.



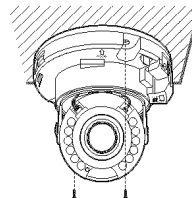
2. Lift up the inner cover to separate it.

Installation

1. Attach the installation template to the desired location, and drill holes by following the template.



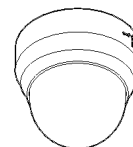
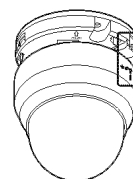
2. Use the provided tapping screws to secure the camera to the holes drilled through the template.
 - Set the < ➔ > mark imprinted on the camera to face the direction of camera monitoring.
3. Connect the camera internal terminal with the corresponding cable.
4. Adjust the lens in a desired direction by referring to the "Adjusting the monitoring direction for the camera" section, (page 20)



- You are recommended not to touch the lens separately, as it is shipped from the factory with the focus correctly adjusted when the inspection is completed. Touching the lens may cause the focus to become distorted or the lens to become dirty. (LND-6010R/6020R/6030R)
- For the manual variable focal lens camera, features such as focus and zoom should be adjusted before installation. When adjusting these, be sure to prevent foreign substances from becoming attached. (LND-6070R)


5. Please connect the inner cover to the main body.
6. While grabbing the bottom side of the camera with your hand, please grab and push its cover with the other hand to align the two arrow signs, as shown in the figure.

- To assemble the dome cover, make the arrows match each other and press the cover firmly. If the dome cover is rotated during assembly or is assembled incorrectly, diffused reflection may occur or the lens section may rotate, which will cause the shooting range to be changed.
- Make sure that the dome cover is correctly connected to the bottom part as shown in the figure. If the strap-fit is not connected correctly, the dome cover may fall, which may cause injury.



installation & connection

INSTALLATION (LNO-6010R/6020R/6030R/6070R)

-  This camera is waterproof and in compliance with the IP66 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

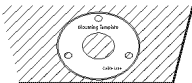
Precautions before installation

Ensure you read out the following instructions before installing the camera:

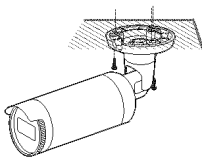
- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.
- For the manual variable focal lens camera, features such as focus and zoom should be adjusted before installation. When adjusting these, be sure to prevent foreign substances from becoming attached.

Installation

1. Attach the installation template to the desired location, and drill holes by following the template.




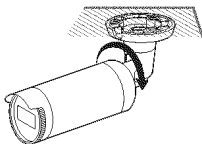
2. Use the provided tapping screws to secure the camera to the holes drilled through the template.



3. Connect the appropriate cables with camera terminals.

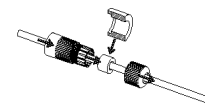
4. Adjust the orientation of the camera using a Phillips screwdriver.

-  When you adjust the camera position using a bracket, please loosen the bracket screw, adjust the camera, and tighten it. If you attempt to adjust it forcibly while the screw is tight, it may result in a scratch or other problems.

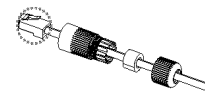


How to connect the RJ45 waterproof cable to a LAN cable

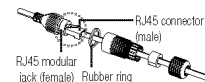
1. Insert it through the arrow direction.




2. Connect the LAN connector (male) to the cable.

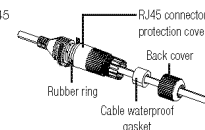


3. Connect the RJ45 modular jack (female) to the RJ45 connector (male).

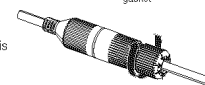



-  Please, keep each of the parts separated.

4. Assemble by rotating the RJ45 modular jack (female) and the RJ45 protection cover clockwise (Follow the arrow).



5. Assemble by rotating RJ45 protection cover and back cover clockwise (Follow the arrow). When the back cover is assembled, the cable waterproof gasket is tightly attached to the cable to make it waterproof.



-  You must fully assemble it to rotate the back cover up to the end of the screw thread of the RJ45 connector.

Outdoor installation

When you install it outside of the building, please waterproof it with waterproof butyl rubber tape (can be purchased in stores) so that water does not leak from the gap of the cable connected to the outside.

1. Connect the PoE cable.

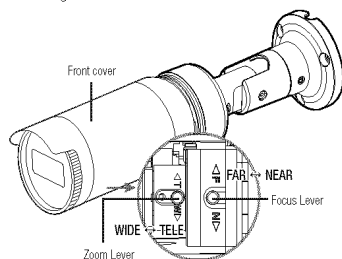
2. Wrap the black cable jacket (Area A) and the cable connection area with waterproof (butyl rubber) tape so that more than half of the butyl rubber tape is overlapped.



- ❗ If the cable jacket is not waterproofed properly, then it can directly cause leakage. Make sure to protect the cable with a dense layer of taping.
- Waterproof butyl tape is made of butyl rubber that can be stretched to twice its normal length.

To adjust the zoom factor or focus (LNO-6070R)

1. Loosen the front cover as shown.
2. Loosen the zoom/focus lever slightly.
3. Position the zoom/focus lever to WIDE (NEAR) or TELE (FAR) as appropriate.
4. Then, tighten the zoom/focus lever to fix the adjusted position.
5. Turn the front cover to tighten it.

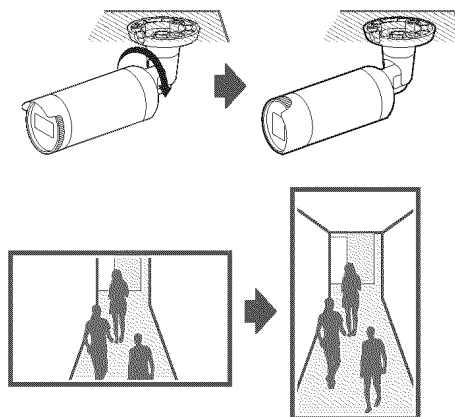


- ❗ To ensure seamless waterproofing, tighten up the front cover by turning it to the end.
- When combining the front cover, please combine the main body and the front cover so that the LOCK indicator is interlocked.
- Use the lever to adjust the zoom factor or focus, and turn the lever clockwise to fix it.
- Before you can adjust the zoom factor/focus of the lens, loosen and remove the front cover.

Hallway view


The camera can be rotated to enlarge the vertical monitoring area to an aspect ratio of 9:16, making it suitable for narrow corridors and passageways.

- ❗ Rotate both the camera body and the front cover.



installation & connection

INSTALLATION (LNV-6010R/6020R/6030R/6070R)

-  This camera is waterproof and in compliance with the IP66 spec, but the jack connected to the external cable is not. You are recommended to install this product below the edge of eaves to prevent the cable from being externally exposed.

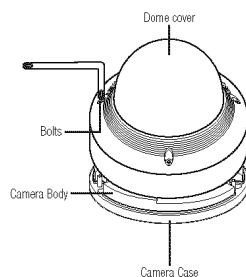
Precautions before installation

Ensure you read out the following instructions before installing the camera:

- It must be installed on the area (ceiling or wall) that can withstand 5 times the weight of the camera including the installation bracket.
- Stuck-in or peeled-off cables can cause damage to the product or a fire.
- For safety purposes, keep anyone else away from the installation site. And put aside personal belongings from the site, just in case.
- For the manual variable focal lens camera, features such as focus and zoom should be adjusted before installation. When adjusting these, be sure to prevent foreign substances from becoming attached.

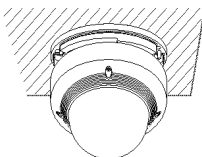
Disassembling

- Remove the dome cover by loosening the fastening bolts by turning them counterclockwise using the supplied star-shaped wrench.




Installation

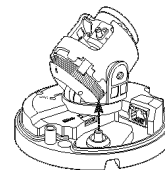
- Attach the installation template to the desired location, and drill holes by following the template.
- Use the provided tapping screws to secure the camera to the holes drilled through the template.
- Connect and arrange the necessary cables lest that they should be damaged or twisted while installing the camera.
- Adjust the lens in a desired direction by referring to the **"Adjusting the monitoring direction for the camera"** section. (page 20)
- Close the dome cover.
 - Tighten the fastening bolts tightly using the star-shaped wrench to prevent water leakage.



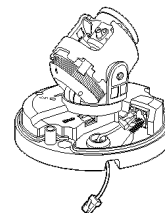
Connecting the LAN cable

- Remove the dome cover and the case.
- Pull out the long projected part of the rubber plug on the bottom and remove it as shown in the figure.

-  Use an appropriate cable bush for the LAN cable to be connected.
- Basic camera : Use the cable with a diameter of Ø5~6.5.
 - Components provided : Use the cable with a diameter of Ø7~8.5.



- Insert the LAN cable through the hole that was formed by removing the protruded part in step 2.
- Remove the sheath with a cable cutter, and align the cables.
- Connect the LAN cable with a LAN connector, and insert it into the LAN tool.
- Connect the finished cable to the Ethernet port.



Attaching to the unbundled adapter

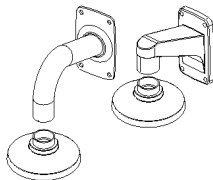
Choose and purchase a necessary one of the following options (unbundled) that is suitable to the installation site or for your convenience.

- Remove the dome cover from the case by referring to the **"Disassembling"** section. (page 18)
- Use the provided machine screw to fix the camera case to the unbundled adapter.
- Connect and arrange the necessary cables lest that they should be damaged or twisted while installing the camera.
- Install the camera body in the reverse order of **"Disassembling"**.
- Adjust the lens in a desired direction by referring to the **"Adjusting the monitoring direction for the camera"** section. (page 20)
- Close the dome cover.
 - Securely fasten the fastening bolt using an L wrench to prevent water from leaking.

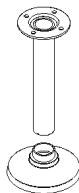
Optional Accessories for Installation

For your easier installation, you can purchase appropriate optional accessories available.

1. WALL MOUNT ADAPTOR(SBP-300WMW1)/
HANGING MOUNT(SBP-122HMMW : LND-6070R, LNV-
6010R/6020R/6030R, SBP-301HMMW2 : LNV-6070R, SBP-
300HMMW7 : LND-6010R/6020R/6030R)
This adaptor is used when installing the dome camera onto a
wall.

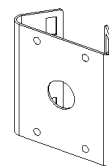


2. CEILING MOUNT ADAPTOR(SBP-300CM)/HANGING MOUNT(SBP-
122HMMW : LND-6070R, LNV-6010R/6020R/6030R, SBP-301HMMW2 :
LNV-6070R, SBP-300HMMW7 : LND-6010R/6020R/6030R)
This adaptor is used when installing the dome camera on a concrete
ceiling.



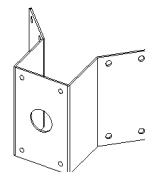
3. POLE MOUNT ADAPTOR(SBP-300PM)

This is an adaptor for WALL MOUNT ADAPTOR (SBP-300WM or SBP-
300WM1) installation on a pole whose diameter is bigger than 60mm.



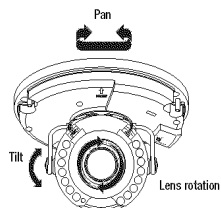
4. CORNER MOUNT ADAPTOR (SBP-300KM)

This is an adaptor for WALL MOUNT ADAPTOR (SBP-300WM or
SBP-300WM1) installation on the corner of wall joint.



installation & connection

Adjusting the monitoring direction for the camera (LND-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)



▪ Adjusting the monitoring direction

You can adjust the camera direction only when the camera is fixed on the ceiling. Where, rotating the camera unit to the left or right is called Pan, adjusting the tilt is called Tilt, and turning the lens on its axis is called Rotation.

- The effective range of pan is a total of 350 degrees.
- The effective range of rotation is a total of 355 degrees.
- The effective range of tilt is a total of 67 degrees.



- The image can be covered up by the camera case depending on the angle.
- Do not forcefully turn the focus/zoom lens after the dome case is disassembled. Otherwise, it may cause an incorrect focus due to a motor failure.

▪ Methods of adjustment

1. After installing the camera, adjust the panning angle in consideration of the monitoring direction.
2. Set the horizontal angle so that the image is not reversed.
3. Adjust the tilt angle so that the camera faces toward the monitoring object.

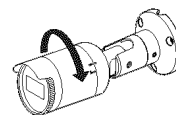
INSERTING/REMOVING A MICRO SD MEMORY CARD



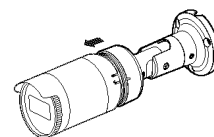
- Disconnect the power cable from the camera before inserting the Micro SD memory card.
- Do not insert the Micro SD memory card while it's upside down by force. Otherwise, it may damage the Micro SD memory card.
- When it rains or the humidity is high, insertion or ejection of a Micro SD card is not recommended.
- Disassembly of the product cover should be finished within 5 minutes, or there will be the risk of internal dew condensation.

Inserting a Micro SD Memory Card (LNO-6010R/6020R/6030R/6070R)

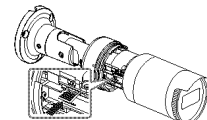
1. Turn the front cover to the UNLOCK [UNLOCK] direction.



2. Pull and separate the front cover.

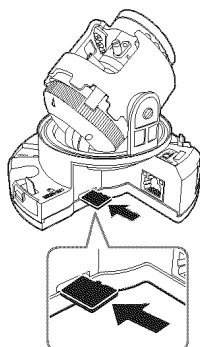


3. Insert a Micro SD card in the arrow direction shown in the figure.

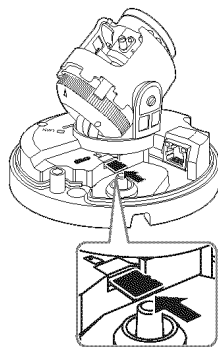


Inserting a Micro SD Memory Card (LND-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)

1. Separate the Dome cover of the camera.
2. Insert a Micro SD card in the arrow direction shown in the figure.



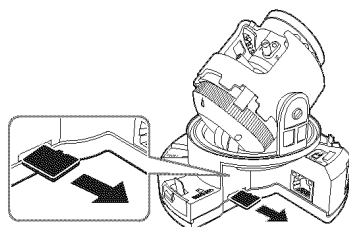
<LND-6010R/6020R/6030R/6070R>



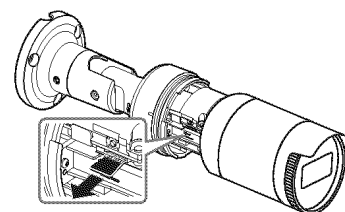
<LNV-6010R/6020R/6030R/6070R>

Removing a Micro SD Memory Card

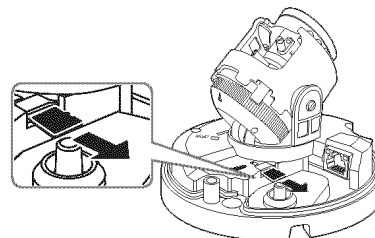
Gently press down on the exposed end of the memory card as shown in the diagram to eject the memory card from the slot.



<LND-6010R/6020R/6030R/6070R>



<LND-6010R/6020R/6030R/6070R>




<LNV-6010R/6020R/6030R/6070R>

- Please note that if you firmly push and release the Micro SD memory card when it is ejected, it may pop out.
- Before removing the Micro SD memory card, in <Storage>, set the device to <Off> and press the [Apply] button and turn the camera off.
- If you turn off the camera or remove the Micro SD memory card that contains data from the product, the data may be lost or damaged.

installation & connection

POWERING AND NETWORKING

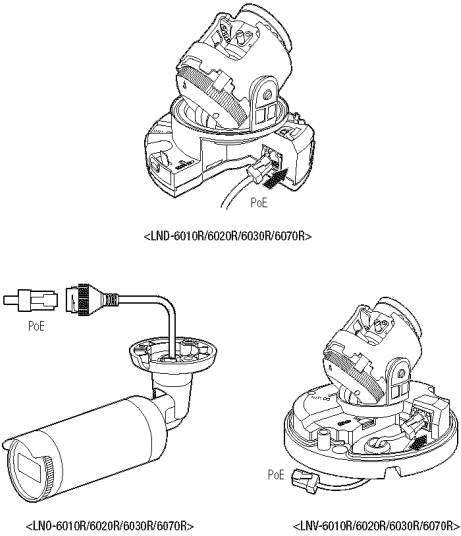
- Connect your PoE device to the camera.
- 

■ Connect to a PoE (Power over Ethernet) enabled router's PoE connector.

■ Use PoE (Power over Ethernet) equipment that supports the IEEE802.3af standard.

Network Cable Specification

Item	Contents	Remark
Connector	RJ45	
Ethernet Cable	10/100BASE-T	10/100 Mbps
	UTP Category 5e	
Max Distance	100M	DC Resistance ≤ 0.188 Ω/m
PoE Support	IEEE 802.3af	



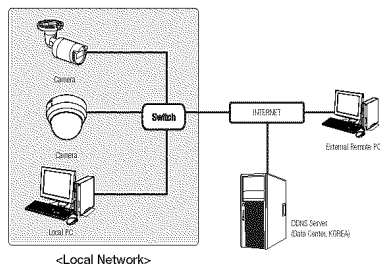
network connection and setup

You can set up the network settings according to your network configurations.

CONNECTING THE CAMERA DIRECTLY TO LOCAL AREA NETWORKING

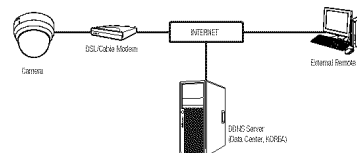
Connecting to the camera from a local PC in the LAN

1. Launch an Internet browser on the local PC.
2. Enter the IP address of the camera in the address bar of the browser.



- A remote PC in an external Internet out of the LAN network may not be able to connect to the camera installed in the intranet if the port-forwarding is not properly set or a firewall is set. In this case, to resolve the problem, contact your network administrator.
- In the IP installer you can use the initial password, "4321" to set IP Address, Subnet Mask, Gateway, HTTP Port, VNP Port, IP type. After changing the network interface, for better security, access the web viewer and change the password.
- By factory default, the IP address will be assigned from the DHCP server automatically. If there is no DHCP server available, the IP address will be set to 192.168.1.100. To change the IP address, use the IP installer. For further details on IP Installer use, refer to "Static IP Setup", (Page 25)

CONNECTING THE CAMERA DIRECTLY TO A DHCP BASED DSL/CABLE MODEM

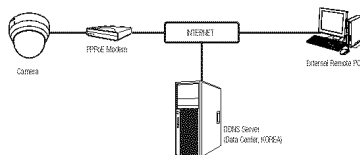


1. Connect the user PC directly with the network camera.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the web viewer.
4. Move to [Setup] page.
5. Move to [Network] - [DDNS] and configure the DDNS settings.
6. Move to [Basic] - [IP & Port], and set the IP type to [DHCP].
7. Connect the camera, which was removed from your PC, directly to the modem.
8. Restart the camera.

- For information on how to set DDNS, refer to the online help of Web Viewer.
- For information on how to set the IP format, refer to the online help of Web Viewer.

network connection and setup

CONNECTING THE CAMERA DIRECTLY TO A PPPoE MODEM

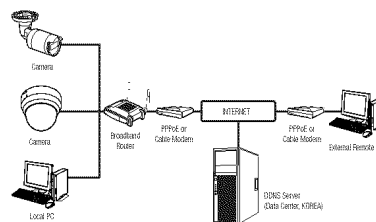


1. Connect the user PC directly with the network camera.
2. Run the IP Installer and change the IP address of the camera so that you can use the web browser on your desktop to connect to the Internet.
3. Use the Internet browser to connect to the web viewer.
4. Move to [Setup] page.
5. Move to [Network] - [DDNS] and configure the DDNS settings.
6. Move to [Basic] - [IP & Port] Setup Page, set the IP type to [PPPoE], and enter the network service's ID and password.
7. Connect the camera, which was removed from your PC, directly to the modem.
8. Restart the camera.

- For information on how to set DDNS, refer to the online help of Web Viewer.
- For information on how to set the IP format, refer to the online help of Web Viewer.

CONNECTING THE CAMERA TO A BROADBAND ROUTER WITH THE PPPoE/CABLE MODEM

This is for a small network environment such as homes, SOHO and ordinary shops.



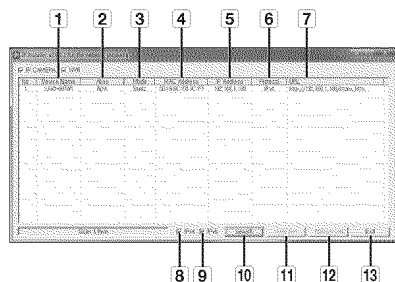
Configuring the network settings of the local PC connected to a Broadband Router

Configuring the network settings of the local PC connected to a Broadband Router, follow the instructions below.

- Select : <Network> → <Properties> → <Local Area Connection> → <General> → <Properties> → <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> or <Use the following IP address>.
- Follow the instructions below if you select <Use the following IP address>:
 - ex1) If the address (LAN IP) of the Broadband Router is 192.168.1.1
 IP address : 192.168.1.100
 Subnet Mask : 255.255.255.0
 Default Gateway : 192.168.1.1
 - ex2) If the address (LAN IP) of the Broadband Router is 192.168.0.1
 IP address : 192.168.0.100
 Subnet Mask : 255.255.255.0
 Default Gateway : 192.168.0.1
 - ex3) If the address (LAN IP) of the Broadband Router is 192.168.xxx.1
 IP address : 192.168.xxx.100
 Subnet Mask : 255.255.255.0
 Default Gateway : 192.168.xxx.1

- For the address of the Broadband Router, refer to the product's documentation.
- For more information about port forwarding of the broadband router, refer to "Port Range Forward (Port Mapping) Setup". (Page 27)

BUTTONS USED IN IP INSTALLER



Item	Description
1 Device Name	Model name of the connected camera. Click the column to sort the list by model name. However, search will be stopped if clicked during the search.
2 Alias	This function is not currently implemented.
3 Mode	Displays either <Static>, <Dynamic> or <PPPoE> for the current network connection status.
4 MAC(Ethernet) Address	Ethernet address for the connected camera. Click the column to sort the list by Ethernet address. However, search will be stopped if clicked during the search.
5 IP Address	IP address. Click the column to sort the list by IP address. However, search will be stopped if clicked during the search.
6 Protocol	Network setting for the camera. The factory default is "IPv4". Cameras with the IPv6 setting will be displayed "IPv6".
7 URL	DDNS URL address enabling access from the external Internet. However, this will be replaced with the <IP Address> of the camera if DDNS registration has failed.
8 IPv4	Scans for cameras with the IPv4 setting.

Item	Description
9 IPv6	Scans for cameras with the IPv6 setting. Activated in an IPv6 compliant environment only.
10 Search	Scans for cameras that are currently connected to the network. However, this button will be grayed out if neither IPv4 nor IPv6 is checked.
11 Auto Set	The IP Installer automatically configures the network settings.
12 Manual Set	You should configure the network settings manually.
13 Exit	Exits the IP Installer program.

For the IP Installer, use only the installer version provided in the installation CD or use the latest one if available. You can download the latest version from the Hanwha Techwin web site.

STATIC IP SETUP

Manual Network Setup

Run <IP Installer_v2.XX.exe> to display the camera search list.
At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.

For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

- Select a camera in the search list.
Check the MAC address of the camera on the camera's label.
Both the [Auto Set] and [Manual Set] buttons will be activated.
- Click [Manual Set].
The Manual Setting dialog appears.
<IP Address>, <Subnet Mask>, <Gateway>, <HTTP Port>, and <VNP Port> of the camera are displayed in the preset values.
- In the <Address> pane, provide the necessary information.
 - MAC (Ethernet) Address : The MAC address imprinted on the camera label is automatically displayed and requires no user setting.

IP related parameters can be set only when DHCP is not checked.



network connection and setup

If not using a Broadband Router

For setting <IP Address>, <Subnet Mask>, and <Gateway>, contact your network administrator.

4. In the <Port> pane, provide necessary information.

- HTTP Port : Used to access the camera using the Internet browser, defaulted to 80.
- VNP Port : Used to control the video signal transfer, defaulted to 4520.

5. Enter the password.

Enter the password of "admin" account, which was used to access the camera.



- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- For information on how to change the password, refer to the online help of Web Viewer.

6. Click [OK].

Manual network setup will be completed.

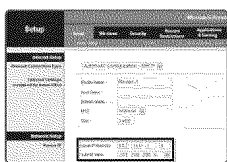
If using a Broadband Router

- IP Address : Enter an address falling in the IP range provided by the Broadband Router.
ex) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254

- Subnet Mask : The <Subnet Mask> of the Broadband Router will be the <Subnet Mask> of the camera.
- Gateway : The <Local IP Address> of the Broadband Router will be the <Gateway> of the camera.



- The settings may differ depending on the connected Broadband Router model.
For more information, refer to the user manual of the applicable router.
- For more information about port forwarding of the broadband router, refer to "Port Range Forward (Port Mapping) Setup". (Page 27)



If the Broadband Router has more than one camera connected

Configure the IP related settings and the Port related settings distinctly with each other.

ex)

	Category	Camera #1	Camera #2
IP related settings	IP Address	192.168.1.100	192.168.1.101
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
Port related settings	HTTP Port	8080	8081
	VNP Port	4520	4521



- If the <HTTP Port> is set other than 80, you must provide the <Port> number in the address bar of the Internet browser before you can access the camera.
ex) http://IP address : HTTP Port
http://192.168.1.100:8080

Auto Network Setup

Run <IP Installer_v2.XX.exe> to display the camera search list.

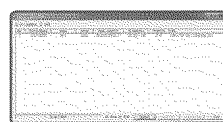
At the initial startup, both [Auto Set] and [Manual Set] will be grayed out.



- For cameras found with the IPv6 setting, these buttons will be grayed out as the cameras do not support this function.

1. Select a camera in the search list.

Check the MAC address of the camera on the camera's label.
Both the [Auto Set] and [Manual Set] buttons will be activated.



2. Click [Auto Set].

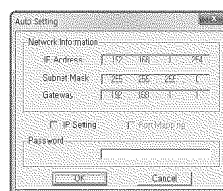
The Auto Setting dialog appears.
The <IP Address>, <Subnet Mask>, and <Gateway> will be set automatically.

3. Enter the password.

Enter the password of "admin" account, which was used to access the camera.



- For the security purposes, you are recommended to use a combination of numbers, alphabets uppercase and lowercase and special characters for your password.
- For information on how to change the password, refer to the online help of Web Viewer.



4. Click [OK].

Auto network setup will be completed.

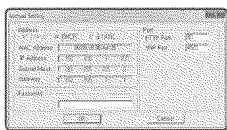
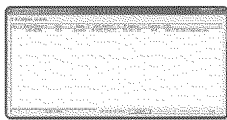
DYNAMIC IP SETUP

Dynamic IP Environment Setup

- Example of the Dynamic IP environment
 - If a Broadband Router, with cameras connected, is assigned an IP address by the DHCP server
 - If connecting the camera directly to modem using the DHCP protocols
 - If IPs are assigned by the internal DHCP server via the LAN

Checking the Dynamic IP

1. Run the IP Installer on the user's local computer.
Cameras allocated with <Dynamic IP> address are shown in the list.
2. Select a camera from the search result.
3. Click the [Manual Set] button and check the camera's <Dynamic IP> address.
If you uncheck <DHCP>, you can change IP to <Static>.

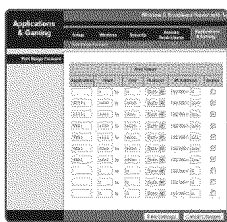


PORT RANGE FORWARD (PORT MAPPING) SETUP

If you have installed a Broadband Router with a camera connected, you must set the port range forwarding on the Broadband Router so that a remote PC can access the camera in it.

Manual Port Range Forwarding

1. From the Setup menu of the Broadband Router, select <Applications & Gaming> - <Port Range Forward>. For setting the port range forward for a third-party Broadband Router, refer to the user guide of that Broadband Router.
2. Select <TCP> and <UDP Port> for each connected camera to the Broadband Router.
The number of each port to be configured to the IP router should be set according to the port number designated in <Setup> - <Basic> - <IP & Port> on the camera web viewer.



