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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	SVP-5300N	E158873-A5-UL	
Video Presenter	SDP-900DXAN, SDP-950DXAN, SDP-950STAN	E158873-A6-UL	
Video Presenter	SDP-850, SDP-850DX	E158873-A9-UL	
Digital Video Recorder	SVR-1650, SVR-1650E, SVR-1640, SVR-1640E, SVR-950, SVR-950E and SVR-1640A	E158873-A11-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	
Digital Video Recorder.	SVR-480	E158873-A17-UL	Withdrawn
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UTP Power Supply Unit	SPU-400	E158873-A20-UL	Withdrawn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 Presenter	SDP-760	E158873-A44-UL	
Network Camera	SNP-5300H*, SNP-6201H* (* is Blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A46-UL	
Network Camera	SNP-5300*, SNP-6201* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A47-UL	
Digital Color Camera	SCP-3371H*, SCP-2371H*, SCP-2271H*, SCP-2373H*, SCP-2273H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A48-UL	
Digital Color Camera	SCP-3371*, SCP-2371*, SCP-2271*, SCP-2373*, SCP-2273* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A49-UL	
Network Camera	SND-7082*, SND-7082F*, SNV-7082* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A50-UL	
Network Camera	SNB-7001*, SNB-5001*, SNB-3002* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A51-UL	
Network Camera	SNO-7082R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A52-UL	
Network Camera	SNB-7002* (* is blank or 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 blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A55-UL	
Network Camera	SND-6084*, SND-6083*, SND-5084*, SND-5083*, SND-7084* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A56-UL	
DIGITAL COLOR CAMERA	SCD-2022*, SCD-2022R*, SCD-2042R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A58-UL	
Digital Color Camera	SCB-2004*, SCB-2005* (* is blank or N or P: N = NTSC, P=PAL);	E158873-A59-UL	
Digital Color Camera	SCD-2082*, SCV-2082R*, SCV-3083*, SCD-3083* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A60-UL	
Network Camera	SND-6084R*, SND-7084R*, SND-5084R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A61-UL	
NETWORK CAMERA	SNO-6084R*. SNO-7084R* (* is blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A63-UL	
Digital Color Camera	SCO-2081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A64-UL	
DIGITAL COLOR CAMERA	SCB-2004*D, SCB-2005*D (* is blank or 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 blank or N or P, N=NTSC / P=PAL)	E158873-A66-UL	
Network Camera	SNP-6200RH*, SCP-2370RH* (* is blank or N or P: N=NTSC,P=PAL)	E158873-A67-UL	
Network Camera	SNV-6012M* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A68-UL	
Network Camera	SNF-7010*, SNF-7010V*, SNF-7010VM* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A69-UL	

Network Camera	SNO-6011R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A72-UL	
Network Camera	SND-6011R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A73-UL	
Digital Video Recorder	SRD-1680D*, SRD-880D* (* is blank or N or P : N=NTSC, P=PAL)	E158873-A74-UL	
DIGITAL COLOR CAMERA	SCZ-2373*, SCZ-2273* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A75-UL	
NETWORK CAMERA	SCO-6081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A76-UL	
DIGITAL COLOR CAMERA	SCV-6081R* and SCD-6081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A77-UL	
NETWORK VIDEO RECORDER	SRN-4000	E158873-A78-UL	
DIGITAL COLOR CAMERA	SCD-6021* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A81-UL	
NETWORK CAMERA	SNV-6013* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A83-UL	
NETWORK CAMERA	SNB-6010*, SNB-6010A*, SNB-6011*, SNB-6010B*, SNB-6011B* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A85-UL	
NETWORK CAMERA	SNP-6320H*, SNP-5430H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A86-UL	
NETWORK CAMERA	SNP-6320*, SNP-5430* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A87-UL	
Network Video Recorder	SRN-472S, XRN-810S* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A88-UL	
Digital Video Recorder	SRD-1676D*, SRD-1656D*, SRD-876D* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A89-UL	
DIGITAL COLOR CAMERA	SCB-5000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A90-UL	
DIGITAL COLOR CAMERA	SCB-5000*D (* is blank or N or P: N = NTSC, P=PAL)	E158873-A91-UL	
DIGITAL COLOR CAMERA	SCD-5080* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A92-UL	
DIGITAL COLOR CAMERA	SCB-5003*, SCB-5005*, HCB-6001* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A94-UL	
DIGITAL COLOR CAMERA	SCV-5082* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A95-UL	
DIGITAL COLOR CAMERA	SCD-5083*, SCD-5083R*, SCD-5082*, SCD-5083B*, SCD-5081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A96-UL	
DIGITAL COLOR CAMERA	SCV-5083* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A97-UL	

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

NETWORK CAMERA	SNV-L6083R*, SNV-L5083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A121-UL	
NETWORK CAMERA	SNB-9000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A122-UL	
Optical PTZ