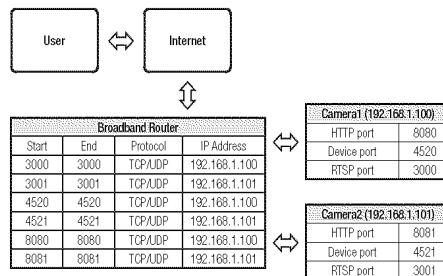
3. When done, click [Save Settings].
Your settings will be saved.

- Above sample instructions are based on the QSCO's Broadband Router.
- The settings may differ depending on the connected Broadband Router model.
For more information, refer to the user manual of the applicable router.

Setting up Port Range Forward for several network cameras

- You can set a rule of Port Forwarding on the Broadband Router device through its configuration web page.
- A user can change each port using the camera setting screen.

When Camera1 and Camera2 are connected to a router :



- Port forwarding can be done without additional router setup if the router supports the UPnP (Universal Plug and Play) function.
After connecting the network camera, select the checkbox from the menu <Quick connect> in <Wisenet DDNS> in 'Settings -> Network -> DDNS'.

network connection and setup

CONNECTING TO THE CAMERA FROM A SHARED LOCAL PC

1. Run the IP Installer.
It will scan for connected cameras and display them as a list.
2. Double-click a camera to access.
The Internet browser starts and connects to the camera.



* Access to the camera can also be gained by typing the camera's IP address in the address bar of the Internet browser.



CONNECTING TO THE CAMERA FROM A REMOTE PC VIA THE INTERNET

Since using the IP Installer on a remote computer that is not in the Broadband Router's network cluster is not allowed, users can access cameras within a Broadband Router's network by using the camera's DDNS URL.

1. Before you can access a camera in the Broadband Router network, you should have set the port range forward for the Broadband Router.
2. From the remote PC, launch the Internet browser and type the DDNS URL address of the camera, or the IP address of the Broadband Router in the address bar.
ex) <http://ddns.hanwha-security.com/ID>



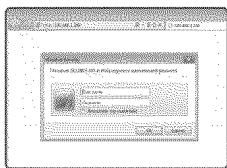
* For information on how to register DDNS, refer to the network setup guide.

web viewer

CONNECTING TO THE CAMERA

Normally, you would

1. Launch the Internet browser.
2. Type the IP address of the camera in the address bar.
ex) • IP address (IPv4) : 192.168.1.100 →
http://192.168.1.100
- the Login dialog should appear.
• IP address (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111
→ http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - the Login
dialog should appear.




If the HTTP port is other than 80

1. Launch the Internet browser.
2. Type the IP address and HTTP port number of the camera in the address bar.
ex) IP address : 192.168.1.100:HTTP Port number(8080)
→ http://192.168.1.100:8080 - the Login dialog should appear.

Using URL

1. Launch the Internet browser.
2. Type the DDNS URL of the camera in the address bar.
ex) URL address : http://ddns.hanwha-security.com/ID
- the Login dialog should appear.

 Network connection is disabled in the LAN only environment.

Connecting via UPnP

1. Run the client or operating system in support of the UPnP protocol.
2. Click the camera name for search.
In the Windows operating system, click the camera name searched from the network menu.
- The login window is displayed.

Connecting via Bonjour

1. Run the client or operating system in support of the Bonjour protocol.
2. Click the camera name for search.
In the Mac operating system, click the camera name searched from the Bonjour tab of Safari.
- The login window is displayed.

To check the DDNS address

If the camera is connected directly to the DHCP cable modem, DSL modem, or PPPoE modem, the IP address of your network will be changed each time you try to connect to the ISP (Internet Service Provider) server.

If this is the case, you will not be informed of the IP address changed by DDNS.

Once you register a dynamic IP-based device with the DDNS server, you can easily check the changed IP when you try to access the device.

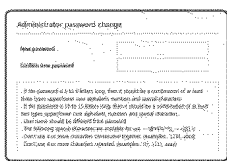
To register your device to the <DDNS> server, visit <http://ddns.hanwha-security.com> and register your device first, and then set the Web Viewer's <Network> - <DDNS> to <Wisenet DDNS>, as well as providing <Product ID> that had been used for DDNS registration.

web viewer

PASSWORD SETTING

When you access the product for the first time, you must register the login password.

When the **"Password change"** window appears, enter the new password.



- For a new password with 8 to 9 digits, you must use at least 3 of the following: uppercase/lowercase letters, numbers and special characters. For a password with 10 to 15 digits, you must use at least 2 types of those mentioned.
 - Special characters that are allowed: `!@#$%^&*()-+=|~?/`
- For higher security, you are not recommended to repeat the same characters or consecutive keyboard inputs for your passwords.
- If you lost your password, you can press the **[RESET]** button to initialize the product. So, don't lose your password by using a memo pad or memorizing it.

LOGIN

Whenever you access the camera, the login window appears. Enter the User ID and password to access the camera.

1. Enter **"admin"** in the **<User name>** input box.
The administrator ID, **"admin"**, is fixed and can not be changed.
2. Enter the password in the **<Password>** input field.
3. Click **[OK]**.



- When you access the camera web viewer, pay special attention to the security by checking whether the image data is encrypted.
- If you check the **"Remember my credentials"** option when your input is done, in future you will be logged in automatically without being prompted to enter the login information.
- You will experience the best video quality if the screen size is 100%. Reducing the ratio may cut the image on the borders.

PLUG-IN SUPPORT SPECIFICATIONS FOR EACH BROWSER

The web viewer has a built-in plugin web viewer and a new plugin-free web viewer together. This means that the web viewer can be used even in modern browser environments that do not support plugins, such as Chrome, EDGE, and Firefox (Windows 64bit only). It is recommended to install the plugin in the IE browser, which allows plugin installation.

The following differences will occur depending on your browser environment:

- **Chrome, FireFox(Windows 64bit only), EDGE, Safari** : Although they don't support plug-ins, you can use a web viewer as a plug-in free web viewer is embedded.

- As the plug-in free **webviewer** has lower performance than the plug-in **webviewer**, it has a limit on the monitoring of high quality profiles and playback of saved videos.
 - To monitor high quality profiles and play saved videos, use either a plug-in **webviewer** or **Smartviewer**.
 - A plug-in free profile is automatically created when there is a delay in live video.
 - Playback may cause delays, depending on the codec and resolution.
- The plug-in free feature has been optimized for the Chrome browser.


- **IE browser :** You can use a web viewer even if you don't install the existing plug-in web viewer.

- To monitor/play saved video seamlessly, you are required to install a plug-in.

INSTALLING WebViewer PLUGIN

If you try to access the plugin-free web viewer from the IE browser and request a live view with a codec other than the one currently in use, or request to use the recorded video playback function, an installation message appears. At this time, the web viewer plugin must be installed to use the functions normally.

1. When the monitoring page is accessed for the very first time, the installation page is displayed. Click **[Click Here]** to begin installation.

 If the plug-in installation file download status is suspended at 99% in the Internet Explorer browser, retry it after selecting "Release SmartScreen filter" in "Tool → SmartScreen filter".

2. Click **[Run]** in the message window.

3. Click **[Yes]** when the notice window saying that all browser windows will be closed.

 Steps 4 and 5 will be skipped if no Web Viewer Plug-in is installed.

4. When the old version of the Web Viewer Plug-in is installed, a notice window saying the old version will be deleted is displayed.

Click **[Yes]** when the notice window is displayed.


5. Click **[OK]**.

The old version of Web Viewer Plug-in is deleted.

6. Click **[Install]** to begin installation of the Web Viewer Plug-in.

7. Click **[Finish]**.

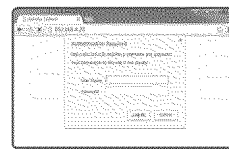
Web Viewer Plug-in installation is completed.

 In your internet explorer, if you need to move to the installation screen after installing the webviewer plugin, check whether webviewer_actvexplugin_lib.control in the "Tool → Additional Function Management" menu is "Activated". If not, and if there is a persisting problem, then select "Tools → Internet Options → General" and delete all the search records. If the problem persists, please register the IP or Domain of your camera in "Tools → Internet Options → Security → Trusted sites".

USING A PLUG-IN FREE WEBVIEWER

If you connect to a camera from Google Chrome, Mozilla Firefox, MS Edge, or the Safari web browser, you cannot install a separate plug-in, but you can view and control the camera videos in real time, without any plugin.

1. Enter your username and password to log in.
2. When you are logged in, a camera live view screen appears.



To set the camera

1. Click the **[Setup (⚙️)]** icon.
2. The Settings window appears.
3. You can perform settings for the camera's basic information, video, network, event, analysis, and system over the network.
4. Click **<Help (📘)>** to view detailed descriptions of each function.



appendix

SPECIFICATION

Items		Description		
		LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Video	Imaging Device	1/2.9" 2.19M CMOS		
	Total Pixels	2,000(H) x 1,121(V)		
	Effective Pixels	1,984(H) x 1,105(V)		
	Scanning System	Progressive		
	Min. Illumination	Color : 0.18Lux (1/30sec, F2.0), 0.003Lux (2sec, F2.0) B/W : 0Lux (IR LED on)		
Lens	Focal Length (Zoom Ratio)	LND-6010R/LND-6010R/LNV-6010R : 3mm LND-6020R/LND-6020R/LNV-6020R : 4mm LND-6030R/LND-6030R/LNV-6030R : 6mm		
	Max. Aperture Ratio	F 2.0		
	Angular Field of View	LND-6010R/LND-6010R/LNV-6010R : H : 102° / V : 54° / D : 120° LND-6020R/LND-6020R/LNV-6020R : H : 80° / V : 43° / D : 94° LND-6030R/LND-6030R/LNV-6030R : H : 51° / V : 29° / D : 58°		
	Min. Object Distance	0.5m(1.64ft)		
	Lens Type	Fixed		
	Mount Type	Board type		
Pan / Tilt / Rotate	Pan Range	0~360°	-	0~360°
	Tilt Range	0~67°	-	0~67°
	Rotate Range	0~365°	-	0~365°
Operational	Viewable Length	20m	30m	
	Camera Title	Off / On (Displayed up to 15 characters)		
	Day & Night	Auto(OR) / Color / B/W / Schedule		
	Backlight Compensation	Off / BLC / WDR		

Items	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Operational	Wide Dynamic Range	120dB	
	Contrast Enhancement	SSDR (Off / On)	
	Digital Noise Reduction	SSNR (Off / On)	
	Motion Detection	Off / On (4ea polygon zones)	
	Privacy Masking	Off / On (8ea rectangular zones)	
	Gain Control	Off / Low / Middle / High	
	White Balance	ATW / AWC / Manual / Indoor / Outdoor	
	LDC (Lens distortion control)	On/Off (5 levels with Min/Max)	
	Electronic Shutter Speed	Minimum / Maximum / Anti flicker	
	Flip / Mirror	Flip / Mirror / Hallway view	
	Intelligent Video Analytics	Motion Detection, Tampering	
	Alarm Triggers	Motion detection, Tampering Detection, SD card error	
Network	Alarm events	<ul style="list-style-type: none"> File upload via FTP, E-Mail Notification via E-Mail Local storage recording at Event 	
	Ethernet	RJ-45 (10/100BASE-T)	
	Video Compression Format	H.264, MJPEG	
	Resolution	1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 800x448 / 720x576 / 720x480 / 640x480 / 640x360 / 320x240	
	Max. Framerate	H.265/H.264 : Max 30fps at all resolutions MJPEG - Max. 1fps at 1920x1080/1280x1024/1280x960/1280x720/1024x768, Max. 15fps at other resolution	
	WiseStream II	Support	
	Video Quality Adjustment	H.264/MJPEG : Target Bitrate Level Control	

Items	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Network	Bitrate Control Method	H.264 : CBR or VBR MPEG : VBR	
	Streaming Capability	Multiple Streaming (Up to 3 Profiles)	
	Audio I/O	-	
	Audio Compression Format	-	
	Audio Communication	-	
	IP	IPv4, IPv6	
	Protocol	TCP/IP, UDP/IP, RTP(JDPI), RTP(TCP), RTCP, RTSP, RTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour	
	Security	HTTPS(SSL) Login Authentication	
		Digest Login Authentication	
		IP Address Filtering	
		User access Log	
	Streaming Method	802.1x Authentication (EAP-TLS, EAP-LEAP)	
		Unicast / Multicast	
	Max. User Access	6 users at Unicast Mode	
	Edge Storage	Micro SD/SDHC/SDXC (up to 32G) - motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. Manual recording at Local PC	
	Application Programming Interface	ONVIF Profile S/G SUNAPI(HTTP API)	
	Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek	

Items	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Network	Web Viewer	Supported OS : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Plug-in free web viewer Supported web browsers : Google Chrome 63, MS Edge 41, Mozilla Firefox 57 (Window 64bit only), Apple Safari 11 (Mac OS X only) Plug-in web viewer Supported web browsers : MS Explorer 11	
	Central Management Software	SmartViewer, SSM	
Environmental	Operating Temperature / Humidity	-10°C ~ +55°C (14°F ~ +131°F) / Less than 90% RH	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C
	Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH	
	Ingress Protection	-	IP66
	Vandal Resistance	-	IK10
Electrical	Input Voltage / Current	PoE(IEEE802.3af, Class3)	
	Power Consumption	6.5W	
Mechanical	Color / Material	White / Plastic	Dark gray / Plastic
	Dimension (ØxH)	Ø110.0mm(4.33") x H86.0(3.39")mm	Ø58.6mm(2.31") x H162.0(7.17")mm
	Weight	230g(0.51lb)	240g(0.53lb)

appendix

Items	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Video	Imaging Device	1/2.9" 2.19M CMOS	
	Total Pixels	2,000(H) x 1,121(V)	
	Effective Pixels	1,984(H) x 1,105(V)	
	Scanning System	Progressive	
	Min. Illumination	Color : 0.095Lux (1/30sec, F1.8), 0.003Lux (2sec, F1.8) B/W : 0Lux (IR LED on)	
Lens	Focal Length (Zoom Ratio)	3.2~10mm (3.1x) varifocal	
	Max. Aperture Ratio	F1.8~2.9	
	Angular Field of View	H : 101.6°(Wide) ~ 31.3°(Tele)	
		V : 54.1°(Wide) ~ 17.8°(Tele)	
		D : 120.6°(Wide) ~ 36.0°(Tele)	
	Min. Object Distance	0.5m(1.64ft)	
	Focus control	Manual	
	Lens Type	DC auto iris	
Pan / Tilt / Rotate	Mount Type	Board type	
	Pan Range	0~350°	0~350°
	Tilt Range	0~67°	0~67°
	Rotate Range	0~355°	0~355°
Operational	Viewable Length	20m	30m
	Camera Title	Off / On (Displayed up to 15 characters)	
	Day & Night	Auto(ICR) / Color / B/W / Schedule	
	Backlight Compensation	Off / BLC / WDR	

Items	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Operational	Wide Dynamic Range	120dB	
	Contrast Enhancement	SSDR (Off / On)	
	Digital Noise Reduction	SSNR (Off / On)	
	Motion Detection	Off / On (4ea polygon zones)	
	Privacy Masking	Off / On (8ea rectangular zones)	
	Gain Control	Off / Low / Middle / High	
	White Balance	ATW / AWC / Manual / Indoor / Outdoor	
	LDC (Lens distortion control)	On/Off (5 levels with Min/Max)	
	Electronic Shutter Speed	Minimum / Maximum / Anti flicker	
	Flip / Mirror	Flip / Mirror / Hallway view	
	Intelligent Video Analytics	Motion Detection, Tampering	
	Alarm Triggers	Motion detection, Tampering Detection, SD card error	
	Alarm events	<ul style="list-style-type: none"> File upload via FTP, E-Mail Notification via E-Mail Local storage recording at Event 	
Network	Ethernet	RJ-45 (10/100BASE-T)	
	Video Compression Format	H.264, MJPEG	
	Resolution	1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 800x448 / 720x576 / 720x480 / 640x480 / 640x360 / 320x240	
	Max. Framerate	H.265/H.264 : Max 30fps at all resolutions MJPEG - Max. 1fps at 1920x1080/1280x1024/1280x960/1280x720/1024x768, Max. 15fps at other resolution	
	WiseStream II	Support	
	Video Quality Adjustment	H.264/MJPEG : Target Bitrate Level Control	

Items	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Network	Bitrate Control Method	H.264 : CBR or VBR MPEG : VBR	
	Streaming Capability	Multiple Streaming (Up to 3 Profiles)	
	Audio I/O	-	
	Audio Compression Format	-	
	Audio Communication	-	
	IP	IPv4, IPv6	
	Protocol	TCP/IP, UDP/IP, RTP(JDPI), RTP(TCP), RTCP, RTSP, RTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour	
	Security	HTTPS(SSL) Login Authentication	
		Digest Login Authentication	
		IP Address Filtering	
		User access Log	
	Streaming Method	802.1x Authentication (EAP-TLS, EAP-LEAP)	
		Unicast / Multicast	
	Max. User Access	6 users at Unicast Mode	
	Edge Storage	Micro SD/SDHC/SDXC (up to 32G) - motion Images recorded in the SD/SDHC/SDXC memory card can be downloaded. Manual recording at Local PC	
	Application Programming Interface	ONVIF Profile S/G SUNAPI(HTTP API)	
	Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek	

Items	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Network	Web Viewer	Supported OS : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Plug-in free web viewer Supported web browsers : Google Chrome 63, MS Edge 41, Mozilla Firefox 57 (Window 64bit only), Apple Safari 11 (Mac OS X only) Plug-in web viewer Supported web browsers : MS Explorer 11	
	Central Management Software	SmartViewer, SSM	
Environmental	Operating Temperature / Humidity	-10°C ~ +55°C (14°F ~ +131°F) / Less than 90% RH	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH * Start up should be done at above -20°C
	Storage Temperature / Humidity	-30°C ~ +60°C (-22°F ~ +140°F) / Less than 90% RH	
	Ingress Protection	-	IP66
	Vandal Resistance	-	IK10
Electrical	Input Voltage / Current	PoE(IEEE802.3af, Class3)	
	Power Consumption	6.5W	
Mechanical	Color / Material	White / Plastic	Dark gray / Plastic White / Aluminum, Plastic
	Dimension (ØxH)	Ø119.8mm(4.72") x H98.8(3.89")mm	Ø78.0mm(3.07") x H262.0(10.32")mm Ø137.8mm(5.43") x H106.1(4.18")mm
	Weight	274g(0.6lb)	380g(0.84lb) 515g(1.16lb)

appendix

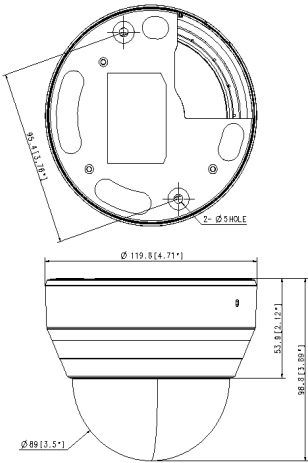
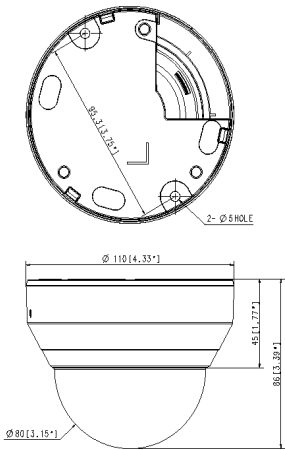
PRODUCT OVERVIEW

LND-6070R

Unit : mm (inch)

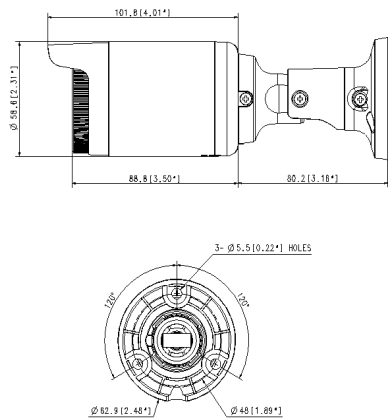
LND-6010R/6020R/6030R

Unit : mm (inch)



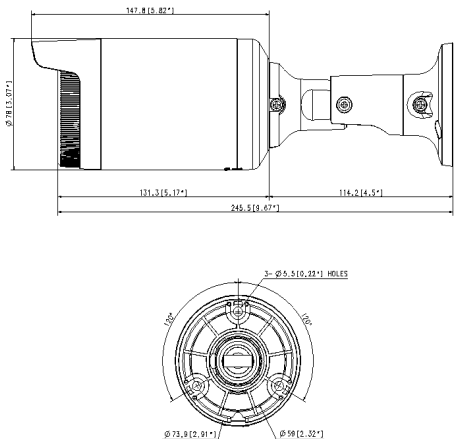
LNO-6010R/6020R/6030R

Unit : mm (inch)



LNO-6070R

Unit : mm (inch)



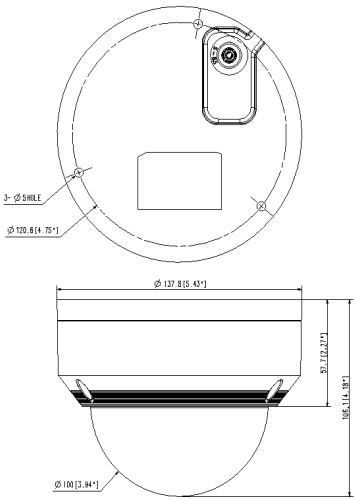
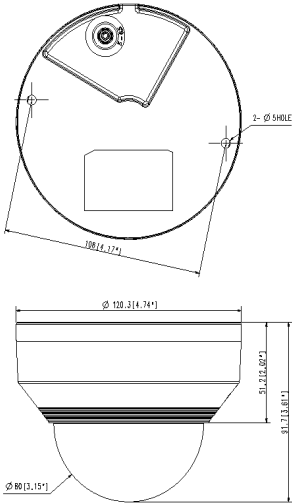
appendix

LNV-6010R/6020R/6030R

Unit : mm (inch)

LNV-6070R

Unit : mm (inch)



TROUBLESHOOTING

PROBLEM	SOLUTION
No video is displayed when accessing the plug-in free webviewer on Safari via HTTPS.	<ul style="list-style-type: none"> On the authentication popup window prompted when initially accessing https, click "View Authentication Certificate" and select the "Always trust when connecting to the designated webviewer IP" check box. If the webviewer continues failing to display a video after you select "Next" on the message window below, press the command key + Q to exit the Safari browser, access again and follow the procedures stated above.
I can't access the camera from a web browser.	<ul style="list-style-type: none"> Check to make sure that the camera's Network settings are appropriate. Check to make sure that all network cables have been connected properly. If connected using DHCP, verify that the camera is able to acquire dynamic IP addresses without any problem. If the camera is connected to a Broadband Router, verify that port forwarding is properly configured.
Viewer got disconnected during monitoring.	<ul style="list-style-type: none"> Connected Viewers become disconnected upon any change to camera or network configurations. Check all network connections. If the camera is connected over an PPPoE network, it's possible for Viewer to disconnect under poor network conditions.
No video is displayed when I newly access the webviewer or connect streaming to the client.	<ul style="list-style-type: none"> The maximum number of profiles available is 3. The connection may be lost if you use 4 or more of profiles. Example) If you access MJPEG, H.264 and H.264(Profiles with Different Settings) and then access with a different profile, the connection will be lost.
The camera connected to the network is not detected in the IP installer program.	<ul style="list-style-type: none"> Turn off the firewall settings on your PC and then search the camera again.
Images overlap.	<ul style="list-style-type: none"> Check whether two or more cameras are set to a single multicast address instead of different addresses. If a single address is used for multiple cameras, the images may overlap.
No image appears.	<ul style="list-style-type: none"> If the transmission method is set to multicast, check whether there is a router that supports multicast in the LAN the camera is connected to.

PROBLEM	SOLUTION
File is not transferred to the email even if a motion detection event is generated with <Motion detection> set to <On> in the <Event> page.	<ul style="list-style-type: none"> Verify the settings in the following sequence: <ul style="list-style-type: none"> A. Check <Data & Time> settings. B. The <Motion detection> should be set to <Enable>. C. Check if the <E-mail> option of <Event setup> menu is checked to use.
Cannot record into the Micro SD memory card.	<ul style="list-style-type: none"> Check if the memory card is defective.
Micro SD memory card is inserted but the camera does not operate properly.	<ul style="list-style-type: none"> Check if the memory card is inserted in the proper direction. Operation of memory card that is formatted by other devices is not guaranteed with this camera unit. Format the memory card again in <Setup> → <Event> → <Storage> menu.

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GPL SW

Component Name	License	URL
Base Kernel	GPL 2.0	
Busybox	GPL 2.0	http://www.busybox.net/downloads/inapshots
iproute2-4.3.0	GPL 2.0	
iptables-1.4.21	GPL 2.0	http://ftp.netfilter.org/pub/iptables
ethtool-4.2	GPL 2.0	
mtst-1.5.2	GPL 2.0	ftp://ftp.infocast.org/pub/mtst-v1.5
mtst-diag-2.11	GPL 2.0	
rp-pppoe-3.11	GPL 2.0	http://www.routingenguin.com/rp-pppoe/
wpa_supplicant-2.5	GPL 2.0	
hatch-4.3.30	GPL 3.0	
zascorff	GPL 2.0	

LGPL SW

Component Name	License	URL
glibc	LGPL 2.0	
inetutils	LGPL 3.0	
neon-0.29.6	LGPL 2.0	http://www.webdav.org/neon/

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Version 3, 29 June 2007

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- Version 1.1

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It appears that the arithmetic coding option of the JPEG spec is covered by patents owned by IBM, AT&T, and Mitsubishi. Hence arithmetic coding cannot legally be used without obtaining one or more licenses. For this reason, support for arithmetic coding has been removed from the free JPEG software. (Since arithmetic coding provides only a marginal gain over the unpatented Huffman mode, it is unlikely that very many implementations will support it.) So far as we are aware, there are no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files. To avoid entanglement with the Unisys LZW patent, GIF reading support has been removed altogether, and the GIF writer has been simplified to produce "uncompressed GIFs". This technique does not use the LZW algorithm; the resulting GIF files are larger than usual, but are readable by all standard GIF decoders.

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established by T-Engine Forum
on January 23, 2004
revised on June 17, 2004
revised on December 21, 2006
revised on March 24, 2009

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 3. The member shall submit test results of the Ported Source Code to T-Engine Forum when requesting the distribution.
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bzip2-1.0.6	Bzip2	http://www.bzip.org/

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Julian Seward, jseward@bzip.org
bzip2/libbzip2 version 1.0.6 of 10 December 2007

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lperf-2.0.5	University of Illinois / NCSA Open Source

lperf performance test

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php-5.2.17	PHP 3.01	http://www.php.net/distributions

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zlib-1.2.8	zlib / libpng	http://zlib.net/

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Jean-loup Gailly, Mark Adler

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The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://www.ietf.org/rfc/rfc1950.txt> (zlib format), <http://www.ietf.org/rfc/rfc1951.txt> (deflate format) and <http://www.ietf.org/rfc/rfc1952.txt> (gzip format).



Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Hanwha Techwin cares for the environment at all product manufacturing stages, and is taking measures to provide customers with more environmentally friendly products.

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**Correct Disposal of This Product (Waste Electrical & Electronic Equipment)**

(Applicable in the European Union and other European countries with separate collection systems)

This marking on the product, accessories or literature indicates that the product and its electronic accessories (e.g. charger, headset, USB cable) should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

**Correct disposal of batteries in this product**

(Applicable in the European Union and other European countries with separate battery return systems.)

This marking on the battery, manual or packaging indicates that the batteries in this product should not be disposed of with other household waste at the end of their working life. Where marked, the chemical symbols Hg, Cd or Pb indicate that the battery contains mercury, cadmium or lead above the reference levels in EC Directive 2006/66. If batteries are not properly disposed of, these substances can cause harm to human health or the environment.

To protect natural resources and to promote material reuse, please separate batteries from other types of waste and recycle them through your local, free battery return system.

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WISeNeT

CAMÉRA RÉSEAU

Manuel d'utilisation

LND-6010R/LND-6020R/LND-6030R/LND-6070R
LNO-6010R/LNO-6020R/LNO-6030R/LNO-6070R
LNV-6010R/LNV-6020R/LNV-6030R/LNV-6070R

CE

Caméra Réseau

Manuel d'utilisation

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❖ La conception et les caractéristiques techniques sont susceptibles d'être modifiées sans préavis.

❖ L'ID initial de l'administrateur initi est "admin" et le mot de passe doit être défini lors de la première connexion.

Veuillez changer votre mot de passe tous les trois mois afin de protéger les renseignements personnels sans risque et afin de prévenir les dommages du vol d'informations.

Veuillez prendre note que l'utilisateur est responsable de la sécurité et des autres problèmes causés par une mauvaise gestion du mot de passe.

présentation

INSTRUCTIONS IMPORTANTES RELATIVES À LA SÉCURITÉ

1. Veuillez lire ces instructions.
2. Conservez ces instructions.
3. Prêtez attention à tous les avertissements.
4. Veuillez suivre toutes les instructions.
5. N'utilisez pas cet appareil à proximité de l'eau.
6. Nettoyez la zone contaminée sur la surface du produit avec un chiffon doux et sec ou un chiffon humide. (Ne pas utiliser un détergent ou des produits cosmétiques contenant de l'alcool, des solvants et des tensioactifs ou des produits contenant du pétrole, car ils peuvent déformer ou endommager le produit.)
7. N'obstruez pas les ouvertures de ventilation. Procédez à l'installation conformément aux instructions du fabricant.
8. Ne pas installer l'appareil à proximité de sources de chaleur comme les radiateurs, les registres de chaleur et les autres appareils (incluant les amplificateurs) produisant de la chaleur.
9. Veillez à vous conformer aux sécurités des prises de terre et polarisées. Une prise dite polarisée est composée de deux fiches, une plus large que l'autre. Une prise de terre est composée de deux fiches et d'une troisième fiche pour la terre. La troisième fiche, plus large que les deux autres, est fournie pour votre sécurité. Si la prise qui vous est fournie ne correspond pas à votre prise murale, demandez à un électricien de remplacer la prise obsolète.
10. Veillez à ce que personne ne marche ou se prenne les pieds dans le cordon d'alimentation et particulièrement au niveau des fiches et des prises de courant et au niveau où ils se situent.
11. N'utilisez que des accessoires ou des produits additionnels spécifiés par le fabricant.
12. Utilisez uniquement un chariot, un socle, un trépied, un support ou une table recommandés par le fabricant ou vendus avec l'appareil. Si vous utilisez un chariot, déplacez le chariot transportant l'appareil avec précaution afin d'éviter les blessures que pourrait entraîner un basculement accidentel.
13. Débranchez cet appareil en cas d'orage ou de non-utilisation prolongée.
14. Veuillez faire appel au personnel qualifié pour tous travaux de maintenance. Les travaux de maintenance sont nécessaires si l'appareil a été endommagé de quelque manière que ce soit, comme cordon d'alimentation endommagé, liquide répandu, objets tombés sur l'appareil, appareil exposé à la pluie et à l'humidité, il ne fonctionne pas normalement ou est tombé par terre.
15. Ce produit est destiné à être alimenté par un boîtier d'alimentation de «Classe 2» ou «LPS» ayant une puissance nominale de PoE, 0.18A.
16. Si vous utilisez une force excessive lors de l'installation du produit, la caméra risque d'être endommagée et de ne pas fonctionner correctement.
Si vous installez le produit à l'aide d'outils non conformes, le produit risque d'être endommagé.
17. Ne pas installer le produit dans un endroit où des substances chimiques ou des nuages d'huile existent ou peuvent être générés. Comme les huiles comestibles telles que l'huile de soja peuvent endommager ou déformer le produit, n'installez pas le produit dans la cuisine ou près de la table de cuisine.
Cela peut endommager le produit.
18. Lors de l'installation du produit, veillez à ne pas laisser la surface du produit se colorer avec une substance chimique.
Certains solvants chimiques tels que des produits de nettoyage ou des adhésifs peuvent causer de graves dommages à la surface du produit.
19. Si vous installez / désassemblez le produit d'une manière qui n'a pas été recommandée, les fonctions / performances de production peuvent ne pas être garanties.
Installez le produit en vous référant à "Installation et connexion" dans le manuel d'utilisation.
20. L'installation ou l'utilisation du produit dans l'eau peut causer des dommages importants au produit.



AVERTISSEMENT

AFIN DE RÉDUIRE LE RISQUE D'INCENDIE OU DE DÉCHARGE ÉLECTRIQUE, N'EXPOSEZ PAS CET APPAREIL À LA PLUIE NI À L'HUMIDITÉ. NE PAS INSÉRER D'OBJET MÉTALLIQUE PAR LES FENTES DE VENTILATION OU TOUTE AUTRE OUVERTURE SITUÉE SUR L'ÉQUIPEMENT.

Veillez à éviter toute projection de liquide sur l'appareil et ne placez jamais sur celui-ci des récipients contenant des liquides, tels que des vases.

Pour éviter les blessures, cet appareil doit être fermement fixé au mur/plafond conformément aux consignes d'installation.

ATTENTION



EXPLICATION DES SYMBOLES GRAPHIQUES



Le symbole de l'éclair se terminant par une flèche inscrit dans un triangle équilatéral sensibilise l'utilisateur à la présence d'une « tension élevée » au sein de l'unité, susceptible d'être suffisamment puissante pour présenter un risque de décharge électrique.



Le symbole de point d'exclamation inscrit dans un triangle équilatéral sensibilise l'utilisateur à la présence d'importantes instructions de fonctionnement et de maintenance (entretien et réparation) dans la documentation accompagnant l'appareil.

présentation

Catégorie de classe I

Un appareil appartenant à une catégorie de type CLASSE I doit être connecté à la prise murale secteur dotée d'une connexion de mise à la terre de protection.

Batterie

Les batteries (module batterie ou piles installées) ne doivent pas être exposées à des températures excessives, telles que la chaleur du soleil, le feu ou toute autre source de même type.

Appareil déconnecté

Débranchez la prise principale de l'appareil si celui-ci est défectueux. Contactez un réparateur situé dans votre région.

Lorsque l'appareil est exploité hors des États-Unis, il est possible d'utiliser le code HAR pour recourir aux services d'une agence agréée.

ATTENTION

Il existe un risque d'explosion si la batterie est remplacée par une autre de modèle incorrect. Éliminez les batteries usagées conformément aux instructions.

Les instructions d'entretien sont fournies à l'intention d'un personnel qualifié exclusivement. Pour réduire les risques de chocs électriques, ne procédez pas à des réparations autres que celles qui sont indiquées dans les instructions de fonctionnement, à moins que vous ne soyez qualifié pour ce faire.

Veillez utiliser l'alimentation en entrée sur une seule caméra, les autres périphériques ne doivent pas être connectés.

L'ITE ne doit être connecté que sur un réseau PoE sans routage vers l'alimentation extérieure.

Veillez lire attentivement les consignes de sécurité recommandées ci-après.

- Ne placez pas cet appareil sur une surface inégale.
- N'installez pas l'appareil sur une surface où il pourrait être exposé à la lumière directe du soleil ou situé à proximité d'un équipement de chauffage ou d'une zone exposée à un froid extrême.
- Ne placez pas cet appareil à proximité de matériaux conducteurs.
- N'essayez de réparer cet appareil vous-même.
- Évitez de placer un verre d'eau sur ce produit.
- N'installez pas le produit à proximité de sources magnétiques.
- Ne bloquez pas les ouvertures de ventilation.
- Ne placez pas d'éléments lourds sur le produit.
- Veillez porter des gants de protection lors de l'installation / retrait de la caméra. La température élevée de la surface du produit peut causer une brûlure.

Le guide de l'utilisateur est un manuel d'instructions portant sur l'utilisation du produit.

La signification des indications fournies dans le manuel est comme suit.

- Référence : Dans le cas de la fourniture d'informations pour aider à l'utilisation du produit.
 - Notification : En cas de risques d'endommagement du produit et de blessures à l'utilisateur provoqués par le non respect des instructions fournies.
- ※ Veillez lire ce manuel et notamment les passages liés à la sécurité du produit, et gardez-le en lieu sûr.

ATTENTION

Pour éviter tout dommage pouvant être causé par la DEL IR,

ne regardez pas le témoin de fonctionnement.

Pour les modèles ci-dessous seulement

LND-6010R/LND-6020R/LND-6030R/LND-6070R

LNO-6010R/LNO-6020R/LNO-6030R/LNO-6070R

LNV-6010R/LNV-6020R/LNV-6030R/LNV-6070R

Groupe de risque 1

AVERTISSEMENT IR émis par ce produit.

Ne pas regarder la lampe de commande

Produit testé contre IEC 62471

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présentation

CARACTÉRISTIQUES DU PRODUIT

- **Indice d'étanchéité à la poussière et aux intempéries (IP66) (LNO-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)**
Le modèle étanche à l'eau et à la poussière vous permet d'installer l'équipement à l'extérieur ou de l'exposer à la pluie en toute sérénité.
- **Mode IR**
Lorsque le voyant IR s'allume, l'appareil passe en mode IR afin d'empêcher toute surexposition et de rendre visibles les objets à faible distance.
- **Prend en charge des vidéos de 2 mégapixels de résolution**
Cette caméra réseau peut afficher des vidéos en différentes qualités et résolutions simultanément, en utilisant plusieurs CODEC.
- **Surveillance basée sur navigateur Web**
Utilisation du navigateur Web pour afficher l'image dans un environnement réseau local.
- **Alarme**
Lorsqu'un événement se produit, les vidéos associées sont envoyées au serveur e-mail et FTP enregistré de l'utilisateur ou stockées sur la carte mémoire Micro SD.
- **Détection de sabotage**
Détection des tentatives de sabotage sur la surveillance vidéo.
- **Détection de mouvement**
Détection des mouvements depuis l'entrée vidéo de la caméra.
- **Conformité ONVIF**
Ce produit supporte l'ONVIF Profile S&G.
Pour obtenir de plus amples informations, consultez le site Web www.onvif.org.



SPÉCIFICATIONS PC RECOMMANDÉES







- CPU : Intel(R) Core(TM) i7 3.4 GHz ou supérieur
 - Système d'exploitation pris en charge : Windows, Mac OS X
 - **Visualiseur Web sans plug-in**
Navigateurs Web supportés : Google Chrome, MS Edge, Mozilla Firefox (Windows 64 bits uniquement), Apple Safari (Mac OS X uniquement)
 - **Visualiseur avec plug-in**
Navigateurs Web supportés : MS Explorer
 - VGA : Carte graphique PCIe 256MB GDDR3 ou supérieure
- ※ Pour des informations détaillées sur le système d'exploitation et le navigateur, veuillez vous reporter à l'annexe.

CARACTÉRISTIQUES RECOMMANDÉES POUR LA CARTE MÉMOIRE MICRO SD/SDHC/SDXC

- Capacité recommandée : 16 Go – 32 Go (type MLC)
- Pour votre caméra, nous recommandons que vous utilisiez une carte mémoire des fabricants suivants:
Carte mémoire Micro SD/SDHC/SDXC : Sandisk, Transcend









CONTENU (LND-6010R/6020R/6030R/6070R)

Veuillez vérifier si votre caméra et l'ensemble de ses accessoires sont contenus dans l'emballage du produit. (l'accessoire varie selon le pays de vente.)

Apparence	Nom de l'élément	Quantité	Description
	Caméra	1	
	Manuel d'utilisation, CD du logiciel installer	1	
	Guide de prise en main rapide (En option)	1	
	Carte de garantie (En option)	1	
	Gabarit	1	Guide d'installation du produit
	Vis autotaraudeuse	2	Permet de procéder à l'installation au plafond ou au mur

CONTENU (LNO-6010R/6020R/6030R/6070R)











Veuillez vérifier si votre caméra et l'ensemble de ses accessoires sont contenus dans l'emballage du produit. (l'accessoire varie selon le pays de vente.)

Apparence	Nom de l'élément	Quantité	Description	Nom du modèle
	Caméra	1		LNO-6010R/6020R/6030R/6070R
	Manuel d'utilisation, CD du logiciel installer	1		Utilisation pour tous les modèles
	Guide de prise en main rapide (En option)	1		
	Carte de garantie (En option)	1		
	Gabarit	1	Guide d'installation du produit	
	Vis autotaraudeuse	3	Permet de procéder à l'installation au plafond ou au mur	
	Accessoire RJ45 résistant à l'eau	1	Doit être installé dans des emplacements humides	
	Agent d'absorption de moisissures pour cartes	1	Associé une fois après installation.	LNO-6070R

présentation

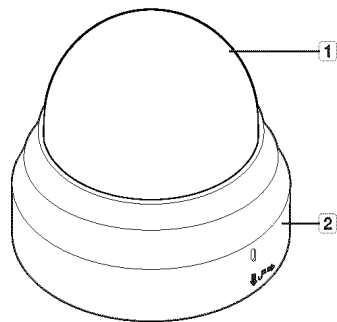
CONTENU (LNV-6010R/6020R/6030R/6070R)

Veuillez vérifier si votre caméra et l'ensemble de ses accessoires sont contenus dans l'emballage du produit.
(l'accessoire varie selon le pays de vente.)

Apparence	Nom de l'élément	Quantité	Description	Nom du modèle
	Caméra	1		LNV-6010R/6020R/ 6030R/6070R
	Manuel d'utilisation, CD du logiciel installer	1		Utilisation pour tous les modèles
	Guide de prise en main rapide (En option)	1		
	Carte de garantie (En option)	1		
	Gabarit	1	Guide d'installation du produit	
	Clé en forme d'étoile	1	Utilisé pour l'assemblage et le démontage des couvercles de dôme	
	Agent d'absorption de moisissures pour cartes	1	Associé une fois après installation.	
	Bague de câble	1	Utilisé pour connecter le câble LAN d'un diamètre de Ø 7 ~ 8,5.	
	Vis autotaraudeuse	2	Permet de procéder à l'installation au plafond ou au mur	LNV-6010R/ 6020R/6030R
		3		LNV-6070R

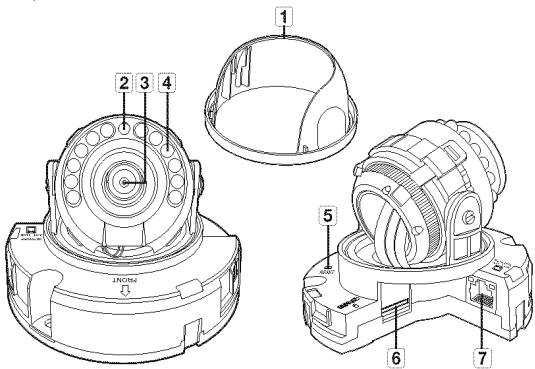
D'UN COUP D'ŒIL (LND-6010R/6020R/6030R)

Apparence



Élément	Description
1 Couvercle dôme	Couvercle du boîtier utilisé pour protéger l'objectif et l'unité principale.
2 Boîtier de la caméra	Partie boîtier couvrant le corps de la caméra.

Composants

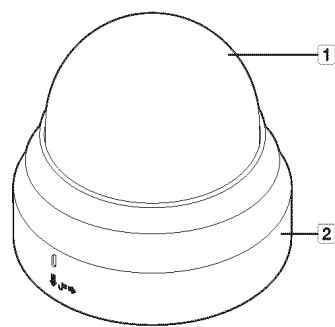


Élément	Description
1 Couvercle intérieur	Coque de protection pour le corps principal.
2 Capteur d'éclairage	Détecte la lumière reçue pour commander la diode infrarouge.
3 Objectif	Objectif de la caméra.
4 Diode infrarouge	Ces diodes infrarouge sont commandées par le capteur d'éclairage.
5 Bouton de réinitialisation	<p>Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système.</p> <p>Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.</p>
6 Compartiment de la carte mémoire Micro SD	Compartiment de la carte mémoire Micro SD.
7 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.

présentation

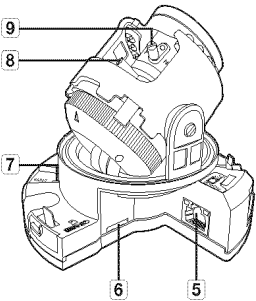
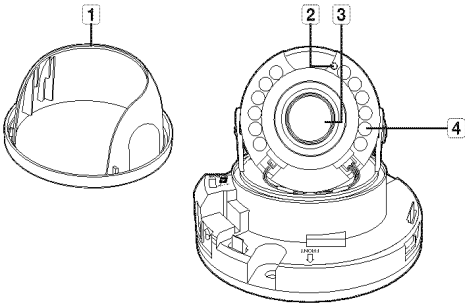
D'UN COUP D'ŒIL (LND-6070R)

Apparence



Élément	Description
1 Couverture dôme	Couvercle du boîtier utilisé pour protéger l'objectif et l'unité principale.
2 Boîtier de la caméra	Partie boîtier couvrant le corps de la caméra.

Composants

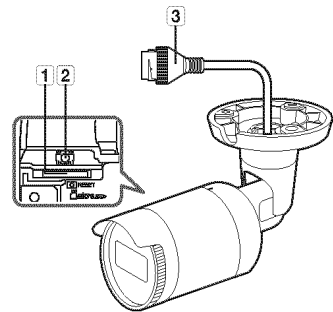


Élément	Description
1 Couvercle intérieur	Coque de protection pour le corps principal
2 Capteur d'éclairage	Détecte la lumière reçue pour commander la diode infrarouge.
3 Objectif	Objectif de la caméra.
4 Diode infrarouge	Ces diodes infrarouge sont commandées par le capteur d'éclairage.
5 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.
6 Compartiment de la carte mémoire Micro SD	Compartiment de la carte mémoire Micro SD.
7 Bouton de réinitialisation	Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système. <p>Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.</p>
8 Levier de commande de zoom	T Zoomer (Télé. obj.)
	W Dézoomer (grand angle)
	Relâchez le levier et déplacez-le vers la gauche ou la droite pour effectuer un zoom avant ou arrière. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.
9 Levier de commande de mise au point	N Mise au point sur un objet proche (Proche)
	F Mettre au point sur un objet éloigné (loin)
	Relâchez le levier et déplacez-le vers la gauche ou la droite pour régler la mise au point de l'objectif. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.

présentation

D'UN COUP D'ŒIL (LNO-6010R/6020R/6030R)

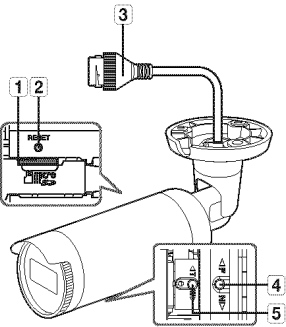
Apparence



Élément	Description
1 Emplacement de la carte Micro SD	(Espace interne du produit) Il s'agit d'un emplacement dans lequel vous pouvez insérer une carte Micro SD.
2 Bouton de réinitialisation	Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système. Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.
3 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.

D'UN COUP D'ŒIL (LNO-6070R)

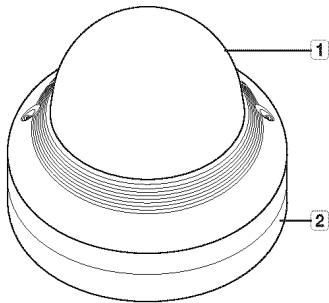
Apparence



Élément	Description
1 Emplacement de la carte Micro SD	(Espace interne du produit) Il s'agit d'un emplacement dans lequel vous pouvez insérer une carte Micro SD.
2 Bouton de réinitialisation	Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système. Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.
3 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.
4 Levier de commande de mise au point	N Mise au point sur un objet proche (Proche)
	F Mettre au point sur un objet éloigné (loin)
5 Levier de commande de zoom	Relâchez le levier et déplacez-le vers la gauche ou la droite pour régler la mise au point de l'objectif. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.
	T Zoomer (Télé. obj.)
	W Dézoomer (grand angle)
5 Levier de commande de zoom	Relâchez le levier et déplacez-le vers la gauche ou la droite pour effectuer un zoom avant ou arrière. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.

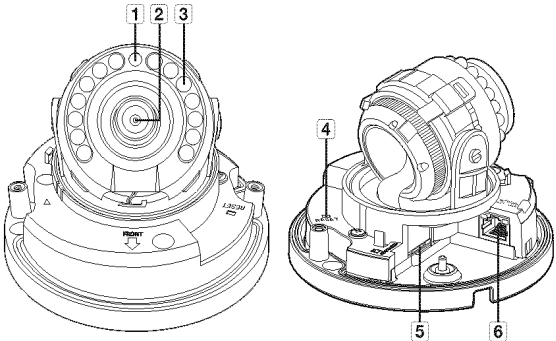
D'UN COUP D'ŒIL (LNV-6010R/6020R/6030R)

Apparence



Élément	Description
1 Couverture dôme	Couvercle du boîtier utilisé pour protéger l'objectif et l'unité principale.
2 Boîtier de la caméra	Partie boîtier couvrant le corps de la caméra.

Composants

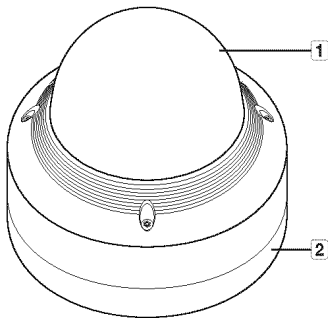


Élément	Description
1 Capteur d'éclairage	Détecte la lumière reçue pour commander la diode infrarouge.
2 Objectif	Objectif de la caméra.
3 Diode infrarouge	Ces diodes infrarouge sont commandées par le capteur d'éclairage.
4 Bouton de réinitialisation	<p>Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système.</p> <p>Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.</p>
5 Compartiment de la carte mémoire Micro SD	Compartiment de la carte mémoire Micro SD.
6 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.

présentation

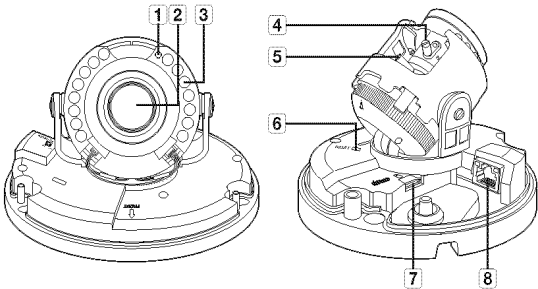
D'UN COUP D'ŒIL (LNV-6070R)

Apparence



Élément	Description
1 Couvercle dôme	Couvercle du boîtier utilisé pour protéger l'objectif et l'unité principale.
2 Boîtier de la caméra	Partie boîtier couvrant le corps de la caméra.

Composants



Élément	Description
1 Capteur d'éclairage	Détecte la lumière reçue pour commander la diode infrarouge.
2 Objectif	Objectif de la caméra.
3 Diode infrarouge	Ces diodes infrarouge sont commandées par le capteur d'éclairage.
4 Levier de commande de mise au point	N Mise au point sur un objet proche (Proche)
	F Mettre au point sur un objet éloigné (loin)
5 Levier de commande de zoom	Relâchez le levier et déplacez-le vers la gauche ou la droite pour régler la mise au point de l'objectif. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.
	T Zoomer (Télé. obj.)
6 Bouton de réinitialisation	W Dézoomer (grand angle)
	Relâchez le levier et déplacez-le vers la gauche ou la droite pour effectuer un zoom avant ou arrière. Tournez le levier dans le sens horaire pour fixer la position ajustée et l'empêcher de se déplacer.
7 Compartiment de la carte mémoire Micro SD	Le bouton permet de restaurer tous les réglages de la caméra sur leur valeur par défaut. Appuyez dessus pendant 5 secondes pour relancer le système.
	Si vous réinitialisez la caméra, les réglages réseau seront ajustés de sorte que le serveur DHCP puisse être activé. En l'absence de serveur DHCP au sein du réseau, vous devez lancer le programme d'installation IP Installer pour modifier les réglages réseau de base, tels que l'adresse IP, le masque de sous-réseau, la passerelle, etc., avant de pouvoir vous connecter au réseau.
8 Connecteur PoE	Alimentez le câble Ethernet et connectez-vous au réseau.

installation et connexion

INSTALLATION (LND-6010R/6020R/6030R/6070R)

Précautions à prendre avant l'installation

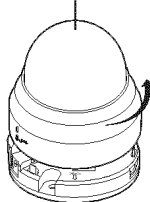
Assurez-vous de bien lire les instructions suivantes avant d'installer la caméra.

- Elle doit être installée sur une zone (plafond ou mur) qui peut supporter cinq fois le poids de la caméra, y compris le support d'installation.
- L'utilisation de câbles recollés ou effilochés peut endommager le produit et provoquer un incendie.
- Pour des raisons de sécurité, ne laissez personne d'autre que vous sur le site de l'installation. Ne laissez pas vos effets personnels sur le site, par mesure de précaution.
- Pour la caméra à objectif focal variable manuel, des fonctions telles que la mise au point et le zoom doivent être réglées avant l'installation. Lors de l'ajustement, assurez-vous d'éviter que des substances étrangères ne soient attachées.

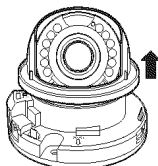
Démontage

1. Maintenez la partie inférieure de la caméra d'une main et tournez le couvercle de droite à gauche avec l'autre main afin de les désolidariser.

Couvercle du dôme

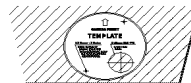


2. Soulevez le couvercle intérieur pour le séparer.

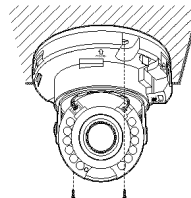


Installation

1. Fixez le gabarit d'installation à l'emplacement souhaité et percez des trous en suivant le gabarit.



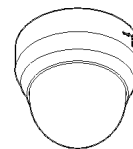
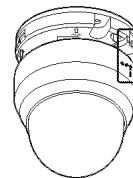
2. Utilisez les vis taraudeuses fournies pour fixer la caméra sur les trous percés dans le gabarit.
 - Placez la marque « ↑ » imprimée sur la caméra en face de la zone à surveiller.
3. Raccordez les bornes internes de la caméra avec les câbles correspondants.
4. Réglez l'orientation de l'objectif selon la position souhaitée en vous reportant à la section « **Réglage de l'orientation de la caméra de surveillance** » (page 20)



- Il est recommandé de ne pas toucher l'objectif séparément, car il est expédié de l'usine avec la mise au point correctement ajustée lorsque l'inspection est terminée. Si vous touchez l'objectif, la mise au point risque d'être déformée ou l'objectif de se salir. (LND-6010R / 6020R / 6030R)
- Pour la caméra à objectif focal variable manuel, des fonctions telles que la mise au point et le zoom doivent être réglées avant l'installation. Lors de l'ajustement, assurez-vous d'éviter que des substances étrangères ne soient attachées. (LND-6070R)


5. Veuillez connecter le couvercle intérieur au corps principal.
6. Tout en tenant le côté inférieur de la caméra à l'aide de votre main, veuillez saisir et pousser son couvercle avec l'autre main afin d'aligner les deux flèches, comme indiqué dans la figure.

- Pour assembler le couvercle du dôme, faire correspondre les flèches et appuyer fermement sur le couvercle. Si le couvercle du dôme est tourné pendant le montage ou s'il est mal disposé, une réflexion diffuse pourrait survenir ou la section de la lentille pourrait tourner, ce qui pourrait entraîner la modification de la plage de prise de vue.
- Assurez-vous que le couvercle du dôme est correctement connecté à la partie inférieure, comme indiqué sur le schéma. Si le système d'enclenchement n'est pas bien fixé, le couvercle du dôme peut tomber, ce qui pourrait causer des blessures.



installation et connexion

INSTALLATION (LNO-6010R/6020R/6030R/6070R)

-  Cette caméra est étanche et en conformité avec les spécifications de la norme IP66, mais la prise jack connectée au câble externe ne l'est pas. Il est recommandé d'installer ce produit sous l'avant-toit afin d'éviter que le câble ne soit exposé.

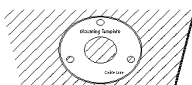
Précautions à prendre avant l'installation

Assurez-vous de bien lire les instructions suivantes avant d'installer la caméra.

- Elle doit être installée sur une zone (plafond ou mur) qui peut supporter cinq fois le poids de la caméra, y compris le support d'installation.
- L'utilisation de câbles recollés ou effilochés peut endommager le produit et provoquer un incendie.
- Pour des raisons de sécurité, ne laissez personne d'autre que vous sur le site de l'installation. Ne laissez pas vos effets personnels sur le site, par mesure de précaution.
- Pour la caméra à objectif focal variable manuel, des fonctions telles que la mise au point et le zoom doivent être réglées avant l'installation. Lors de l'ajustement, assurez-vous d'éviter que des substances étrangères ne soient attachées.

Installation

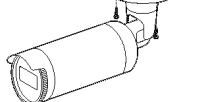
1. Fixez le gabarit d'installation à l'emplacement souhaité et percez des trous en suivant le gabarit.




2. Utilisez les vis taraudeuses fournies pour fixer la caméra sur les trous percés dans le gabarit.

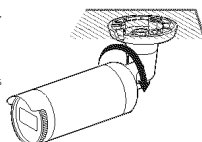


3. Connectez les câbles appropriés aux bornes de la caméra.



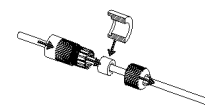
4. Réglez l'orientation de la caméra à l'aide d'un tournevis cruciforme.

-  Lorsque vous réglez la position de la caméra à l'aide d'un support, serrez la vis du support, réglez la caméra et serrez-la. Si vous tentez de régler en forçant alors que la vis est serrée, il peut en découler une rayure ou d'autres problèmes.

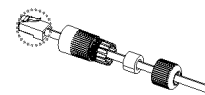


Comment connecter le câble RJ45 étanche à un câble LAN

1. Insérez-le dans la direction de la flèche.

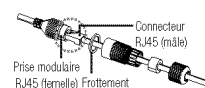


2. Branchez le connecteur LAN (mâle) au câble.

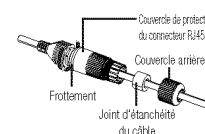


3. Branchez la prise modulaire RJ45 (femelle) au connecteur RJ45 (mâle).


-  Veuillez garder chacune des pièces séparées.

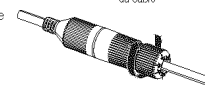


4. Assemblez en tournant la prise modulaire RJ45 (femelle) et le couvercle de protection RJ45 dans le sens des aiguilles d'une montre (Suivez la flèche).



5. Assemblez en tournant le couvercle de protection RJ45 et la façade arrière dans le sens des aiguilles d'une montre (Suivez la flèche). Une fois le capot arrière monté, le joint d'étanchéité du câble est fermement fixé au câble pour le rendre imperméable à l'eau.

-  Vous devez le monter en entier pour faire tourner le couvercle arrière jusqu'à la fin du filetage du connecteur RJ45.



Installation extérieure

Lorsque vous l'installez en dehors d'un bâtiment, rendez-le étanche à l'aide de ruban en caoutchouc butylique (qui peut être acheté dans un magasin), de sorte que l'eau ne coule pas depuis le câble connecté à l'extérieur.

1. Connectez le câble PoE.

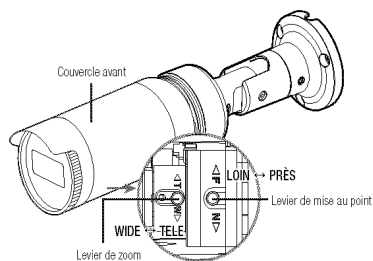


2. Enroulez la gaine du câble noir (zone A) et la zone de connexion du câble à l'aide de ruban étanche (en caoutchouc butylique), de sorte que plus de la moitié du ruban est chevauchée.

- Si la gaine du câble noir n'est pas correctement rendue étanche, elle peut directement provoquer une fuite. Assurez-vous de protéger le câble avec une large épaisseur de ruban.
- Le ruban étanche en caoutchouc butylique est fait de caoutchouc butylique qui peut être étendu jusqu'à double de sa longueur normale.

Pour régler le facteur de zoom ou la mise au point (LNO-6070R)

1. Desserrez le couvercle avant, tel qu'illustré.
2. Desserrez légèrement le levier de zoom/mise au point.
3. Positionnez le levier de zoom/mise au point sur WIDE (PRÈS) ou TELE (LOIN), selon le cas.
4. Ensuite, resserrez le levier de zoom/mise au point pour fixer la position ainsi réglée.
5. Tournez le couvercle avant pour le ressermer.

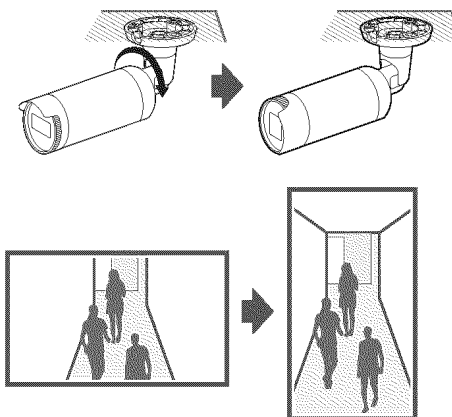


- Pour garantir une étanchéité homogène, resserrez le couvercle avant en le tournant jusqu'en bout de course. En associant le capot avant, veuillez associer le corps principal et le couvercle avant de sorte que l'indicateur LOCK soit verrouillé.
- Utilisez le levier pour régler le facteur de zoom ou la mise au point, puis tournez le levier dans le sens des aiguilles d'une montre pour le fixer.
- Avant de régler le facteur de zoom ou la mise au point de l'objectif, desserrez le couvercle avant et retirez-le.

Vue du couloir


La caméra peut être tournée pour agrandir la zone de surveillance verticale à un rapport d'aspect de 9:16, ce qui la rend appropriée pour les couloirs étroits et les passages.

- Faites pivoter le boîtier de la caméra et le couvercle avant.



installation et connexion

INSTALLATION (LNV-6010R/6020R/6030R/6070R)

-  Cette caméra est étanche et en conformité avec les spécifications de la norme IP66, mais la prise jack connectée au câble externe ne l'est pas. Il est recommandé d'installer ce produit sous l'avant-toit afin d'éviter que le câble ne soit exposé.

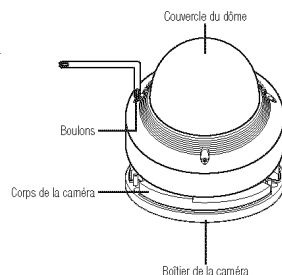
Précautions à prendre avant l'installation

Assurez-vous de bien lire les instructions suivantes avant d'installer la caméra.

- Elle doit être installée sur une zone (plafond ou mur) qui peut supporter cinq fois le poids de la caméra, y compris le support d'installation.
- L'utilisation de câbles recollés ou effilochés peut endommager le produit et provoquer un incendie.
- Pour des raisons de sécurité, ne laissez personne d'autre que vous sur le site de l'installation. Ne laissez pas vos effets personnels sur le site, par mesure de précaution.
- Pour la caméra à objectif focal variable manuel, des fonctions telles que la mise au point et le zoom doivent être réglées avant l'installation. Lors de l'ajustement, assurez-vous d'éviter que des substances étrangères ne soient attachées.

Démontage

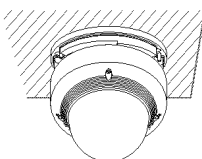
1. Retirez le couvercle du dôme en desserrant les boulons de fixation en les tournant dans le sens antihoraire à l'aide de la clé en forme d'étoile fournie.



Installation


2. Fixez le gabarit d'installation à l'emplacement souhaité et percez des trous en suivant le gabarit.
3. Utilisez les vis taraudeuses fournies pour fixer la caméra sur les trous percés dans le gabarit.
4. Connectez et disposez les câbles nécessaires de sorte à éviter de les endommager ou de les coincer lors de l'installation de la caméra.
5. Réglez l'orientation de l'objectif selon la position souhaitée en vous reportant à la section « **Réglage de l'orientation de la camera de surveillance** ». (page 20)
6. Refermez le couvercle du dôme.

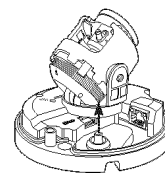
■ Serrer les boulons de fixation fermement en utilisant la clé en forme d'étoile pour éviter les fuites d'eau.



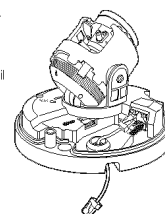
Raccordement du câble LAN

1. Retirez le couvercle du dôme et le boîtier.
2. Tirez sur la longue partie projetée de la prise en caoutchouc en partie inférieure, et retirez-la ainsi qu'illustré sur la figure.

-  Utilisez une bague de câble appropriée pour connecter le câble LAN.
- Caméra de base : utilisez le câblé d'un diamètre de Ø 5 ~ 6.5.
 - Composants fournis : utilisez le câble d'un diamètre de Ø 7 ~ 8.5.



3. Insérez le câble LAN à travers le trou qui a été formé en enlevant la partie saillante à l'étape 2.
4. Retirez la gaine à l'aide d'une pince coupe-câble et alignez les câbles.
5. Raccordez le câble LAN avec un connecteur LAN et insérez-le dans l'outil LAN.
6. Raccordez le câble fini au port Ethernet.



Fixation de l'adaptateur (dégroulé)

Choisissez et achetez parmi les options suivantes (dégroupées) celle qui est adaptée au site d'installation ou celle qui vous convient le mieux.

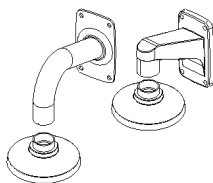
1. Retirez le couvercle du dôme du boîtier en vous référant au chapitre « **Démontage** ». (page 16)
2. Utilisez la vis de mécanique fournie pour fixer le boîtier de la caméra à l'adaptateur dégroupé.
3. Connectez et disposez les câbles nécessaires de sorte à éviter de les endommager ou de les coincer lors de l'installation de la caméra.
4. Procédez au montage de la caméra dans l'ordre inverse indiqué à la section « **Démontage** ».
5. Réglez l'orientation de l'objectif selon la position souhaitée en vous reportant à la section « **Réglage de l'orientation de la camera de surveillance** ». (page 20)
6. Refermez le couvercle du dôme.

■ Fixez solidement le boulon de fixation à l'aide d'une clé en L pour empêcher l'eau de couler.

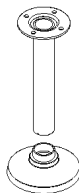
Accessoires en option pour l'installation

Pour faciliter l'installation, vous pouvez acheter les accessoires appropriés disponibles en option.

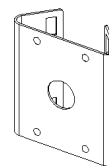
1. ADAPTATEUR POUR FIXATION MURALE (SBP-300WMW1) /
ADAPTATEUR POUR FIXATION SUSPENDUE (SBP-122HMMW :
LND-6070R, LNV-6010R/6020R/6030R, SBP-301HMMW2 : LNV-
6070R, SBP-300HMMW7 : LND-6010R/6020R/6030R)
Cet adaptateur est utilisé pour installer le dôme de la caméra sur un
mur.



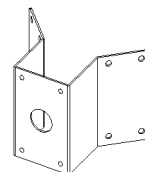
2. ADAPTATEUR POUR FIXATION AU PLAFOND (SBP-300CM) /
ADAPTATEUR POUR FIXATION SUSPENDUE (SBP-122HMMW : LND-
6070R, LNV-6010R/6020R/6030R, SBP-301HMMW2 : LNV-6070R, SBP-
300HMMW7 : LND-6010R/6020R/6030R)
Cet adaptateur est utilisé pour installer le dôme de la caméra sur un
plafond en béton.



3. ADAPTATEUR POUR FIXATION SUR POTEAU (SBP-300PM)
Ceci est un adaptateur utilisé pour l'installation de l'ADAPTATEUR POUR
FIXATION MURALE
(SBP-300WM ou SBP-300WM1) sur un poteau d'un diamètre supérieur
à 80 mm.

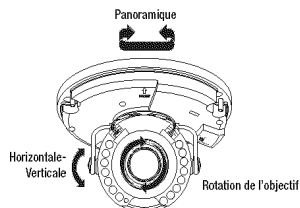


4. ADAPTATEUR POUR FIXATION D'ANGLE (SBP-300KM)
Ceci est un adaptateur pour l'installation de l'ADAPTATEUR POUR
FIXATION MURALE (SBP-300WM ou SBP-300WM1) à l'angle du
joint de mur.



installation et connexion

Réglage de l'orientation de la caméra de surveillance (LND-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)



▪ Réglage de la direction de surveillance

Vous ne pouvez régler l'orientation de la caméra que lorsque celle-ci a été fixée au plafond. La rotation de l'unité de la caméra vers la gauche ou la droite est appelée Panoramique, le réglage de l'inclinaison est appelé Horizontale-Verticale et la rotation de l'objectif sur son axe est appelée Rotation.

- La plage effective du panoramique couvre un angle total de 350 degrés.
- La plage effective de la rotation couvre un angle total de 355 degrés.
- La plage effective de l'inclinaison couvre un angle total de 67 degrés.



- L'image peut être recouverte par le boîtier de la caméra en fonction de l'angle.
- Ne forcez pas sur la mise au point / le zoom de l'objectif après démontage du boîtier en dôme. Autrement, ceci peut fausser la mise au point en raison d'une panne de moteur.

▪ Méthodes de réglage

1. Après l'installation de la caméra, réglez l'angle de panoramique selon la direction de surveillance.
2. Réglez l'angle horizontal de manière à ce que l'image ne soit pas inversée.
3. Réglez l'angle d'inclinaison de sorte que la caméra soit face à l'objet à surveiller.

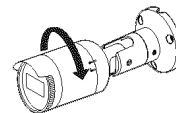
INSERTION/RETRAIT D'UNE CARTE MÉMOIRE MICRO SD



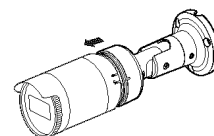
- Déconnectez le câble d'alimentation de la caméra avant d'y insérer la carte mémoire Micro SD.
- N'insérez pas la carte mémoire Micro SD à l'envers et de force. Autrement, vous risquez d'endommager la carte mémoire Micro SD.
- En cas de pluie ou lorsque le taux d'humidité est élevé, l'insertion ou l'éjection d'une carte Micro SD n'est pas recommandée.
- Le désassemblage du couvercle du produit doit être terminé dans un délai de 5 minutes. Sinon, il y a un risque de condensation interne.

Insertion d'une carte mémoire Micro SD (LNO-6010R/6020R/6030R/6070R)

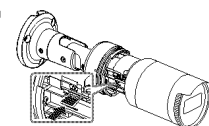
1. Tournez le couvercle avant dans le sens [↺].



2. Tirez et séparez le couvercle avant.

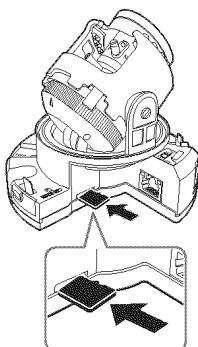


3. Insérez une carte Micro SD en suivant la direction de la flèche du schéma.

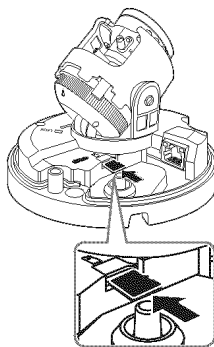


Insertion d'une carte mémoire Micro SD (LND-6010R/6020R/6030R/6070R, LNV-6010R/6020R/6030R/6070R)

1. Séparez le couvercle du dôme de la caméra.
2. Insérez une carte Micro SD en suivant la direction de la flèche du schéma.



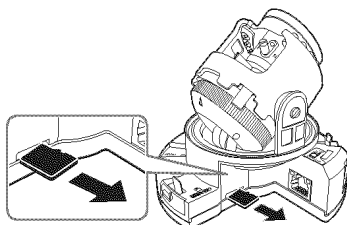
<LND-6010R/6020R/6030R/6070R>



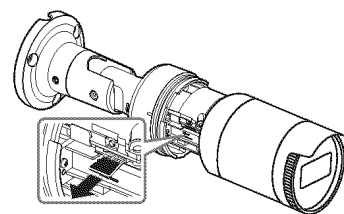
<LNV-6010R/6020R/6030R/6070R>

Retrait d'une carte mémoire Micro SD

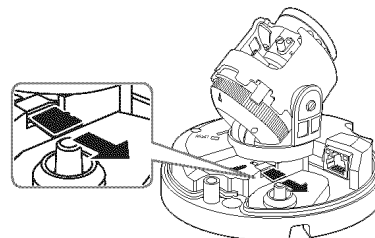
Appuyer doucement vers le bas sur l'extrémité exposée de la carte mémoire comme indiqué dans le diagramme pour éjecter la carte mémoire de la fente.



<LND-6010R/6020R/6030R/6070R>



<LND-6010R/6020R/6030R/6070R>



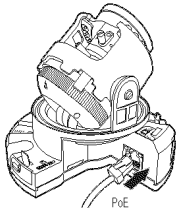
<LNV-6010R/6020R/6030R/6070R>

- ⓘ Veuillez noter que si vous appuyez fermement et relâchez la carte mémoire Micro SD quand elle est éjectée, elle peut sortir.
- ⓘ Avant de retirer la carte mémoire Micro SD, dans <Stockage>, réglez le dispositif sur <Désactivé> et appuyez sur le bouton [Appliquer], puis mettez la caméra hors tension.
- ⓘ Si vous arrêtez la caméra ou retirez la carte mémoire Micro SD qui contient les données du produit, ces données peuvent être perdues ou endommagées.

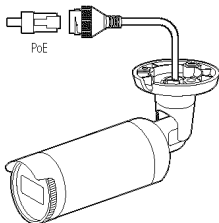
installation et connexion

ALIMENTATION ET MISE EN RÉSEAU

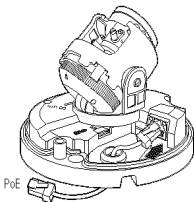
- Connectez votre périphérique PoE à la caméra.
- Connectez-vous à un connecteur PoE du routeur compatible PoE (alimentation électrique par câble Ethernet).
 - Utilisez un équipement PoE (alimentation électrique par câble Ethernet) prenant en charge la norme IEEE802.3af.



<LND-6010R/6020R/6030R/6070R>



<LNO-6010R/6020R/6030R/6070R>



<LNV-6010R/6020R/6030R/6070R>

Spécifications du câble réseau

Elément	Contenus	Remarque
Connecteur	RJ45	
Ethernet	10/100BASE-T	10/100 Mbps
Câble	5e catégorie UTP	
Distance max	100 M	Résistance CC ≤ 0,188 Ω/m
Support du PoE	IEEE 802.3af	

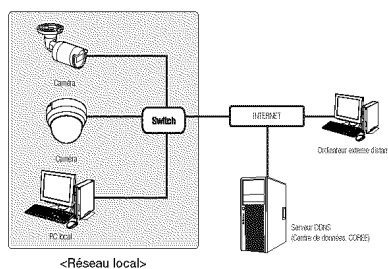
connexion et configuration réseau

Vous pouvez configurer les paramètres de réseau en fonction de vos configurations de réseau.

CONNECTER LA CAMÉRA DIRECTEMENT AU RÉSEAU DE ZONE LOCALE

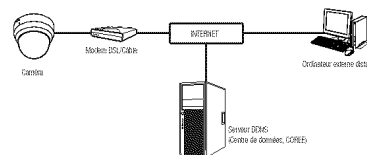
Se connecte à la caméra à partir d'un PC local sur le LAN

1. Lancer un navigateur Internet sur le PC local.
2. Saisir l'adresse IP de la caméra dans la barre d'adresse du navigateur.



- ❗ Un PC à distance dans une sortie Internet externe de réseau LAN peut ne pas pouvoir se connecter à la caméra installée dans l'intranet si le renvoi de port n'est pas correctement configuré ou si un pare-feu est mis. Dans ce cas, pour résoudre le problème, contactez votre administrateur de réseau.
- ❗ Dans le programme d'installation IP, vous pouvez utiliser le mot de passe initial, "4321" pour définir l'adresse IP, le masque de sous-réseau, la passerelle, le port HTTP, le port VNP et le type d'IP. Après avoir changé l'interface réseau, pour une meilleure sécurité, accédez au navigateur Web et modifiez le mot de passe.
- ❗ Par défaut, l'adresse IP sera attribuée automatiquement depuis le serveur DHCP. En l'absence de serveur DHCP disponible, l'adresse IP sera définie sur 192.168.1.100. Pour changer l'adresse IP, utilisez le programme d'installation IP. Pour obtenir de plus amples détails sur l'utilisation du programme d'installation IP, reportez-vous à la section « Configuration de l'adresse IP Fixe » (Page 25)

CONNEXION DE LA CAMÉRA DIRECTEMENT À UN MODEM DSL/CÂBLE BASÉ SUR LE PROTOCOLE DHCP

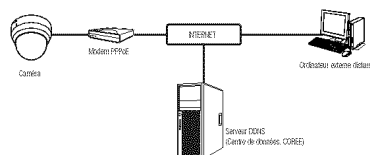


1. Connectez l'ordinateur utilisateur directement à la caméra réseau.
2. Exécutez le programme d'installation IP et changez l'adresse IP de la caméra afin d'utiliser le navigateur Web sur votre poste pour la connexion à l'Internet.
3. Utilisez le navigateur Internet pour connecter le Web viewer.
4. Allez à la page [Configuration].
5. Allez sur [Réseau] - [DDNS], puis configurez les réglages DDNS.
6. Allez à [Basic] - [IP & Port], et définissez le type d'IP pour [DHCP].
7. Connectez la caméra, qui a été retirée de votre ordinateur, directement au modem.
8. Redémarrez la caméra.

- ❗ Pour plus d'informations sur la configuration de DDNS, reportez-vous à l'aide en ligne de Web Viewer.
- ❗ Pour plus d'informations sur la définition du format IP, reportez-vous à l'aide en ligne de Web Viewer.

connexion et configuration réseau

CONNEXION DE LA CAMÉRA DIRECTEMENT À UN MODEM PPPoE

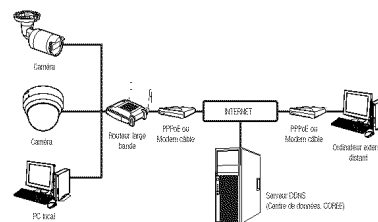


1. Connectez l'ordinateur utilisateur directement à la caméra réseau.
2. Exécutez le programme d'installation IP et changez l'adresse IP de la caméra afin d'utiliser le navigateur Web sur votre poste pour la connexion à l'Internet.
3. Utilisez le navigateur Internet pour connecter le Web viewer.
4. Allez à la page [Configuration].
5. Allez sur [Réseau] - [DDNS], puis configurez les réglages DDNS.
6. Allez à [Basic] - [IP & Port] Page de configuration, définissez le type d'IP [PPPoE], et saisissez l'ID du service réseau et le mot de passe.
7. Connectez la caméra, qui a été retirée de votre ordinateur, directement au modem.
8. Redémarrez la caméra.

- ✎ Pour plus d'informations sur la configuration de DDNS, reportez-vous à l'aide en ligne de Web Viewer.
- ✎ Pour plus d'informations sur la définition du format IP, reportez-vous à l'aide en ligne de Web Viewer.

CONNECTER LA CAMÉRA AU ROUTEUR LARGE BANDE PAR LE MODEM PPPoE/CÂBLE

C'est pour un petit environnement de réseau comme les maisons, SOHO et les magasins ordinaires.



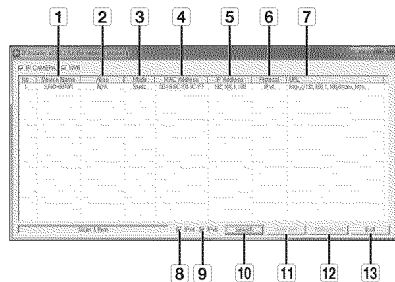
Configurer les paramètres de réseau du PC local connecté au routeur

Pour configurer les paramètres de réseau du PC local connecté au Routeur large bande, suivre les instructions ci-dessous.

- Sélectionner : <Network> → <Properties> → <Local Area Connection> → <General> → <Properties> → <Internet Protocol (TCP/IP)> → <Properties> → <Obtain an IP address automatically> ou <Use the following IP address>.
- Suivre les instructions ci-dessous si vous sélectionnez <Use the following IP address>:
 - ex.1) Si l'adresse (LAN IP) du Routeur large bande est 192.168.1.1
 Adresse IP : 192.168.1.100
 Masque de sous-réseau : 255.255.255.0
 Passerelle par défaut : 192.168.1.1
 - ex.2) Si l'adresse (LAN IP) du Routeur large bande est 192.168.0.1
 Adresse IP : 192.168.0.100
 Masque de sous-réseau : 255.255.255.0
 Passerelle par défaut : 192.168.0.1
 - ex.3) Si l'adresse (LAN IP) du Routeur large bande est 192.168.xxx.1
 Adresse IP : 192.168.xxx.100
 Masque de sous-réseau : 255.255.255.0
 Passerelle par défaut : 192.168.xxx.1

- ✎ Pour l'adresse du Routeur large bande, se référer à la documentation du produit.
- ✎ Pour plus d'informations sur la redirection de port du routeur large bande, reportez-vous à « Configuration de la Redirection de la Plage de Ports (Mapping de Ports) » (Page 27)

BOUTONS UTILISÉS SOUS IP INSTALLER



Élément	Description
1 Device Name	Nom du modèle de la caméra connectée. Cliquez sur la colonne pour trier la liste par nom de modèle. Cependant, si vous cliquez dessus durant la recherche, celle-ci sera interrompue.
2 Alias	Cette fonction n'est pas appliquée pour le moment.
3 Mode	Affiche <Static>, <Dynamic> ou <PPPoE> pour l'état de connexion réseau actuel.
4 MAC(Ethernet) Address	Adresse Ethernet de la caméra connectée. Cliquez sur la colonne pour trier la liste par adresse Ethernet. Cependant, si vous cliquez dessus durant la recherche, celle-ci sera interrompue.
5 IP Address	Adresse IP. Cliquez sur la colonne pour trier la liste par adresse IP. Cependant, si vous cliquez dessus durant la recherche, celle-ci sera interrompue.
6 Protocol	Réglage réseau de la caméra. Le réglage par défaut est « IPv4 ». Les caméras ayant un réglage en IPv6 affichent « IPv6 ».
7 URL	Adresse URL du serveur DNS autorisant l'accès à partir d'un système Internet externe. Cependant, cette option sera remplacée par le réglage <IP Address> de la caméra en cas d'échec de l'enregistrement DNS.
8 IPv4	Recherche les caméras réglées sur IPv4.

Élément	Description
9 IPv6	Recherche les caméras réglées sur IPv6. Activé uniquement dans un environnement compatible IPv6.
10 Search	Recherche les caméras actuellement connectées au réseau. Cependant, ce bouton sera grisé si aucun des réglages IPv4 ou IPv6 n'est sélectionné.
11 Auto Set	Le programme d'installation IP configure automatiquement les réglages réseau.
12 Manual Set	Vous devez configurer les réglages réseau manuellement.
13 Exit	Quitte le programme IP Installer.

- En ce qui concerne le programme d'installation IP Installer, utilisez uniquement la version fournie sur le CD d'installation ou la dernière version disponible de l'application. Vous pouvez télécharger la version la plus récente du produit sur le site Internet de Hanwha Techwin.

CONFIGURATION DE L'ADRESSE IP FIXE

Configuration réseau manuelle

Exécutez <IP Installer_v2.XX.exe> pour afficher la liste des résultats de la recherche de caméras.
Au démarrage initial, les deux options [Auto Set] et [Manual Set] sont grisées.

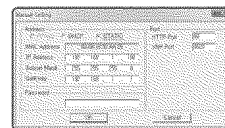
- Pour les caméras trouvées ayant un réglage IPv6, ces boutons sont grisés car ces caméras ne prennent pas en charge cette fonction.

- Sélectionnez une caméra dans la liste de recherche.
Vérifiez l'adresse MAC de la caméra sur l'étiquette de la caméra.
Les boutons [Auto Set] et [Manual Set] sont alors activés.



- Cliquez sur [Manual Set].
La boîte de dialogue Manual Setting apparaît.
<IP Address>, <Subnet Mask>, <Gateway>, <HTTP Port>, et <VNP Port> de la caméra sont affichés avec les valeurs pré-réglées.

- Renseignez les informations nécessaires dans la sous-fenêtre <Address>.
 - MAC (Ethernet) Address : L'adresse MAC imprimée sur l'étiquette de la caméra est automatiquement affichée et ne nécessite aucun réglage utilisateur.



- Les paramètres liés à l'adresse IP ne peuvent être réglés lorsque DHCP n'est pas sélectionné.

connexion et configuration réseau

Si vous n'utilisez pas de Routeur large bande

Pour le réglage des options <IP Address>, <Subnet Mask> et <Gateway>, contactez votre administrateur réseau.

4. Renseignez les informations nécessaires dans la sous-fenêtre <Port>.

- HTTP Port : Permet d'accéder à la caméra à l'aide du navigateur Internet, réglé par défaut sur 80.
- VNP Port : Permet de contrôler le transfert du signal vidéo, réglé par défaut sur 4520.

5. Entrez le mot de passe.

Entrez le mot de passe du compte « admin » qui a été utilisé pour accéder à la caméra.

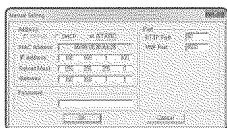


- Pour des raisons de sécurité, il est recommandé d'utiliser une combinaison de chiffres, de lettres majuscules et minuscules et caractères spéciaux pour votre mot de passe.

- Pour plus d'informations sur la modification du mot de passe, reportez-vous à l'aide en ligne de Web Viewer.

6. Cliquez sur [OK].

La configuration réseau manuelle est ainsi terminée.



Si vous utilisez un Routeur large bande

- IP Address : Entrez une adresse comprise dans la plage IP fournie par le Routeur large bande.

ex.) 192.168.1.2~254, 192.168.0.2~254, 192.168.XXX.2~254

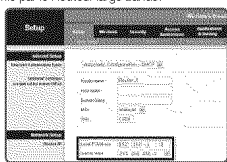
- Subnet Mask : La valeur de <Subnet Mask> du Routeur large bande est identique à celle de l'option <Subnet Mask> de la caméra.

- Gateway : La valeur de <Local IP Address> du Routeur large bande est identique à celle de l'option <Gateway> de la caméra.



- Les réglages peuvent varier selon le modèle du Routeur large bande connecté. Pour obtenir de plus amples informations à ce sujet, reportez-vous au guide d'utilisation du routeur applicable.

- Pour plus d'informations sur la redirection de port du routeur large bande, reportez-vous à « Configuration de la Redirection de la Plage de Ports (Mappage de Ports) » (Page 27)



Si le Routeur large bande dispose de plusieurs caméras connectées

Configurez séparément les réglages IP et les réglages de port.

ex.)

	Catégorie	Caméra 1	Caméra 2
Réglages IP	IP Address	192.168.1.100	192.168.1.101
	Subnet Mask	255.255.255.0	255.255.255.0
	Gateway	192.168.1.1	192.168.1.1
Réglages de port	HTTP Port	8080	8081
	VNP Port	4520	4521



- Si l'option <HTTP Port> est réglée sur une valeur différente de 80, vous devrez indiquer le numéro du réglage <Port> dans la barre d'adresse du navigateur Internet pour pouvoir accéder à la caméra.

ex.) http://IP address : HTTP Port
http://192.168.1.100:8080

Configuration réseau automatique

Exécutez <IP Installer_v2.XX.exe> pour afficher la liste des résultats de la recherche de caméras.

Au démarrage initial, les deux options [Auto Set] et [Manual Set] sont grisées.



- Pour les caméras trouvées ayant un réglage IPv6, ces boutons sont grisés car ces caméras ne prennent pas en charge cette fonction.

1. Sélectionnez une caméra dans la liste de recherche.

Vérifiez l'adresse MAC de la caméra sur l'étiquette de la caméra. Les boutons [Auto Set] et [Manual Set] sont alors activés.

2. Cliquez sur [Auto Set].

La boîte de dialogue Auto Setting apparaît.

Les options <IP Address>, <Subnet Mask> et <Gateway> sont automatiquement réglées.

3. Entrez le mot de passe.

Entrez le mot de passe du compte « admin » qui a été utilisé pour accéder à la caméra.

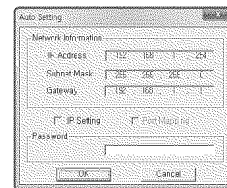
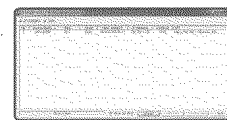


- Pour des raisons de sécurité, il est recommandé d'utiliser une combinaison de chiffres, de lettres majuscules et minuscules et caractères spéciaux pour votre mot de passe.

- Pour plus d'informations sur la modification du mot de passe, reportez-vous à l'aide en ligne de Web Viewer.

4. Cliquez sur [OK].

La configuration réseau automatique est ainsi terminée.



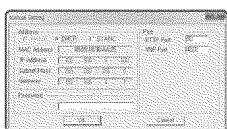
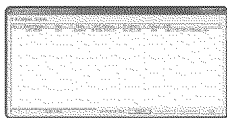
CONFIGURATION DE L'ADRESSE IP DYNAMIQUE

Configuration de l'environnement IP Dynamique

- Exemple d'environnement IP Dynamique
 - Routeur large bande, disposant de caméras connectées, affecté à une adresse IP par le serveur DHCP
 - En cas de connexion directe de la caméra au modem via les protocoles DHCP
 - Adresses IP affectées par le serveur DHCP interne via le réseau LAN

Vérification de l'adresse IP Dynamique

- Exécutez le programme IP Installer sur l'ordinateur local de l'utilisateur.
Les caméras attribuées avec l'adresse <Dynamic IP> sont indiquées dans la liste.
- Sélectionnez une caméra parmi les résultats de la recherche.
- Cliquez sur le bouton [Manual Set] et vérifiez l'adresse <Dynamic IP> de la caméra.
Si vous désélectionnez <DHCP>, vous pourrez modifier la valeur de l'option IP en réglant sur <Static>.

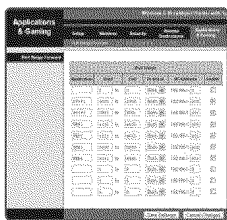


CONFIGURATION DE LA REDIRECTION DE LA PLAGE DE PORTS (MAPPAGE DE PORTS)

Si vous avez installé un Routeur large bande muni d'une caméra connectée, vous devrez régler la redirection de la plage de ports sur le Routeur large bande de sorte qu'un ordinateur distant puisse accéder à la caméra qui y est installée.

Redirection manuelle de la plage de ports

- Depuis le menu Setup du Routeur large bande, sélectionnez <Applications & Gaming> - <Port Range Forward>.
Pour le réglage de la redirection de la plage de ports sur un Routeur large bande tiers, reportez-vous au manuel d'utilisation du Routeur large bande concerné.
- Sélectionnez <TCP> et <UDP Port> pour chacune des caméras connectées au Routeur large bande.
Le nombre de ports à configurer sur le routeur IP doit être réglé en fonction du nombre de ports indiqué dans <Configuration> - <Basic> - <IP & Port> sur le visualiseur Web de la caméra.



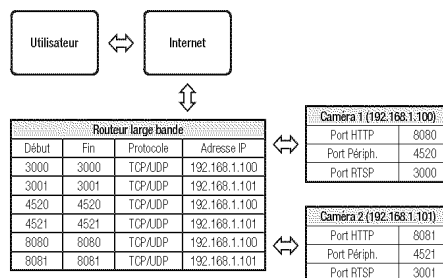
- Une fois terminé, cliquez sur [Save Settings].
Vos réglages seront ainsi sauvegardés.

- Les instructions des exemples ci-dessus sont basées sur le Routeur large bande de QSCO.
- Les réglages peuvent varier selon le modèle du Routeur large bande connecté.
Pour obtenir de plus amples informations à ce sujet, reportez-vous au guide d'utilisation du routeur applicable.

Réglage de la redirection de la plage de ports pour plusieurs caméras en réseau

- Vous pouvez définir une règle de redirection de port sur le périphérique du Routeur large bande via sa page Web de configuration.
- Un utilisateur peut modifier chaque port à l'aide de l'écran de réglage de la caméra.

Lorsque la Caméra 1 et la Caméra 2 sont connectées à un routeur :



- La redirection de port peut être réalisée sans paramétrage supplémentaire du routeur si celui-ci supporte la fonction UPnP.
Après avoir connecté la caméra réseau, cochez la case à cocher dans le menu <Connexion rapide> dans <DNS Wisenet> dans "Paramètres -> Réseau -> DDNS".

connexion et configuration réseau

CONNEXION À LA CAMÉRA DEPUIS UN ORDINATEUR LOCAL PARTAGÉ

1. Exécutez le programme d'installation IP.
Le système recherche les caméras connectées et en affiche la liste.
2. Double-cliquez sur une caméra pour y accéder.
Le navigateur Internet démarre et se connecte à la caméra.



▣ Vous pouvez aussi accéder à la caméra en tapant l'adresse IP de la caméra trouvée dans la barre d'adresse du navigateur Internet.



CONNEXION À LA CAMÉRA DEPUIS UN ORDINATEUR DISTANT VIA INTERNET

L'utilisation du programme d'installation IP sur un ordinateur à distance n'appartenant pas à la grappe du réseau du Routeur large bande n'est pas autorisée, les utilisateurs peuvent accéder aux caméras au sein du réseau du Routeur large bande en utilisant l'adresse URL DDNS de la caméra.

1. Avant de pouvoir accéder à une caméra depuis le réseau du Routeur large bande, vous devez régler la redirection des plages de port du Routeur large bande.
2. Depuis l'ordinateur distant, lancez le navigateur Internet et tapez l'adresse URL DDNS de la caméra ou l'adresse IP du Routeur large bande dans la barre d'adresse.
ex.) <http://ddns.hanwha-security.com/ID>



▣ Pour plus d'informations sur l'enregistrement du DDNS, reportez-vous au guide de configuration du réseau.

CONNEXION À LA CAMÉRA

Normalement, vous devez procéder comme suit

1. Lancez le navigateur Internet.
2. Tapez l'adresse IP de la caméra dans la barre d'adresse.
ex.) • Adresse IP (IPv4) : 192.168.1.100 →
http://192.168.1.100
- la boîte de dialogue de connexion devrait apparaître.
• Adresse IP (IPv6) : 2001:230:abcd:ffff:0000:0000:ffff:1111
→ http://[2001:230:abcd:ffff:0000:0000:ffff:1111] - la boîte de dialogue de connexion devrait apparaître.



Si le numéro de port HTTP est différent de 80

1. Lancez le navigateur Internet.
2. Tapez l'adresse IP et le numéro de port HTTP de la caméra dans la barre d'adresse.
ex.) Adresse IP: 192.168.1.100:HTTP Numéro de port (8080)
→ http://192.168.1.100:8080 - la boîte de dialogue de connexion devrait apparaître.

Utilisation de l'adresse URL

1. Lancez le navigateur Internet.
2. Tapez l'adresse URL DDNS de la caméra dans la barre d'adresse.
ex.) Adresse URL : http://ddns.hanwha-security.com/ID
- la boîte de dialogue de connexion devrait apparaître.

 La connexion réseau est désactivée dans un environnement uniquement LAN.

Se connecter via UPnP

1. Exécutez le système client ou d'exploitation afin de supporter le protocole UPnP.
2. Cliquez sur le nom de la caméra aux fins de recherche.
Dans le système d'exploitation Windows, cliquez sur le nom de la caméra recherchée dans le menu réseau.
- La fenêtre de connexion s'affiche.

Se connecter via Bonjour

1. Exécutez le système client ou d'exploitation afin de supporter le protocole Bonjour.
2. Cliquez sur le nom de la caméra pour recherche.
Sur le système d'exploitation Mac, cliquer sur le nom de la caméra lance la recherche depuis l'onglet Bonjour de Safari.
- La fenêtre de connexion s'affiche.

Vérification de l'adresse DDNS

Si la caméra est directement connectée à un modem de câble DHCP, à un modem DSL ou à un modem PPPoE, l'adresse IP de votre réseau sera modifiée à chaque fois que vous essayerez de vous connecter au serveur FSI (Fournisseur de services Internet).

Le cas échéant, vous ne serez pas informé du changement d'adresse IP par le serveur DDNS.

Une fois que vous enregistrez un périphérique dynamique basé sur IP sur le serveur <DDNS>, vous pouvez facilement vérifier l'adresse IP modifiée lorsque vous essayez d'accéder au périphérique.

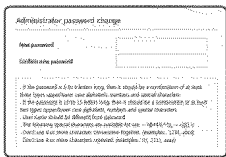
http://ddns.hanwha-security.com et enregistrez tout d'abord votre périphérique puis réglez <Réseau> - <DDNS> de Web Viewer sur <Wisenet DDNS>. Renseignez également le champ <ID produit> avec la donnée utilisée pour l'enregistrement DDNS.

visionneur web

RÉGLAGE DU MOT DE PASSE

Lorsque vous accédez au produit pour la première fois, vous devez enregistrer le mot de passe de connexion.
Lorsque la fenêtre « **Confirm new password** » apparaît, saisissez le nouveau mot de passe.

- 1
- Pour un nouveau mot de passe de 8 à 9 chiffres, vous devez utiliser au moins trois des éléments suivants : lettres majuscules / minuscules, chiffres et caractères spéciaux. Pour un mot de passe de 10 à 15 chiffres, vous devez utiliser au moins deux des types mentionnés.
 - Les caractères spéciaux qui sont autorisés : ~!@#%\$%^&*()_+=[]
 - []/?
 - Pour plus de sécurité, il n'est pas recommandé de répéter les mêmes caractères ou entrées clavier consécutives pour vos mots de passe.
 - Si vous avez perdu votre mot de passe, vous pouvez appuyer sur le bouton **[RESET]** pour initialiser le produit. Veuillez donc ne pas perdre votre mot de passe en utilisant un bloc-notes ou bien mémorisez-le.



LOGIN

Lorsque vous accédez à la caméra, la fenêtre de connexion apparaît.
Saisissez l'identifiant utilisateur et le mot de passe pour accéder à la caméra.

1. Entrez « **admin** » dans la zone de saisie de texte « **User Name** ».
L'identifiant de l'administrateur « **admin** » est fixe et ne peut être modifié.
2. Saisissez le mot de passe dans le champ de saisie « **Password** ».
3. Cliquez sur **[OK]**.
Si vous êtes connecté avec succès, vous verrez l'écran Live Viewer s'afficher.

- 1
- Lorsque vous accédez à la visionneuse web de la caméra, accordez une attention particulière à la sécurité en vérifiant si les données d'image sont cryptées.
- 2
- Si vous sélectionnez l'option « **Remember my credentials** » après avoir entré votre saisie, vous serez automatiquement connecté sans être invité à entrer vos informations de connexion à votre prochaine connexion.
 - Pour une qualité vidéo optimale, passez en affichage 100 %. La réduction du format de l'image peut couper l'image sur les bords.



SPÉCIFICATIONS DE PRISE EN CHARGE DE PLUG-IN POUR CHAQUE NAVIGATEUR

La visionneuse Web a une visionneuse Web intégrée et un plugin intégré et une nouvelle visionneuse Web sans plugin ensemble. Cela signifie que la visionneuse Web peut être utilisée même dans les environnements de navigateur modernes qui ne prennent pas en charge les plug-ins, tels que Chrome, EDGE et FireFox (Windows 64 bits uniquement). Il est recommandé d'installer le plugin dans le navigateur IE, ce qui permet l'installation du plugin. Les différences suivantes se produiront en fonction de l'environnement de votre navigateur :

- **Chrome, FireFox(Windows 64 bits uniquement), EDGE, Safari** : Bien qu'ils ne prennent pas en charge les plug-in, vous pouvez utiliser un visualiseur Web étant donné qu'un visualiseur Web sans plug-in est intégré.

- 1
- Étant donné que le visualiseur sans plug-in a des performances moins élevées par rapport au visualiseur avec plug-in, il existe une limite relative au suivi des profils de haute qualité et à la lecture des vidéos enregistrées.
Pour surveiller les profils de haute qualité et les vidéos enregistrées, utilisez un visualiseur Web avec plug-in ou un visualiseur intelligent.
 - Un profil sans plug-in est automatiquement créé lorsqu'il y a un retard dans la vidéo en direct.
 - La lecture peut entraîner des retards, en fonction du codec et de la résolution.
 - La fonction sans plug-in a été optimisée pour le navigateur Chrome.

- **IE browser** : Vous pouvez utiliser un visualiseur Web même si vous n'installez pas le visualiseur Web avec plug-in existant.

- 1
- Vous devez installer un plug-in pour surveiller/lire aisément les vidéos enregistrées.

INSTALLATION DU MODULE WebViewer

Si vous essayez d'accéder à la visionneuse Web sans plug-in à partir du navigateur IE et de demander une vue en direct avec un codec autre que celui actuellement utilisé, ou demander d'utiliser la fonction de lecture vidéo enregistrée, un message d'installation apparaît. À ce stade, le plugin de la visionneuse Web doit être installé pour utiliser les fonctions normalement.

1. Lorsque vous accédez à une page de surveillance pour la toute première fois, la page d'installation s'affiche. Cliquez sur **[Click Here]** pour débiter l'installation.

 Si le téléchargement du fichier d'installation est suspendu à 99 % dans Internet Explorer, réessayez après avoir sélectionné « Libérer le filtre SmartScreen » dans « Outil » → « Filtre SmartScreen ».

2. Cliquez sur **[Bun]** dans la fenêtre.

3. Cliquez sur **[Yes]** lorsque la fenêtre de notification indique que toutes les fenêtres du navigateur vont être fermées.

 Les étapes 4 et 5 seront ignorées si aucun module d'extension pour le navigateur n'est installé.

4. Lorsque l'ancienne version du module d'extension du navigateur Web est installée, une fenêtre de notification indique que cette dernière va être effacée.

Cliquez sur **[Yes]** lorsque la fenêtre de notification est affichée.


5. Cliquez sur **[OK]**.

L'ancienne version du module d'extension est supprimée.

6. Cliquez sur **[Install]** pour débiter l'installation du module d'extension du navigateur Web.

7. Cliquez sur **[Finish]**.

L'installation du module d'extension pour navigateur Web est achevée.

 Dans votre Internet Explorer, si vous avez besoin de passer à l'écran d'installation après l'installation du plug-in webviewer, vérifiez si webviewer_actifexpluglib.control dans le menu « Outils » → « Fonction de gestion complémentaire » est « activé ».

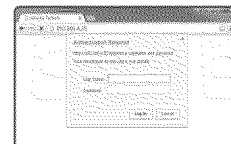
Si non, et si le problème persiste, alors sélectionnez « Outils » → « Options Internet » → « Général » et supprimez tous les enregistrements de la recherche.

Si le problème persiste, veuillez enregistrer l'adresse IP ou le domaine de votre caméra dans « Outils » → « Options Internet » → « Sécurité » → « Sites de confiance ».

UTILISER GRATUITEMENT UN PLUG-IN DE VISUALISEUR WEB

Si vous vous connectez à une caméra depuis Google Chrome, Mozilla Firefox, MS Edge ou le navigateur Web Safari, vous ne pouvez pas installer un plug-in distinct, mais vous pouvez visualiser et contrôler les vidéos de la caméra en temps réel, sans aucun plugin.

1. Entrez votre nom d'utilisateur et mot de passe pour vous connecter.
2. Lorsque vous êtes connecté, un écran de visualisation en direct de la caméra apparaît.



Pour configurer la caméra

1. Cliquez sur l'icône **[Configuration (⚙)]**.
2. La fenêtre de configuration apparaît.
3. Vous pouvez configurer les paramètres liés aux informations de base, à la vidéo, au réseau, à l'événement, à l'analyse et au système de la caméra sur le réseau.
4. Cliquez sur **<Aide (?)>** pour voir les descriptions détaillées de chaque fonction.

annexes

SPÉCIFICATIONS

Éléments		Description		
		LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Vidéo	Système imageur	1/2.9" 2.19M CMOS		
	Nombre total de pixels	2,000(H) x 1,121(V)		
	Nombre de pixels réels	1,984(H) x 1,105(V)		
	Système de balayage	Progressif		
	Luminosité minimale	Couleur : 0.18Lux (1/30sec. F2.0), 0.003Lux (2sec. F2.0) N / B : 0Lux (LED IR allumée)		
Objectif	Longueur focale (facteur zoom)	LND-6010R/LND-6010R/LNV-6010R : 3mm LND-6020R/LND-6020R/LNV-6020R : 4mm LND-6030R/LND-6030R/LNV-6030R : 6mm		
	Ouverture relative maxi	F 2.0		
	Champ de vision angulaire	LND-6010R/LND-6010R/LNV-6010R : H : 102° / V : 54° / D : 120° LND-6020R/LND-6020R/LNV-6020R : H : 80° / V : 43° / D : 94° LND-6030R/LND-6030R/LNV-6030R : H : 51° / V : 29° / D : 58°		
	Distance minimale de l'objet à l'objectif	0.5m(1.64ft)		
	Type d'objectif	Fixe		
	Type montage	Type de carte		
	Plage de panoramique	0~350°	-	0~350°
Panoramique / Inclinaison / Rotation	Plage d'orientation	0~67°	-	0~67°
	Plage de rotation	0~355°	-	0~355°
Opérationnel	Longueur de vision	20m	30m	
	Titre de caméra	Désactivé / Activé (jusqu'à 15 caractères affichés)		
	Jour et Nuit	Auto (ICR) / Couleur / N / B / Planification		
	Compensation de contreéclairage	Désactivé / BLC / WDR		

Éléments	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Opérationnel	Large gamme dynamique	120dB	
	Amélioration du contraste	SSDR (Désactivé / Activé)	
	Réduction du bruit numérique	SSNR (Désactivé / Activé)	
	Détection mouvement	Désactivé / Activé (Zones de polygones 4ea)	
	Masque de confidentialité	Désactivé / Activé (Zones de rectangle 6ea)	
	Contrôle du gain	Désactivé / Faible / Moyen / Élevé	
	Balance Blancs	ATW / AWC / Manuel / Intérieur / Extérieur	
	LDC (correction de la distorsion de l'objectif)	On / Off (5 niveaux avec Min/Max)	
	Vitesse d'obturateur électronique	Minimum / Maximum / Anti scintillement	
	Retourner/Miroir	Retourner / Miroir / Vue corridor	
	Analyse vidéo intelligente	Détection de mouvement, Altération	
	Déclenchements d'alarme	Détection de mouvements, détection de la trempe, erreur carte SD	
Réseau	Événements d'alarme	<ul style="list-style-type: none"> • Télétransmission de fichiers via FTP, E-mail • Notification par e-mail • Enregistrement de stockage local à l'événement 	
	Ethernet	RJ-45 (10/100BASE-T)	
	Format de compression vidéo	H.264, MJPEG	
	Résolution	1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 800x448 / 720x576 / 720x480 / 640x480 / 640x360 / 320x240	
	Vitesse d'enregistrement max.	H.265/H.264 - Max. 30fps pour toutes les résolutions MJPEG - Max. 1fps à 1920x1080/1280x1024/1280x720/1024x768, Max. 15fps à d'autres résolutions	
	WiseStream II	Assistance	
	Réglage de la qualité vidéo	H.264/MJPEG : Contrôle du niveau de débit binaire cible	

Éléments	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Réseau	Méthode de contrôle du débit binaire	H.264 : CBR ou VBR MJPEG : VBR	
	Fonction de lecture en transit	Lecture en transit multiple (Jusqu'à 3 profils)	
	Audio I/O	-	
	Format de compression audio	-	
	Communication audio	-	
	IP	IPv4, IPv6	
	Protocole	TCP/IP, UDP/IP, RTP/UDP, RTP/TCP, RTCP, RTSP, RTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, DoS, PIM-SM, UPnP, Bonjour	
	Sécurité	Authentification de l'identifiant HTTPS(SSL) Authentification de l'identifiant en abrégé Filtrage de l'adresse IP Journal d'accès des utilisateurs Authentification 802.1X (EAP-TLS, EAP-LEAP)	
	Méthode de lecture en transit	Diffusion individuelle / Multiple	
	Nombre maximal d'utilisateurs en accès	6 utilisateurs max en mode Diffusion individuelle	
	Edge storage	Micro SD/SDHC/SDXC (jusqu'à 32G) - Les images en mouvement enregistrées dans la carte mémoire SD/SDHC/SDXC peuvent être téléchargées. PC local pour un enregistrement instantané	
	Interface de programmation de l'application	ONVIF Profile S/G SUNAPI(HTTP API)	
	Langue de la page Web	Anglais, Français, Allemand, Espagnol, Italien, Chinois, Coréen, Russe, Japonais, Suédois, Portugais, Tchèque, Polonais, Turc, Néerlandais, Hongrois, Grec	

Éléments	Description		
	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R	LND-6010R/6020R/6030R
Réseau	Web Viewer	Système d'exploitation pris en charge : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Visualiseur Web sans plug-in Navigateurs Web supportés : Google Chrome 63, MS Edge 41, Mozilla Firefox 57(Window 64bit uniquement), Apple Safari 11 (Mac OS X uniquement) Visualiseur avec plug-in Navigateurs Web supportés : MS Explorer 11	
	Logiciel de gestion centrale CMS	SmartViewer, SSM	
Environnemental	Température / Humidité de fonctionnement	-10°C ~ +55°C (14°F ~ +131°F) / Moins de 90 % d'humidité.	-30°C ~ +55°C (-22°F ~ +131°F) / Moins de 90 % d'humidité. * Le démarrage doit être effectué au-dessus de -20°C
	Température / Humidité de stockage	-30°C ~ +60°C (-22°F ~ +140°F) / Moins de 90 % d'humidité relative	
	Protection captage	-	IP66
	Résistance au vandalisme	-	IK10
Électrique	Tension d'entrée / Courant	PoE (IEEE802.3at, Classe3)	
	Consommation d'énergie	6.5W	
Mécanique	Couleur / Matériau	Blanc/Plastique	Gris foncé/Plastique
	Dimensions (ØxH)	Ø110,0mm(4,33") x H86,0(3,39")mm	Ø58,6mm(2,31") x H182,0(7,17")mm
	Poids	230g(0,51lb)	240g(0,53lb)

annexes

Éléments	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Vidéo	Système imageur	1/2,9" 2,19M CMOS	
	Nombre total de pixels	2,000(H) x 1,121(V)	
	Nombre de pixels réels	1,984(H) x 1,105(V)	
	Système de balayage	Progressif	
	Luminosité minimale	Couleur : 0.095Lux (1/30sec, F1.6), 0.003Lux (2sec, F1.6) N / B : 0Lux (LED IR allumée)	
Objectif	Longueur focale (facteur zoom)	3,2 - 10mm (3,1x) varifocal	
	Ouverture relative maxi	F1.6~2.9	
	Champ de vision angulaire	H : 101,6°(Wide) ~ 31,3°(Tele)	
		V : 54,1°(Wide) ~ 17,8°(Tele)	
		D : 120,6°(Wide) ~ 36,0°(Tele)	
	Distance minimale de l'objet à l'objectif	0.5m(1.64ft)	
	Contrôle de la mise au point	Manuel	
	Type d'objectif	DC auto iris	
Panoramique / Inclinaison / Rotation	Type montage	Type de carte	
	Plage de panoramique	0~350°	0~350°
	Plage d'orientation	0~67°	0~67°
Opérationnel	Plage de rotation	0~355°	0~355°
	Longueur de vision	20m	30m
	Titre de caméra	Désactivé / Activé (jusqu'à 15 caractères affichés)	
	Jour et Nuit	Auto (ICR) / Couleur / N / B / Planification	
	Compensation de rétroéclairage	Désactivé / BLC / WDR	

Éléments	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Opérationnel	Large gamme dynamique	120dB	
	Amélioration du contraste	SSDR (Désactivé / Activé)	
	Réduction du bruit numérique	SSNR (Désactivé / Activé)	
	Détection mouvement	Désactivé / Activé (Zones de polygones 4ea)	
	Masque de confidentialité	Désactivé / Activé (Zones de rectangle 6ea)	
	Contrôle du gain	Désactivé / Faible / Moyen / Élevé	
	Balance Blancs	ATW / AWC / Manuel / Intérieur / Extérieur	
	LDC (correction de la distorsion de l'objectif)	On / Off (5 niveaux avec Min/Max)	
	Vitesse d'obturateur électronique	Minimum / Maximum / Anti scintillement	
	Retourner/Miroir	Retourner / Miroir / Vue corridor	
	Analyse vidéo intelligente	Détection de mouvement, Altération	
	Déclenchements d'alarme	Détection de mouvements, détection de la trempe, erreur carte SD	
Réseau	Événements d'alarme	<ul style="list-style-type: none"> • Télétransmission de fichiers via FTP, E-mail • Notification par e-mail • Enregistrement de stockage local à l'événement 	
	Ethernet	RJ-45 (10/100BASE-T)	
	Format de compression vidéo	H.264, MJPEG	
	Résolution	1920x1080 / 1280x1024 / 1280x960 / 1280x720 / 1024x768 / 800x600 / 800x448 / 720x576 / 720x480 / 640x480 / 640x360 / 320x240	
	Vitesse d'enregistrement max.	H.265/H.264 - Max. 30fps pour toutes les résolutions MJPEG - Max. 1fps à 1920x1080/1280x1024/1280x720/1024x768, Max. 15fps à d'autres résolutions	
	WiseStream II	Assistance	
	Réglage de la qualité vidéo	H.264/MJPEG : Contrôle du niveau de débit binaire cible	

Éléments	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Réseau	Méthode de contrôle du débit binaire	H.264 : CBR ou VBR MJPEG : VBR	
	Fonction de lecture en transit	Lecture en transit multiple (Jusqu'à 3 profils)	
	Audio I/O	-	
	Format de compression audio	-	
	Communication audio	-	
	IP	IPv4, IPv6	
	Protocole	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, RTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, DoS, PIM-SM, UPnP, Bonjour	
	Sécurité	Authentification de l'identifiant HTTPS(SSL) Authentification de l'identifiant en abrégé Filtrage de l'adresse IP Journal d'accès des utilisateurs Authentification 802.1X (EAP-TLS, EAP-LEAP)	
	Méthode de lecture en transit	Diffusion individuelle / Multiple	
	Nombre maximal d'utilisateurs en accès	6 utilisateurs max en mode Diffusion individuelle	
	Edge storage	Micro SD/SDHC/SDXC (jusqu'à 32G) - Les images en mouvement enregistrées dans la carte mémoire SD/SDHC/SDXC peuvent être téléchargées. PC local pour un enregistrement instantané	
	Interface de programmation de l'application	ONVIF Profile S/G SUNAPI(HTTP API)	
	Langue de la page Web	Anglais, Français, Allemand, Espagnol, Italien, Chinois, Coréen, Russe, Japonais, Suédois, Portugais, Tchèque, Polonais, Turc, Néerlandais, Hongrois, Grec	

Éléments	Description		
	LND-6070R	LNO-6070R	LNV-6070R
Réseau	Web Viewer	Système d'exploitation pris en charge : Windows 7 / 8.1 / 10, MAC OS X 10.10, 10.11, 10.12 Visualiseur Web sans plug-in Navigateurs Web supportés : Google Chrome 63, MS Edge 41, Mozilla Firefox 57(Window 64bit uniquement), Apple Safari 11 (Mac OS X uniquement) Visualiseur avec plug-in Navigateurs Web supportés : MS Explorer 11	
	Logiciel de gestion centrale CMS	SmartViewer, SSM	
Environnemental	Température / Humidité de fonctionnement	-10°C ~ +55°C (14°F ~ +131°F) / Moins de 90 % d'humidité.	-30°C ~ +55°C (-22°F ~ +131°F) / Moins de 90 % d'humidité. * Le démarrage doit être effectué au-dessus de -20°C
	Température / Humidité de stockage	-30°C ~ +60°C (-22°F ~ +140°F) / Moins de 90 % d'humidité relative	
	Protection captage	-	IP66
	Résistance au vandalisme	-	IK10
Électrique	Tension d'entrée / Courant	PoE (IEEE802.3at, Classe3)	
	Consommation d'énergie	6.5W	
Mécanique	Couleur / Matériau	Blanc/Plastique	Gris foncé/Plastique
	Dimensions (ØxH)	Ø119,8mm(4,72") x H98,8(3,89")mm	Ø137,8mm(5,43") x H106,1(4,18")mm
	Poids	274g(0,6lb)	380g(0,84lb)

annexes

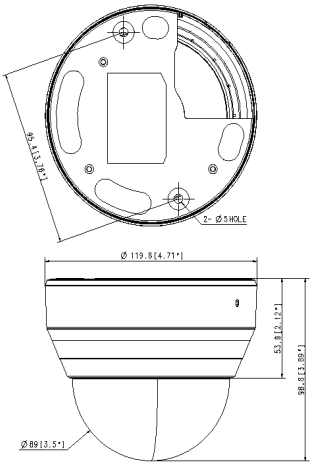
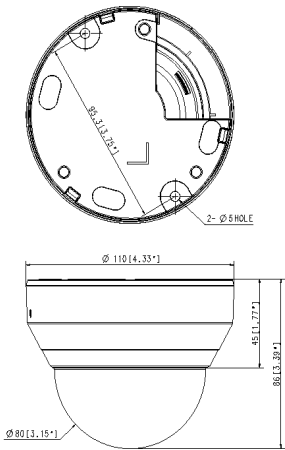
VUE DU PRODUIT

LND-6070R

Unité : mm (pouce)

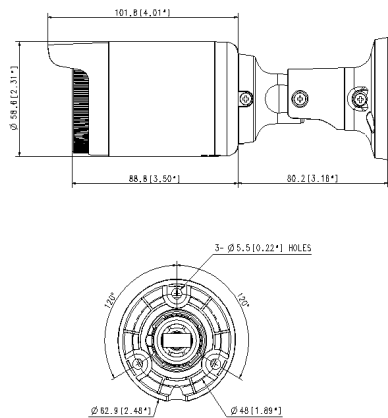
LND-6010R/6020R/6030R

Unité : mm (pouce)



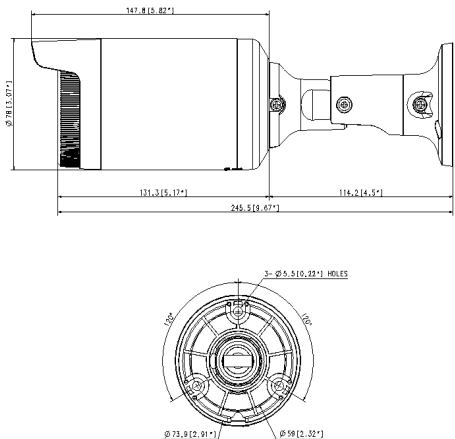
LNO-6010R/6020R/6030R

Unité : mm (pouce)



LNO-6070R

Unité : mm (pouce)



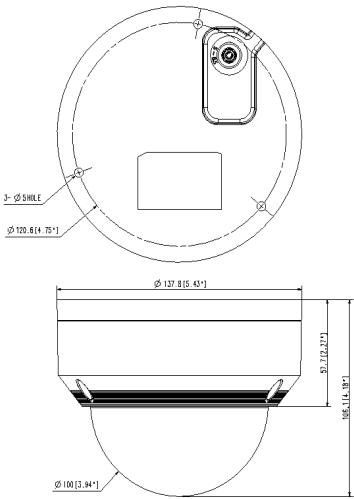
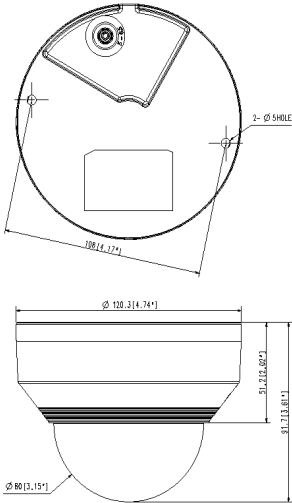
annexes

LNV-6010R/6020R/6030R

Unité : mm (pouce)

LNV-6070R

Unité : mm (pouce)



RÉSOLUTION DE PROBLÈMES

PROBLÈME	SOLUTION
Aucune vidéo n'est affichée lors de l'accès libre au visualiseur Web de plug-in sur Safari via HTTPS.	<ul style="list-style-type: none"> Dans la fenêtre d'authentification contextuelle affichée lors de l'accès initial à https, cliquez sur "Afficher certificat d'authentification" et sélectionnez l'option "Toujours taire confiance lors de la connexion à l'adresse IP du visualiseur Web désigné". Si le visualiseur Web ne peut toujours pas lire une vidéo après avoir sélectionné "Suivant" dans la fenêtre de message ci-dessous, appuyez sur la touche de commande + Q pour quitter le navigateur Safari puis recommencez et suivez les procédures indiquées ci-dessus.
Je n'ai pas accès à la caméra à partir d'un navigateur Internet.	<ul style="list-style-type: none"> Vérifier pour s'assurer que les paramètres de réseau de la caméra sont appropriés. Vérifier pour assurer que tous les câbles de réseau ont été correctement connectés. Si elle est connectée en utilisant DHCP, vérifier que la caméra peut acquérir des adresses IP dynamiques sans aucun problème. Si la caméra est connectée à un Routeur large bande, vérifier que le renvoi de port est configuré correctement.
Le visionneur a été déconnecté pendant le suivi.	<ul style="list-style-type: none"> Les visionneurs connectés se déconnectent à tout changement apporté à la caméra ou aux configurations de réseau. Vérifier toutes les connexions de réseau. Si la caméra est connectée par un réseau PPPoE, il est possible que le visionneur se déconnecte en raison de mauvaises conditions de réseau.
Aucune vidéo ne s'affiche lorsque l'utilisateur vient d'accéder au visualiseur Web ou qu'il se connecte directement avec le client.	<ul style="list-style-type: none"> Le nombre maximum de profils disponibles est de 3. La connexion peut être perdue si vous utilisez 4 ou plusieurs profils. Exemple) Si vous accédez à MJPEG, H.264 et H.264 (Profils avec des paramètres différents), puis accédez avec un profil différent, la connexion sera perdue.
La caméra connectée au réseau n'est pas détectée dans le programme d'installateur IP.	<ul style="list-style-type: none"> Désactiver les paramètres de pare-feu sur votre PC et chercher de nouveau la caméra.
Chevauchement d'images.	<ul style="list-style-type: none"> Vérifier si une ou plusieurs caméras sont configurée à une adresse multidiffusion unique au lieu d'adresses différentes. Si une adresse unique est utilisée pour des caméras multiples, les images peuvent se chevaucher.
Aucune image n'apparaît.	<ul style="list-style-type: none"> Si la méthode de transmission est configurée sur multidiffusion, vérifier s'il y a un routeur qui prend en charge la multidiffusion dans le LAN sur lequel la caméra est connectée.

PROBLÈME	SOLUTION
Le fichier n'est pas transféré vers la boîte e-mail même si un événement de détection de mouvements est généré avec la fonction <Détection mvmt> réglée sur <Activer> sur la page <Événement>.	<ul style="list-style-type: none"> Vérifiez les réglages selon la séquence suivante : <ol style="list-style-type: none"> Vérifiez les réglages <Date et heures>. L'option <Détection mvmt> doit être réglée sur <Activer>. Vérifiez si l'option <E-mail> du menu <Config. évén.> est cochée avant utilisation.
Impossible d'effectuer un enregistrement sur la carte mémoire Micro SD.	<ul style="list-style-type: none"> Vérifiez que la carte mémoire n'est pas détectueuse.
La carte mémoire Micro SD est insérée mais la caméra ne fonctionne pas correctement.	<ul style="list-style-type: none"> Vérifiez si la carte mémoire est insérée dans le bon sens. Le fonctionnement des cartes mémoire formatées sur d'autres appareils n'est pas garanti sur cette caméra. Formatez la carte mémoire à nouveau sous le menu <Configuration> → <Événement> → <Stockage>.

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GPL SW

Component Name	License	URL
Base Kernel	GPL 2.0	
Busybox	GPL 2.0	http://www.busybox.net/downloads/inapshots
iproute2-4.3.0	GPL 2.0	
iptables-1.4.21	GPL 2.0	http://ftp.netfilter.org/pub/iptables
ethtool-4.2	GPL 2.0	
mtid-1.5.2	GPL 2.0	ftp://ftp.infocast.org/pub/mtid-v1.5
mti-diag-2.11	GPL 2.0	
rp-pppoe-3.11	GPL 2.0	http://www.routingenguin.com/~pppoe/
wpa_supplicant-2.5	GPL 2.0	
hatch-4.3.30	GPL 3.0	
zascodiff	GPL 2.0	

LGPL SW

Component Name	License	URL
gl_hc	LGPL 2.0	
inetutils	LGPL 3.0	
neon-0.29.6	LGPL 2.0	http://www.webdav.org/neon/

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This package is an SSL implementation written by Eric Young (ey@cryptsoft.com).

The implementation was written so as to conform with Netscape's SSL.

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established by T-Engine Forum
on January 23, 2004
revised on June 17, 2004
revised on December 21, 2006
revised on March 24, 2009

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Component Name	License	URL
bzip2-1.0.6	Bzip2	http://www.bzip.org/

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Julian Seward, jseward@bzip.org
bzip2/libbzip2 version 1.0.6 of 10 December 2007

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Component Name	License
lperf-2.0.5	University of Illinois / NCSA Open Source

lperf performance test

Mark Gates
Ajay Trivedi
Jim Ferguson
Jon Dugan
Feng Qin
Kevin Gibbs
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National Laboratory for Applied Network Research
National Center for Supercomputing Applications
University of Illinois at Urbana-Champaign
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php-5.2.17	PHP 3.01	http://www.php.net/distributions

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zlib-1.2.8	zlib / libpng	http://zlib.net/

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Jean-loup Gailly, Mark Adler

jloup@gzip.org madler@alumni.org

The data format used by the zlib library is described by RFCs (Request for Comments) 1950 to 1952 in the files <http://www.ietf.org/rfc/rfc1950.txt> (zlib format), <http://www.ietf.org/rfc/rfc1951.txt> (deflate format) and <http://www.ietf.org/rfc/rfc1952.txt> (gzip format).

Toute modification entreprise dans la conception de cet appareil non expressément approuvée par la partie responsable de la conformité pourrait annuler l'autorisation de l'utilisateur à utiliser l'équipement.

Cet appareil est conforme au point 15 du règlement FCC. Son fonctionnement est soumis aux deux conditions suivantes : (1) Cet appareil ne peut pas causer d'interférences nuisibles et (2) doit accepter toute interférence reçue, y compris les interférences susceptibles de causer un mauvais fonctionnement.

Cet équipement a été testé et se conforme aux limites relatives à un appareil numérique de classe A, conformément à la partie 15 des Réglementations FCC. Ces limites sont élaborées pour fournir un degré raisonnable de protection contre les interférences dangereuses si l'équipement fonctionne dans un environnement commercial.

Cet équipement génère, utilise et peut produire une énergie à radio fréquence, s'il n'est pas installé et utilisé selon le manuel d'instruction, il peut causer des interférences nuisibles aux communications radioélectriques.

Le fonctionnement de cet équipement au sein d'une zone résidentielle peut provoquer des interférences dangereuses, dans ce cas l'utilisateur est sommé de corriger l'interférence à ses propres frais.



Hamwa Technw se soucie de l'environnement à toutes les phases de fabrication du produit et s'engage à tout mettre en œuvre pour offrir à ses clients des produits plus respectueux de l'environnement.

La marque Eco représente l'engagement de Hamwa Technw à créer des produits respectueux de l'environnement et indique que le produit est conforme à la Directive RoHS de l'Union européenne.

**Les bons gestes de mise au rebut de ce produit (Déchets d'équipements électriques et électroniques)**

(Applicable dans les pays de l'Union Européenne et dans d'autres pays européens pratiquant le tri sélectif)

Ce symbole sur le produit, ses accessoires ou sa documentation indique que ni le produit, ni ses accessoires électroniques usagés (chargeur, casque audio, câble USB, etc.) ne peuvent être jetés avec les autres déchets ménagers. La mise au rebut incontrôlée des déchets présentant des risques environnementaux et de santé publique, veuillez séparer vos produits et accessoires usagés des autres déchets. Vous favoriserez ainsi le recyclage de la matière qui les compose dans le cadre d'un développement durable.

Les particuliers sont invités à contacter le magasin leur ayant vendu le produit ou à se renseigner auprès des autorités locales pour connaître les procédures et les points de collecte de ces produits en vue de leur recyclage. Les entreprises et professionnels sont invités à contacter leurs fournisseurs et à consulter les conditions de leur contrat de vente. Ce produit et ses accessoires ne peuvent être jetés avec les autres déchets professionnels et commerciaux.

**Élimination des batteries de ce produit**

(Applicable aux pays de l'Union européenne et aux autres pays européens dans lesquels des systèmes de collecte sélective sont mis en place.)

Le symbole sur la batterie, le manuel ou l'emballage indique que les batteries de ce produit ne doivent pas être éliminées en fin de vie avec les autres déchets ménagers. L'indication éventuelle des symboles chimiques Hg, Cd ou Pb signifie que la batterie contient des quantités de mercure, de cadmium ou de plomb supérieures aux niveaux de référence stipulés dans la directive CE 2006/66. Si les batteries ne sont pas correctement éliminées, ces substances peuvent porter préjudice à la santé humaine ou à l'environnement.

Afin de protéger les ressources naturelles et d'encourager la réutilisation du matériel, veuillez à séparer les batteries des autres types de déchets et à les recycler via votre système local de collecte gratuite des batteries.

Head Office

6, Pangyo-ro 319 beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 463-400 Rep. of KOREA
Tel : +82.70.7147.8753 Fax : +82.31.8018.3740
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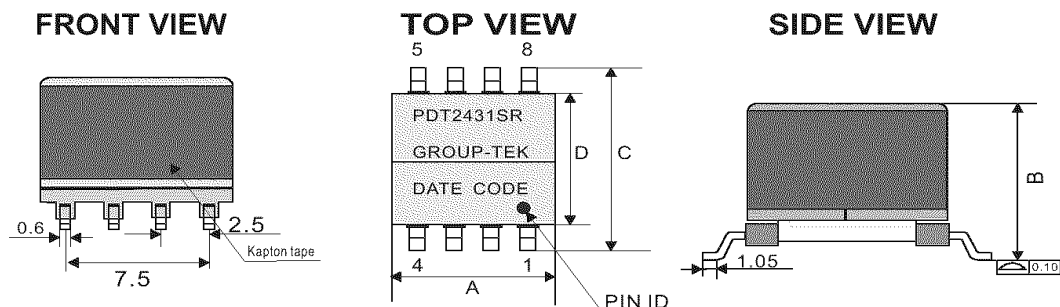
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Toll Free +1.877.213.1222 Direct +1.201.325.6920
Fax +1.201.373.0124
www.hanwha-security.com

Hanwha Techwin Europe

Heriot House, Heriot Road, Chertsey, Surrey, KT16 9DT, United Kingdom
Tel +44.1932.57.8100 Fax +44.1932.57.8101
www.hanwha-security.eu



2. Mechanical Dimensions:



Note:

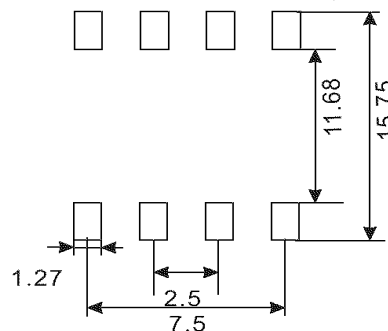
1. Wrap 2Ts of 6mm tape around the finished part.

Unit: mm

A MAX	B MAX	C MAX	D TYP
12.7	11.43	15.24	10.60

SUGGESTED PAD LAYOUT

Unit: mm Tolerances: +/-0.2



3. Electrical Characteristics :

Specifications Test: at 25 °C. Operating Temperature: -40 to +105°C			
NO.	ITEM	TEST CONDITION	SPECIFICATION
1	Inductance	(3-4)@200kHz, 0.1v	155uH+/-10%.
2	Inductance	(2-1)@200kHz, 0.1v	30uH+/-15%.
3	Inductance	(7-5)//(8-6)@200kHz, 0.1v	5.3uH+/-15%.
4	Leakage Inductance	(3-4) with shorted other@200kHz, 0.1v	3.6uH MAX.
5	DCR	(3-4) @ 25°C	0.414 Ω Max.
6		(7+8)-(5+6) @ 25°C	0.06Ω Max.
7		(2-1) @ 25°C	0.822Ω Max.
8	HI-POT	PRI TO SEC	1500Vac 1mA 3Sec.
9	T/R	(3-4):(9+10-7+8):(2-1)	33:6:14±2%.

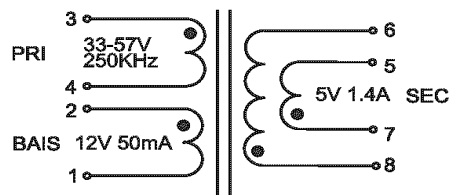
5. Winding Information:

WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
1	3--4	0.30mm 2UEW	33	2T w6.0mm	N/A	N/A	1
2	8--6 7--5	0.30mm 2UEW R 0.30mm 2UEW N	6	2T w6.0mm	2T W0.80mm	N/A	1
3	2--1	0.23mm 2UEW	14	2T w6.0mm	2T W0.80mm	N/A	1

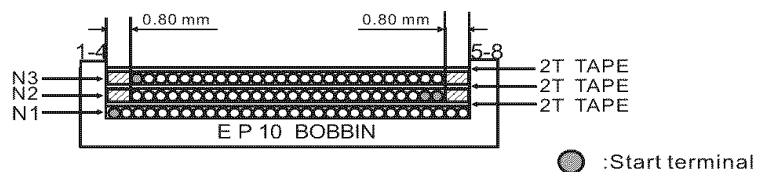
NOTE :

1. - Place the bobbin pin 1 right side of operator.

6. Schematic:



7. Winding construction



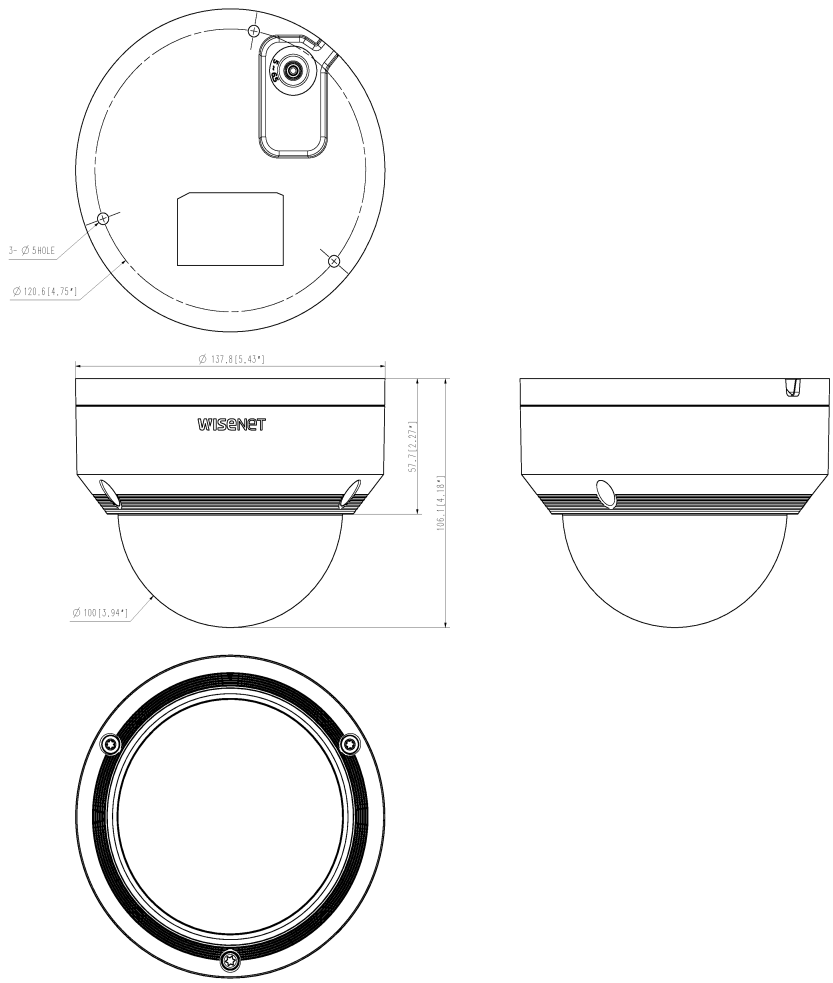
8. Material List

NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFACTURES	UL FILE NO.
1	BOBBIN	PHENOLIC T375J UL RATING: 94V-0 THERMAL RATING:150°C	CHANG CHUN PLASTIC CO.LTD.	QMFZ2.E59481
2	CORE	Ep10 PG232A	High-tech Electronics Co.,Ltd.	N/A
3	WIRE	POLYURETHANE ENAMELED TYPE NO.:2UEW 0.23mm 0.30mm THERMAL RATING:180°C	Shing Shun Magnet wire(HuiZhou) Co.,Ltd	E255839
4	TAPE	ADHESIVE POLYESTER TAPE TYPE NO.:W-001 THERMAL RATING:130°C yellow tape: for inner coils	Shen zhen Weichuangda Packing material Co.,Ltd	E333581
5	TAPE	ADHESIVE POLYESTER TAPE TYPE NO.:S19(kapton tape) THERMAL RATING:200°C Kapton tape: for outside of core	Shen zhen yanda electronic Technology Co.,Ltd	E309332
6	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
7	Glue	E-500(xx) E-504H-1 THERMAL RATING:130°C	Dong Guan city eatto electronic material Co.,Ltd	E218090
8	INK	VIC-120	Shenshen Huarui samwo group Co.,Ltd	N/A

9. PACKING INFORMATION:

DESCRIPTION	QTY
PIECES PER REEL	250
PIECES PER POCKET	1
PIECES PER BOX	750
REEL PER BOX	3
GROSS WEIGHT PER BOX(KG)	TBD
NET WEIGHT PER BOX(KG)	TBD

LVN-6070R
UNIT : mm[inch]





Project No. 4788307309 File E158873 Page 22
 Compliance Review
 Conducted by: SEUNGTAE KIM Date 2018-01-25
 Printed Name Signature

Standard SCC Requirements and Guidance - Product Certification Body Accreditation Program Edition/ Revision Date 2016-04-06

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
9.2.3 CBs shall include dual language safety labeling within their product certification requirements, if so required by the standard or by the authority having jurisdiction.					
The manufacturer has confirmed they have the ability to include English and French safety labeling exactly as specified in the product standard; or, if NOT specified in the product standard, the ability to include English and French safety labelling consisting of markings associated with the signal words DANGER, WARNING, and CAUTION when required.	X			The ability of the manufacturer to include these markings was verified by either (1) visual inspection of the markings on the actual product or (2) draft of labels that will be applied to the product or (3) written confirmation from the customer of the markings that will appear on the product. If the product standard provides the exact translation, the evidence must match the exact translation. If the product standard does NOT provide the exact translation, the evidence must simply include both the English and French text (no verification of translation is required).	N/A

Project No. 4788307309

File E158873

Page 23

Compliance

Review

Conducted by:

SEUNGTAE KIM

Date 2018-01-25

Printed Name

Signature

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
Manufacturer has a method to manage distribution of products, IF all products with the Canadian certification mark are NOT going to include the dual language.	X			Evaluation staff are to only verify that the manufacturer has a method to control distribution. Evaluation staff do not have to record the method of control nor are the evaluation staff expected to verify the effectiveness of the method of control. This requirement to verify that a method exists will be noted in the FUS Procedure. The UL Field Engineer will verify the method during surveillance. If the manufacturer is going to include the dual language on all products with the Canadian certification mark, then this item is N/A; no further action required.	N/A

5mm Infrared LED**XB-L5BT3BAD-80****SAMPLE APPROVAL SHEET**NUMBER OF SAMPLE: YP1710011SAMASON P/N: XB-L5BT3BAD-80SPECIFICATION: 5mm有边黑色红外LEDREV: A/1EFFECTIVE TIME: 2017-11-21

Customer:				
Customer Approval	Check	Inspection	Approval	Date

Provider:				
Provider Approval	Drawn	Check	Approval	Date
	赵晓英	谈历龙	王惠秋	2017-11-21

5mm Infrared LED**XB-L5BT3BAD-80**

Features

- 2.54mm Lead spacing
- Peak wavelength: $\lambda_P = 850\text{nm}$
- Pb Free
- RoSH-compliant
- High reliability
- The long service life, low driving voltage

Applications

- Infrared Illumination for cameras
- Surveillance systems
- Machine vision systems
- Smoke detector
- Infrared applied system

Safety Advices

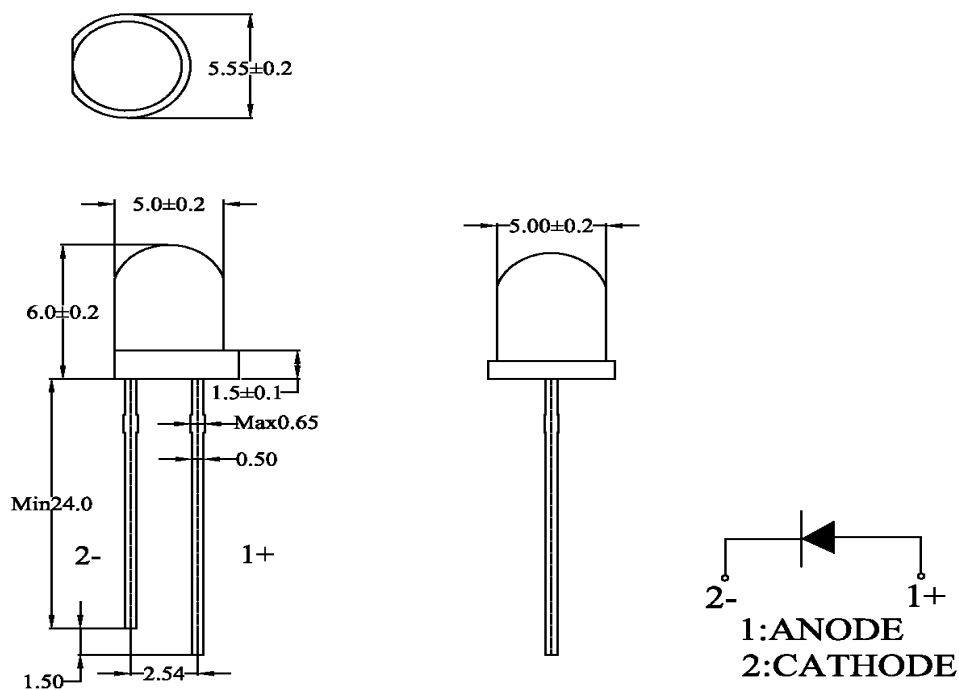
Depending on the mode of operation, these devices emit highly concentrated non visible infrared light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions given in IEC 60825-1 and IEC 62471 .

5mm Infrared LED

XB-L5BT3BAD-80

Part Number: XB-L5BT3BAD-80

■ Package Dimensions And Materials



Chip		Lens Color
Material	Emitting Color	
AlGaAs	Infrared	Black

Notes:

- 1.All dimension units are millimeters
- 2.All dimension tolerance is $\pm 0.2\text{mm}$ unless otherwise noted
- 3.An epoxy meniscus may extend about 1.5mm down the leds
- 4.Burr around bottom of epoxy may be 0.5mm max...

5mm Infrared LED**XB-L5BT3BAD-80****■ Absolute Maximum Rating at TA=25°C**

Item	Symbol	Absolute Maximum Rating	Unit
Peak Forward Current (1/10Duty Cycle,0.1ms Pulse Width)	Ifp	1000	mA
Continuous Forward Current	If	100	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	150	mW
Electrostatic discharge	ESD	3000	V
Operation Temperature	Topr	-40 -- +85	°C
Storage Temperature	Tstg	-40 -- +100	°C
Lesd Soldering Temperature	Tsol	Max.260°C for 5sec Max	
Junction temperature	Tj	125	°C

■ Typical Optical/Electrode Characteristic

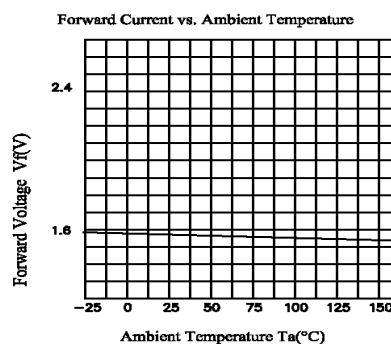
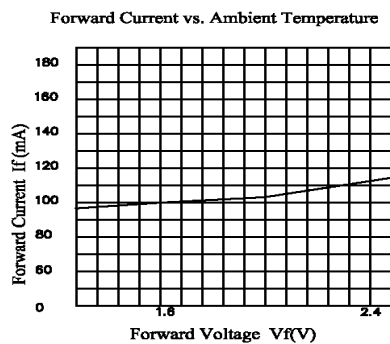
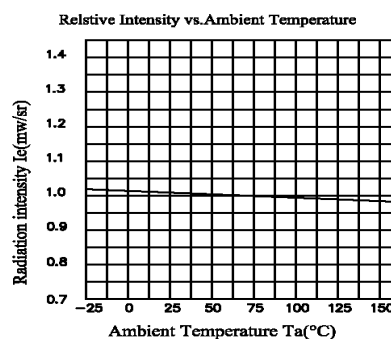
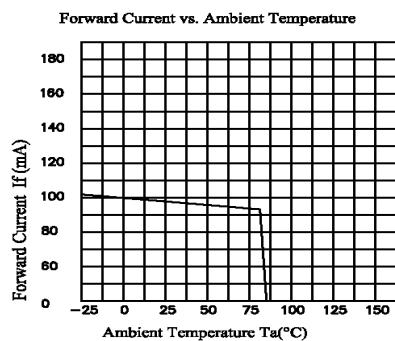
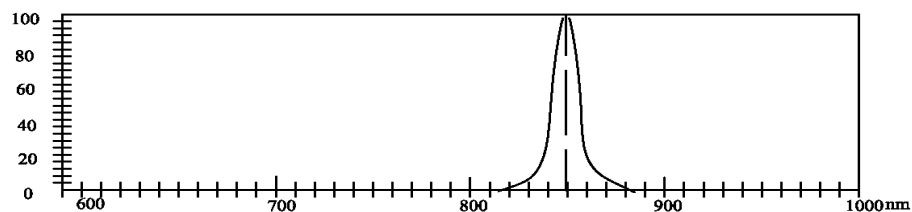
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf	IF=100mA	--	1.5	1.8	V
Reverse Current	Ir	Vr=5V	--	--	10	uA
50% Power Angle	2θ1/2	IF=100mA	--	80	--	deg
Radiation intensity	Ie	IF=100mA	20	35	--	mw/sr
The peak wave	λP	IF=100mA	--	850	--	nm
Spectral Line Half-Width	Δλ	IF=100mA	--	50	--	nm

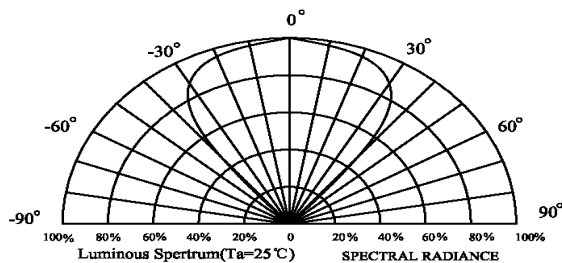
5mm Infrared LED

XB-L5BT3BAD-80

■ Typical Optical/Electrode Characteristic Curves
($T_a=25^{\circ}\text{C}$ Unless Otherwise Noted)

RELATIVE RESPONSE 100%=1.642e-G01



5mm Infrared LED**XB-L5BT3BAD-80****Soldering Condition(Pb-Free)****1.Iron:**

Soldering Iron:30W Max

Temperature 350℃ Max

Soldering Time:3 Seconds Max(One Time)

Distance:2mm Min(From solder joint to body)

2.Wave Soldering Profile

Dip Soldering

Preheat: 120℃ Max

Preheat time: 60seconds Max

Ramp-up

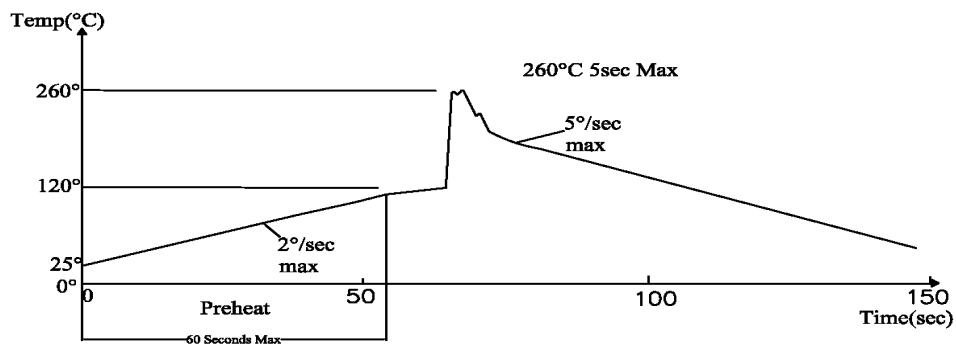
2℃/sec(max)

Ramp-Down:-5℃/sec(max)

Solder Bath:260℃ Max

Dipping Time:3 seconds Max

Distance:2mm Min(From solder joint to body)



5mm Infrared LED**XB-L5BT3BAD-80****■ Reliability Persult**

Test Classification	Test Item	Test Condititons	Test Duration	Sample Size	AC/RE
Life Test	Room Temperatuer DC Operating Life Test	Ta=25℃±5℃, IF=100mA	1000Hrs	22PCS	0/1
Environment Test	Thermal Shock Test	-10℃±5℃←→+100℃±5℃ 5min. 10sec. 5min	50cycles	22PCS	0/1
	Temperature Cycle Test	-35℃±5℃←→+85℃±5℃ 25min. 5min. 25min	200cycles	22PCS	0/1
	High Temperature High Humidity test	Ta=85℃±5℃ RH=85%±0.5%RH	1000Hrs	22PCS	0/1
	High Temperature Storage	Ta=100℃±5℃	1000Hrs	22PCS	0/1
	Low Temperature Storage	Ta=-55℃±5℃	1000Hrs	22PCS	0/1
Mechanical Test	Resistance to Soldering Heat	Ta=260℃±5℃	5sec	22PCS	0/1
	Lead Integrity	Load 2.5N(0.25kgf) 0° ~ 90° ~0°	3times	22PCS	0/1

■ Criteria for Judging The Damage


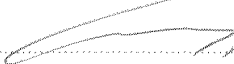
Item	Symbol	Test Conditions	Criteria for Judgment	
			Min.	Max.
Forward Voltage	V _F	IF=100mA		U.S.L.*1.2
Reverse Current	I _R	V _R =5V		U.S.L.*2.2
Luminous Intensity	I _v	IF=100mA	L.S.L.**×0.7	

U.S.L.* : Upper Standard Level

L.S.L.** : Lower Standard Level



Page 1 of 15

TEST REPORT IEC 62471 and/or EN 62471 Photobiological safety of lamps and lamp systems	
Report Reference No.	F690501/RF-SAF009831
Order No.	G-44-2018-00190
Tested by (name + signature).....	Ethan Kim 
Approved by (name + signature)	ChangMin Yi 
Date of issue	January 24, 2018
Total number of pages	15
Testing Laboratory	SGS Korea Co., Ltd. Gunpo Laboratory
Address	14, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, 15807, Republic of Korea
Applicant's name	Hanwha Techwin Co., Ltd.
Address	Hanwha Techwin R&D center, 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
Test specification:	
Standard	<input checked="" type="checkbox"/> IEC 62471: 2006 (First Edition) <input type="checkbox"/> EN 62471: 2008
Test procedure	Test report
Non-standard test method	N/A
Test Report Form No.	IECEN62471A
TRF Originator	VDE Testing and Certification Institute
Master TRF	Dated 2009-05
TRF Modified by	SGS Korea Co., Ltd. Gunpo Laboratory
Modified TRF Form No.	TRF No. SAF5102-IEC62471A(2015/11/11)(0)
Test item description	Network Camera
Trade Mark	-
Manufacturer	Same as applicant
Model/Type reference	LVN-6070R
Ratings	37-57 Vd.c.; 0,18 A

TRF No. SAF5102-IEC62471A(2015/11/11)(0)

**Summary of testing:**

- The equipment is powered by PoE ((35 – 57 V d.c.))
- Testing were performed with adapter supplied by the applicant

Hazard	Risk Group
Actinic UV	Exempt
Near UV	Exempt
Blue Light	Exempt
Retinal Thermal Weak Visual	Group 1

Tests performed (name of test and test clause):

- 4.3.1 Actinic UV hazard exposure limit for the skin and eye
- 4.3.2 Near-UV hazard exposure limit for eye
- 4.3.3 Retinal blue light hazard exposure limit
- 4.3.5 Retinal thermal hazard exposure limit
- 4.3.7 Infrared radiation hazard exposure limits for the eye
- 4.3.8 Thermal hazard exposure limit for the skin

Testing location:

Refer to page 1.

Summary of compliance with National Differences: None**Copy of marking plate:**

-



Test item particulars		—
Tested lamp	<input checked="" type="checkbox"/> continuous wave lamps	<input type="checkbox"/> pulsed lamps
Tested lamp system	—	
Lamp classification group	<input type="checkbox"/> exempt	<input checked="" type="checkbox"/> risk 1 <input type="checkbox"/> risk 2 <input type="checkbox"/> risk 3
Lamp cap	—	
Bulb	—	
Rated of the lamp	—	
Furthermore marking on the lamp	—	
Seasoning of lamps according IEC standard	—	
Used measurement instrument	Bentham IDR300-PSL	
Temperature by measurement	25 ± 5 °C	
Information for safety use	—	
Possible test case verdicts:		
— test case does not apply to the test object : N/A		
— test object does meet the requirement : P (Pass)		
— test object does not meet the requirement : F (Fail)		
Testing:		
Date of receipt of test item : January 19, 2018		
Date (s) of performance of tests : January 22, 2018		
General remarks:		
Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.		
The test results presented in this report relate only to the object tested.		
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
"(See Enclosure #)" refers to additional information appended to the report.		
"(See appended table)" refers to a table appended to the report.		
Throughout this report a comma is used as the decimal separator.		
This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at www.sgs.com/terms_e-document.htm .		
Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.		
Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.		



General product information:

- The product can emit IR(non visible infrared light) when powered
- LED 15 EA (Manufacture: Cybright IR LED Technology Co., Ltd;
Model: XB-L5BT3BAD-80); $V_F = 1,8$ Vd.c.(Max); $I_F = 100$ mA; Angle = 80°

- Factory:
HANWHA TECHWIN (TIANJIN) CO., LTD.
No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
4	EXPOSURE LIMITS		—
4.1	General		P
	The exposure limits in this standard is not less than 0,01 ms and not more than any 8-hour period and should be used as guides in the control of exposure		P
	Detailed spectral data of a light source are generally required only if the luminance of the source exceeds 10^4 cd m^{-2}		P
4.3	Hazard exposure limits		P
4.3.1	Actinic UV hazard exposure limit for the skin and eye		P
	The exposure limit for effective radiant exposure is 30 J m^{-2} within any 8-hour period		P
	To protect against injury of the eye or skin from ultraviolet radiation exposure produced by a broad-band source, the effective integrated spectral irradiance, E_s , of the light source shall not exceed the levels defined by:		P
	$E_s \cdot t = \sum_{200}^{400} \sum_f E_f(\lambda, t) \cdot S_{UV}(\lambda) \cdot \Delta\lambda \cdot \Delta t \leq 30 \text{ J m}^{-2}$		P
	The permissible time for exposure to ultraviolet radiation incident upon the unprotected eye or skin shall be computed by:		P
	$t_{\max} = \frac{30}{E_s} \text{ s}$		P
4.3.2	Near-UV hazard exposure limit for eye		P
	For the spectral region 315 nm to 400 nm (UV-A) the total radiant exposure to the eye shall not exceed 10000 J m^{-2} for exposure times less than 1000 s. For exposure times greater than 1000 s (approximately 16 minutes) the UV-A irradiance for the unprotected eye, E_{UVA} , shall not exceed 10 W m^{-2} .		P
	The permissible time for exposure to ultraviolet radiation incident upon the unprotected eye for time less than 1000 s, shall be computed by:		P
	$t_{\max} \leq \frac{10000}{E_{UVA}} \text{ s}$		P
4.3.3	Retinal blue light hazard exposure limit		P
	To protect against retinal photochemical injury from chronic blue-light exposure, the integrated spectral radiance of the light source weighted against the blue-light hazard function, $B(\lambda)$, i.e., the blue-light weighted radiance, L_B , shall not exceed the levels defined by:		P



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	$L_B \cdot t = \sum_{300}^{700} \sum_i L_{\lambda}(\lambda, t) \cdot B(\lambda) \cdot \Delta\lambda \cdot \Delta t \leq 10^6 \quad \text{J} \cdot \text{m}^{-2} \cdot \text{sr}^{-1}$		P
	$L_B = \sum_{300}^{700} L_{\lambda} \cdot B(\lambda) \cdot \Delta\lambda \leq 100 \quad \text{W} \cdot \text{m}^{-2} \cdot \text{sr}^{-1}$		P
4.3.4	Retinal blue light hazard exposure limit - small source		N/A
	Thus the spectral irradiance at the eye E_{λ} , weighted against the blue-light hazard function $B(\lambda)$ shall not exceed the levels defined by:		N/A
	$E_B \cdot t = \sum_{300}^{700} \sum_i E_{\lambda}(\lambda, t) \cdot B(\lambda) \cdot \Delta\lambda \cdot \Delta t \leq 100 \quad \text{J} \cdot \text{m}^{-2}$		N/A
	$E_B = \sum_{300}^{700} E_{\lambda} \cdot B(\lambda) \cdot \Delta\lambda \leq 1 \quad \text{W} \cdot \text{m}^{-2}$		N/A
4.3.5	Retinal thermal hazard exposure limit		N/A
	To protect against retinal thermal injury, the integrated spectral radiance of the light source, L_{λ} , weighted by the burn hazard weighting function $R(\lambda)$ (from Figure 4.2 and Table 4.2), i.e., the burn hazard weighted radiance, shall not exceed the levels defined by:		N/A
	$L_{IR} = \sum_{380}^{1400} L_{\lambda} \cdot R(\lambda) \cdot \Delta\lambda \leq \frac{50\,000}{\alpha \cdot t^{0.25}} \quad \text{W} \cdot \text{m}^{-2} \cdot \text{sr}^{-1}$		N/A
4.3.6	Retinal thermal hazard exposure limit – weak visual stimulus		P
	For an infrared heat lamp or any near-infrared source where a weak visual stimulus is inadequate to activate the aversion response, the near infrared (780 nm to 1400 nm) radiance, L_{IR} , as viewed by the eye for exposure times greater than 10 s shall be limited to:		P
	$L_{IR} = \sum_{780}^{1400} L_{\lambda} \cdot R(\lambda) \cdot \Delta\lambda \leq \frac{6\,000}{\alpha} \quad \text{W} \cdot \text{m}^{-2} \cdot \text{sr}^{-1}$		P
4.3.7	Infrared radiation hazard exposure limits for the eye		N/A
	The avoid thermal injury of the cornea and possible delayed effects upon the lens of the eye (cataractogenesis), ocular exposure to infrared radiation, E_{IR} , over the wavelength range 780 nm to 3000 nm, for times less than 1000 s, shall not exceed:		N/A
	$E_{IR} = \sum_{780}^{3000} E_{\lambda} \cdot \Delta\lambda \leq 18\,000 \cdot t^{-0.75} \quad \text{W} \cdot \text{m}^{-2}$		N/A
	For times greater than 1000 s the limit becomes:		N/A



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	$E_{IR} = \sum_{380}^{3000} E_{\lambda} \cdot \Delta\lambda \leq 100 \quad W \cdot m^{-2}$		N/A
4.3.8	Thermal hazard exposure limit for the skin		N/A
	Visible and infrared radiant exposure (380 nm to 3000 nm) of the skin shall be limited to:		N/A
	$E_{H-t} = \sum_{380}^{3000} \sum_t E_{\lambda}(\lambda, t) \cdot \Delta\lambda \cdot \Delta t \leq 20\,000 \cdot t^{0.25} \quad J \cdot m^{-2}$		N/A
5	MEASUREMENT OF LAMPS AND LAMP SYSTEMS		—
5.1	Measurement conditions		P
	Measurement conditions shall be reported as part of the evaluation against the exposure limits and the assignment of risk classification.		P
5.1.1	Lamp ageing (seasoning)		N/A
	Seasoning of lamps shall be done as stated in the appropriate IEC lamp standard.		N/A
5.1.2	Test environment		P
	For specific test conditions, see the appropriate IEC lamp standard or in absence of such standards, the appropriate national standards or manufacturer's recommendations.		P
5.1.3	Extraneous radiation		P
	Careful checks should be made to ensure that extraneous sources of radiation and reflections do not add significantly to the measurement results.		P
5.1.4	Lamp operation		P
	Operation of the test lamp shall be provided in accordance with:		P
	– the appropriate IEC lamp standard, or		N/A
	– the manufacturer's recommendation		P
5.1.5	Lamp system operation		N/A
	The power source for operation of the test lamp shall be provided in accordance with:		N/A
	– the appropriate IEC standard, or		N/A
	– the manufacturer's recommendation		N/A
5.2	Measurement procedure		P
5.2.1	Irradiance measurements		P
	Minimum aperture diameter 7mm.		P



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	Maximum aperture diameter 50 mm.		P
	The measurement shall be made in that position of the beam giving the maximum reading.		P
	The measurement instrument is adequate calibrated.		P
5.2.2	Radiance measurements		P
5.2.2.1	Standard method		P
	The measurements made with an optical system.		P
	The instrument shall be calibrated to read in absolute radiant power per unit receiving area and per unit solid angle to acceptance averaged over the field of view of the instrument.		P
5.2.2.2	Alternative method		N/A
	Alternatively to an imaging radiance set-up, an irradiance measurement set-up with a circular field stop placed at the source can be used to perform radiance measurements.		N/A
5.2.3	Measurement of source size		P
	The determination of α , the angle subtended by a source, requires the determination of the 50% emission points of the source.		P
5.2.4	Pulse width measurement for pulsed sources		N/A
	The determination of Δt , the nominal pulse duration of a source, requires the determination of the time during which the emission is > 50% of its peak value.		N/A
5.3	Analysis methods		P
5.3.1	Weighting curve interpolations		P
	To standardize interpolated values, use linear interpolation on the log of given values to obtain intermediate points at the wavelength intervals desired.		P
5.3.2	Calculations		P
	The calculation of source hazard values shall be performed by weighting the spectral scan by the appropriate function and calculating the total weighted energy.		P
5.3.3	Measurement uncertainty		P
	The quality of all measurement results must be quantified by an analysis of the uncertainty.		P
6	LAMP CLASSIFICATION		—



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	For the purposes of this standard it was decided that the values shall be reported as follows:		P
	– for lamps intended for general lighting service, the hazard values shall be reported as either irradiance or radiance values at a distance which produces an illuminance of 500 lux, but not at a distance less than 200 mm		N/A
	– for all other light sources, including pulsed lamp sources, the hazard values shall be reported at a distance of 200 mm		P
6.1	Continuous wave lamps		P
6.1.1	Exempt Group		F
	In the exempt group are lamps, which do not pose any photobiological hazard. The requirement is met by any lamp that does not pose:		P
	– an actinic ultraviolet hazard (E_s) within 8-hours exposure (30000 s), nor		P
	– a near-UV hazard (E_{UVA}) within 1000 s, (about 16 min), nor		P
	– a retinal blue-light hazard (L_B) within 10000 s (about 2,8 h), nor		P
	– a retinal thermal hazard (L_R) within 10 s, nor	Exceed the limit; See next group	F
	– an infrared radiation hazard for the eye (E_{IR}) within 1000 s		N/A
6.1.2	Risk Group 1 (Low-Risk)		P
	In this group are lamps, which exceeds the limits for the exempt group but that does not pose:		P
	– an actinic ultraviolet hazard (E_s) within 10000 s, nor		N/A
	– a near ultraviolet hazard (E_{UVA}) within 300 s, nor		N/A
	– a retinal blue-light hazard (L_B) within 100 s, nor		N/A
	– a retinal thermal hazard (L_R) within 10 s, nor		P
	– an infrared radiation hazard for the eye (E_{IR}) within 100 s		N/A
	Lamps that emit infrared radiation without a strong visual stimulus and do not pose a near-infrared retinal hazard (L_{IR}), within 100 s are in Risk Group 1.		N/A
6.1.3	Risk Group 2 (Moderate-Risk)		N/A
	This requirement is met by any lamp that exceeds the limits for Risk Group 1, but that does not pose:		N/A



IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	– an actinic ultraviolet hazard (E_s) within 1000 s exposure, nor		N/A
	– a near ultraviolet hazard (E_{UVA}) within 100 s, nor		N/A
	– a retinal blue-light hazard (L_B) within 0,25 s (aversion response), nor		N/A
	– a retinal thermal hazard (L_R) within 0,25 s (aversion response), nor		N/A
	– an infrared radiation hazard for the eye (E_{IR}) within 10 s		N/A
	Lamps that emit infrared radiation without a strong visual stimulus and do not pose a near-infrared retinal hazard (L_{IR}), within 10 s are in Risk Group 2.		N/A
6.1.4	Risk Group 3 (High-Risk)		N/A
	Lamps which exceed the limits for Risk Group 2 are in Group 3.		N/A
6.2	Pulsed lamps		N/A



EN 62471			
Clause	Requirement + Test	Result - Remark	Verdict
	CENELEC COMMON MODIFICATIONS (EN)		—
4	EXPOSURE LIMITS		—
	Contents of the whole Clause 4 of IEC 62471:2006 moved into a new informative Annex ZB		—
	Clause 4 replaced by the following:		N/A
	Limits of the Artificial Optical Radiation Directive (2006/25/EC) have been applied instead of those fixed in IEC 62471:2006		N/A
4.1	General		N/A
	First paragraph deleted		—



IEC 62471			
Clause	Requirement + Test	Result – Remark	Verdict

Table 6.1 Emission limits for risk groups of continuous wave lamps									P
Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	1.58E-05	0,003	—	0,03	—
Near UV	—	E_{UVA}	$W \cdot m^{-2}$	10	6.16E-06	33	—	100	—
Blue light	$B(\lambda)$	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	0.0031	10000	—	4000000	—
Blue light, small source	$B(\lambda)$	E_B	$W \cdot m^{-2}$	1,0*	0E+00	1,0	0E+00	400	—
Retinal thermal	$R(\lambda)$	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/ α	—	28000/ α	—	71000/ α	—
Retinal thermal, weak visual stimulus**	$R(\lambda)$	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	6000/ α	3.25E+06	6000/ α	3.13E+03	6000/ α	3.13E+03
IR radiation, eye	—	E_{IR}	$W \cdot m^{-2}$	100	—	570	—	3200	—
* Small source defined as one with $\alpha < 0,011$ radian. Averaging field of view at 10000 s is 0,1 radian.									
** Involves evaluation of non-GLS source									

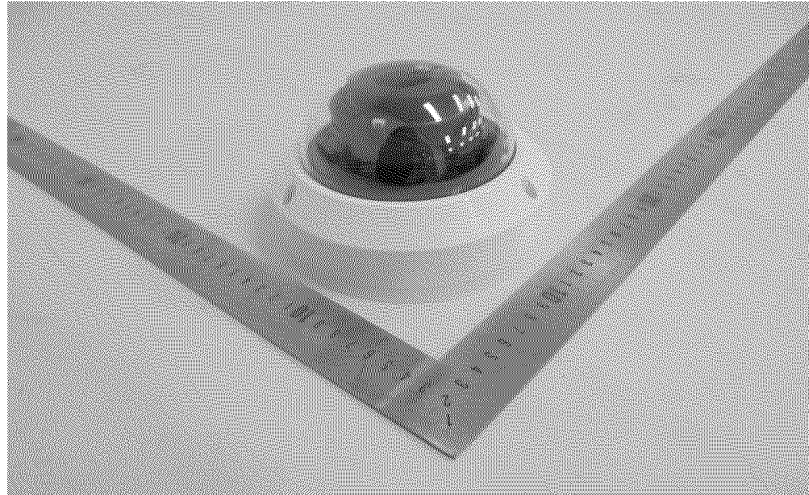


EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict

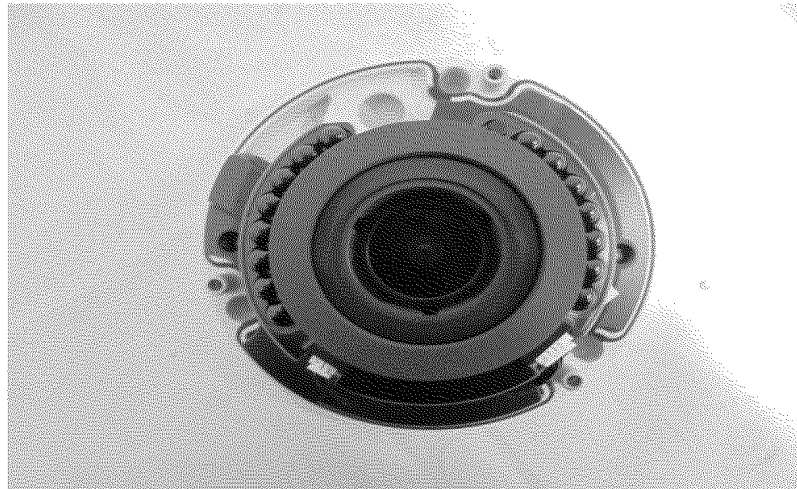
Table 6.1		Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC)							N/A
Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Actinic UV	$S_{UV}(\lambda)$	E_s	$W \cdot m^{-2}$	0,001	—	—	—	—	—
Near UV	—	E_{UVA}	$W \cdot m^{-2}$	0,33	—	—	—	—	—
Blue light	$B(\lambda)$	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	—	10000	—	4000000	—
Blue light, small source	$B(\lambda)$	E_B	$W \cdot m^{-2}$	0,01*	—	1,0	—	400	—
Retinal thermal	$R(\lambda)$	L_R	$W \cdot m^{-2} \cdot sr^{-1}$	28000/ α	—	28000/ α	—	71000/ α	—
Retinal thermal, weak visual stimulus**	$R(\lambda)$	L_{IR}	$W \cdot m^{-2} \cdot sr^{-1}$	545000 0,0017 $\leq \alpha \leq 0,011$	—				
				6000/ α 0,011 $\leq \alpha \leq 0,1$	—				
IR radiation, eye	—	E_{IR}	$W \cdot m^{-2}$	100	—	570	—	3200	—
* Small source defined as one with $\alpha < 0,011$ radian. Averaging field of view at 10000 s is 0,1 radian. ** Involves evaluation of non-GLS source									

**Photo documentation**

* External View (1 of 1)



* LED Power On View (1 of 1)



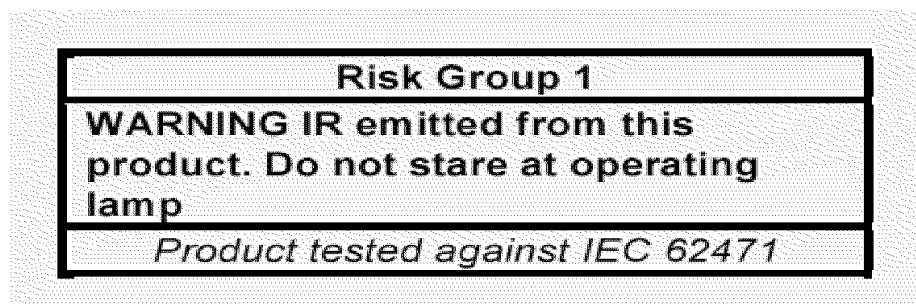
TRF No. SAF5102-IEC62471A(2015/11/11)(0)



Furthermore remarks

* Resulting IEC 62471 Classification and Labelling

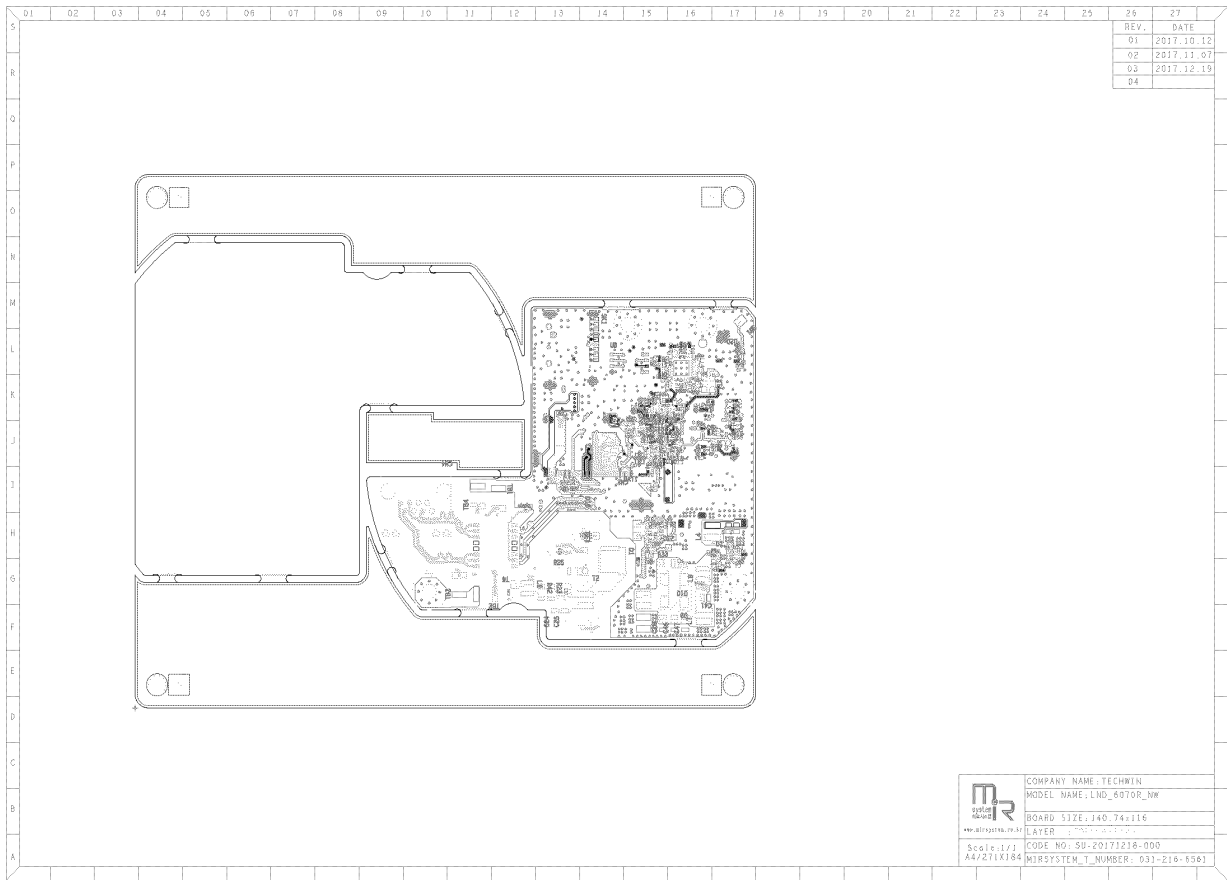
Hazard	Risk Group
Actinic UV	Exempt
Near UV	Exempt
Blue Light	Exempt
Retinal Thermal Weak Visual	Group 1



- END OF TEST REPORT -

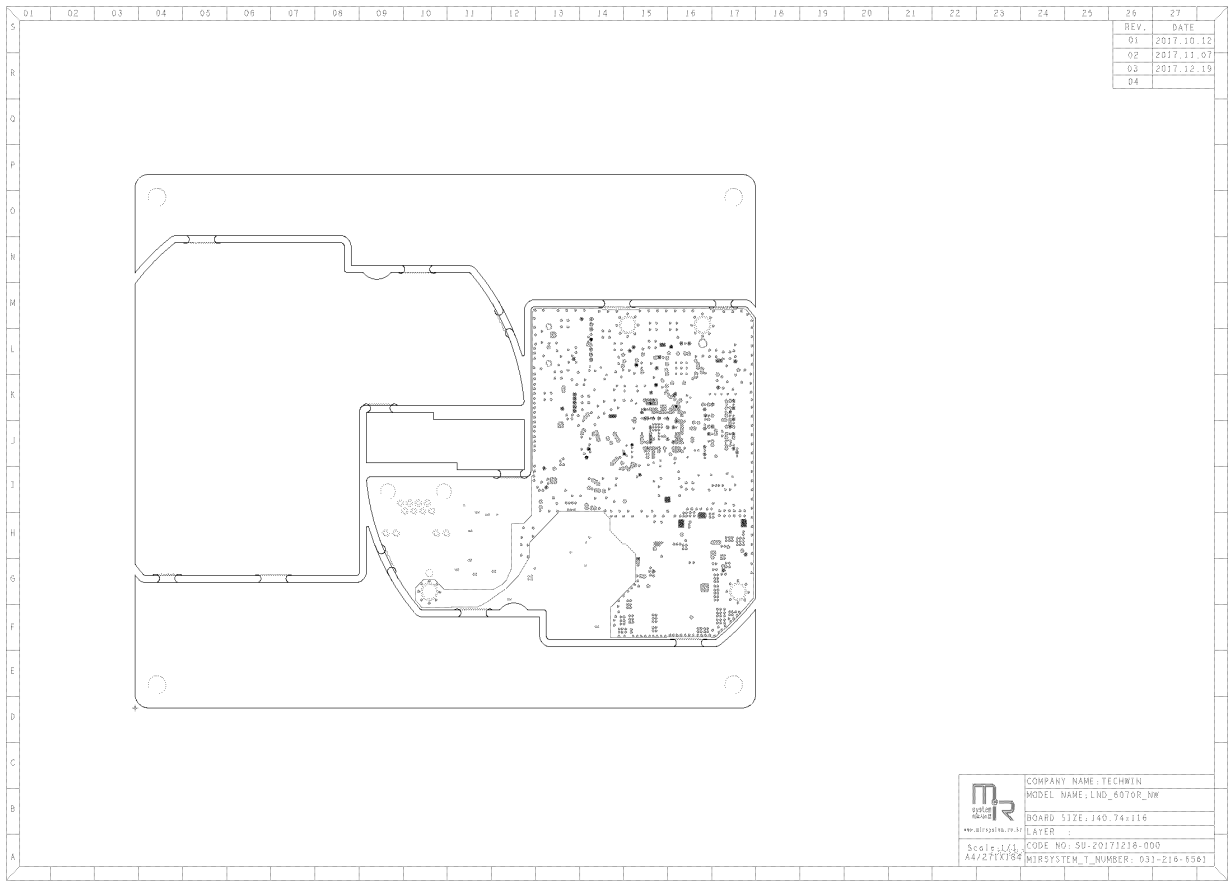
TRF No. SAF5102-IEC62471A(2015/11/11)(0)

ART FILM - 04_TOP



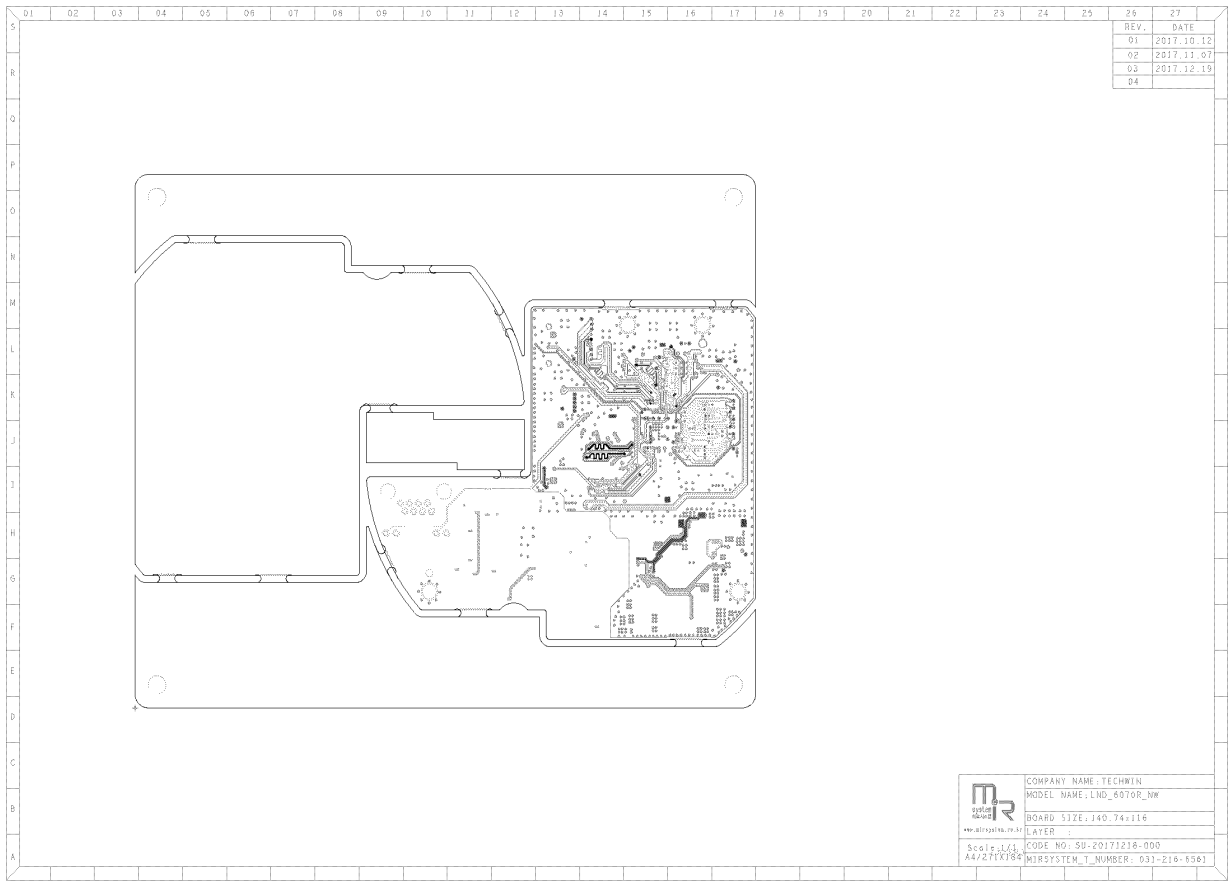
ART FILM - 04_TOP

ART FILM - 05_Layer2



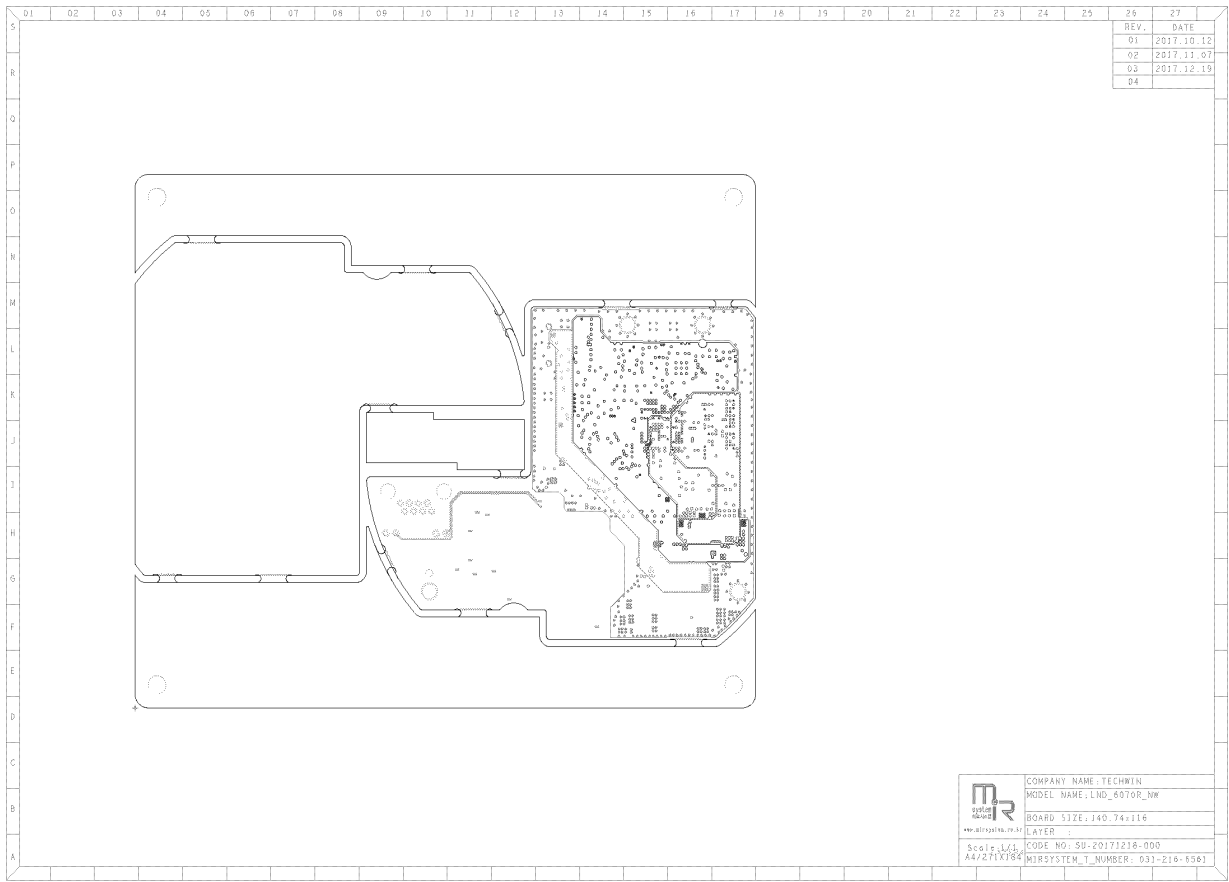
ART FILM - 05_Layer2

ART FILM - 06_Layer3



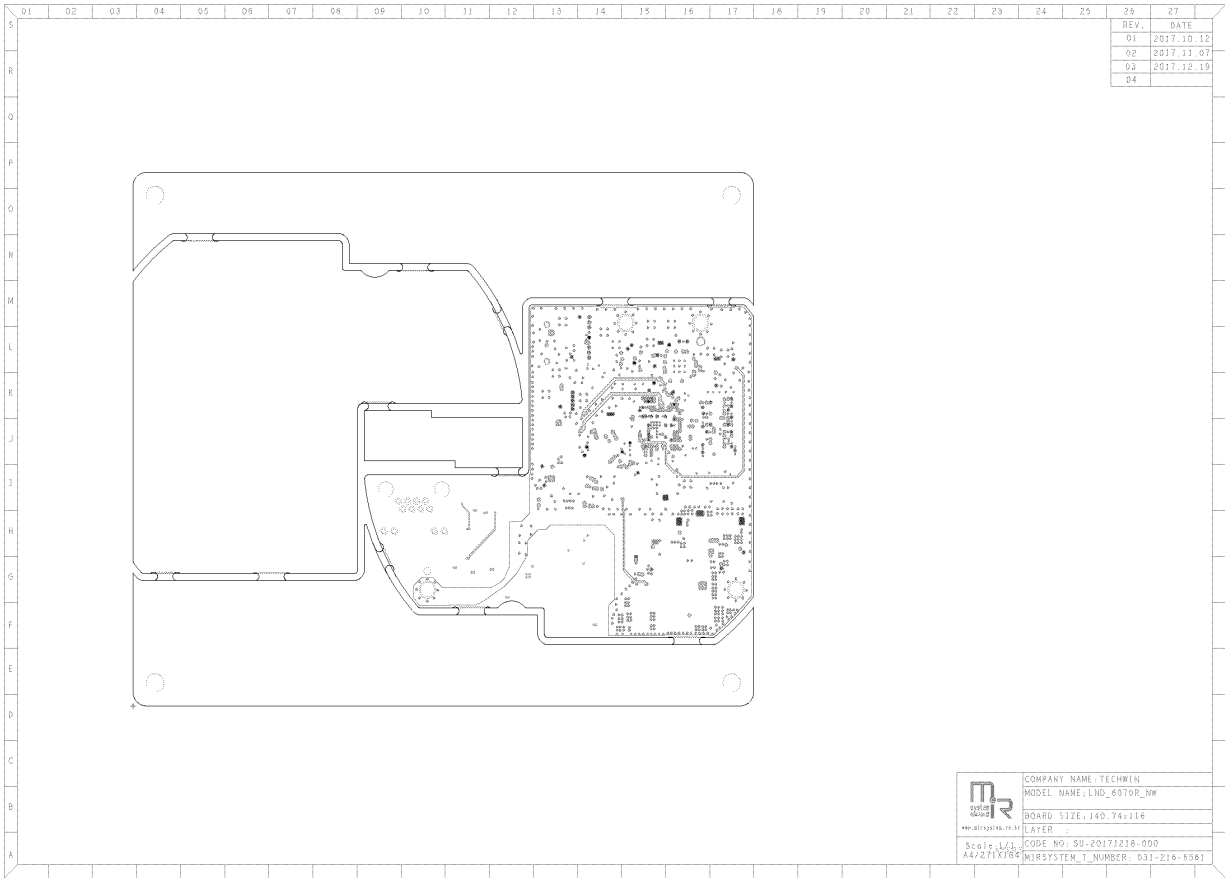
ART FILM - 06_Layer3

ART FILM - 07_Layer4



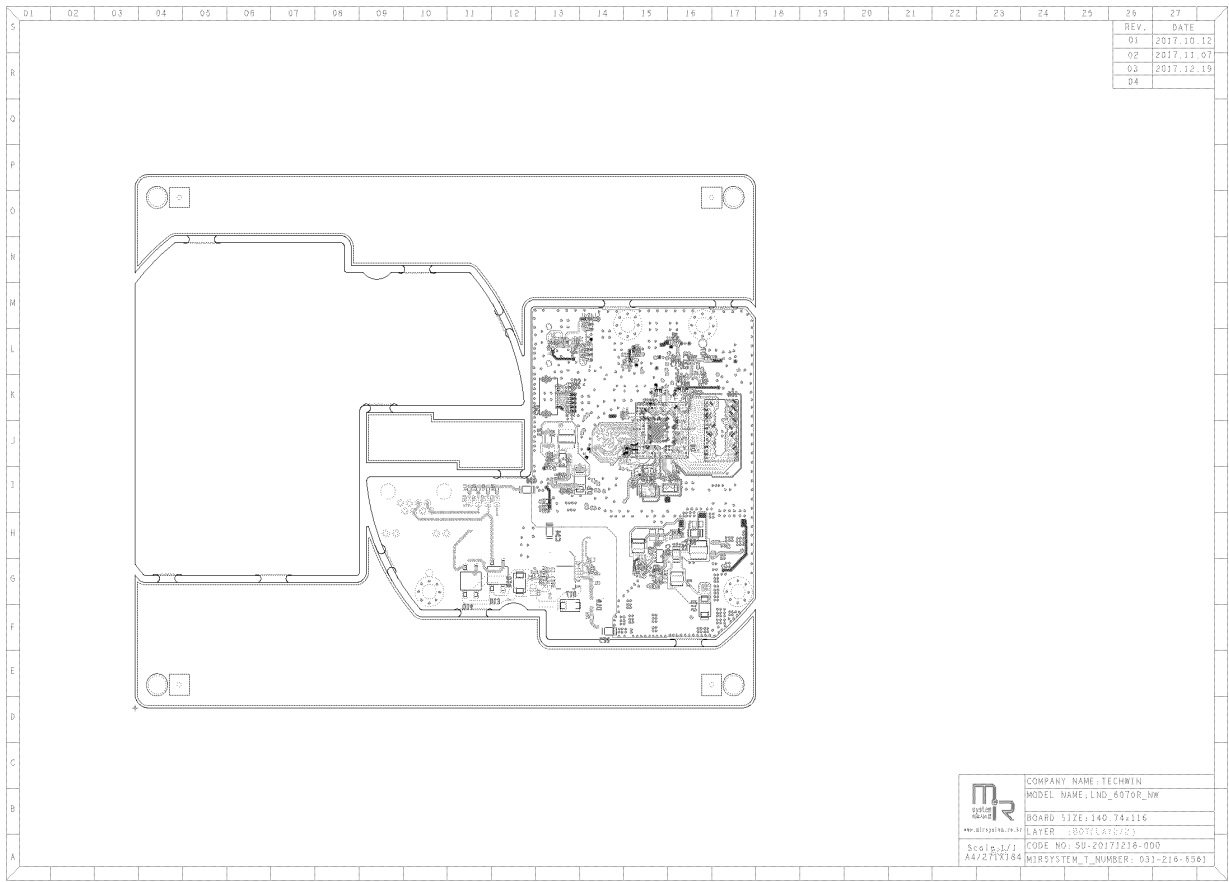
ART FILM - 07_Layer4

ART FILM - 08_Layer5

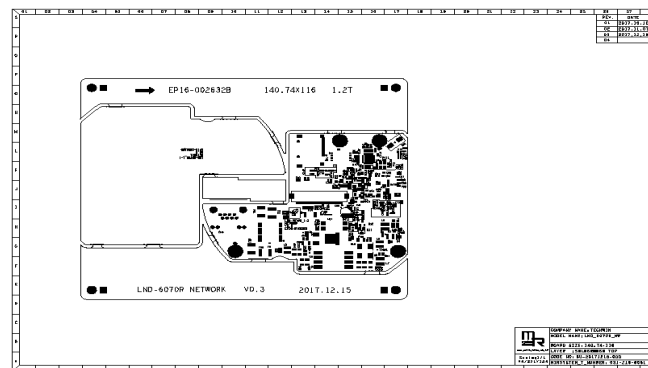


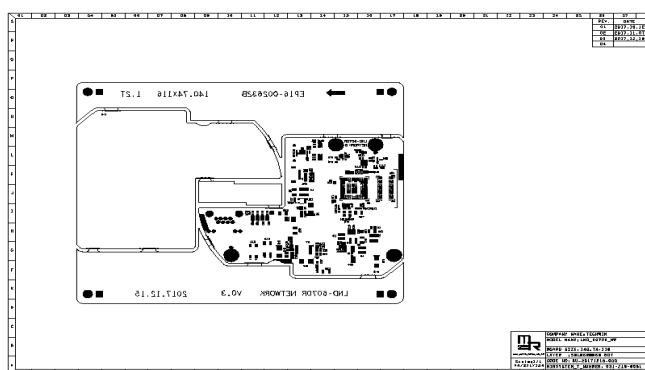
ART FILM - 08_Layer5

ART FILM - 09_BOTTOM



ART FILM - 09_BOTTOM





Test Record

Test Record No. 1

1. Test result relate only to the items tested.
2. The manufacturer submitted representative production samples of NETWORK CAMERA, LNV-6070R.
3. Only the test listed were considered necessary.

The following tests were conducted:

Test	Testing Location/Comments
End Product Reference Page	
General Guidelines	
Input: Single-Phase (1.6.2)	
SELV Reliability Test Including Hazardous Voltage Measurements (2.2.2, 2.2.3, 2.2.4, Part 22 6.1)	
Determination of Working Voltage; Working Voltage Measurement (2.10.2)	
Loading - Wall and Ceiling Mounted Equipment (4.2.10)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Component Failure (5.3.1, 5.3.4, 5.3.7)	

Test results are valid only for the tested equipment. These tests are considered representative of the products covered by this Test Report. The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements in the Standard(s) referenced at the beginning of this Test Report.

The following supplements are provided as a part of this Test Record. NOTE: These supplements are only available to the Applicant via the CDA system.

Type	Supplement Id	Description
Datasheet	2-01	DataSheet - 4788307309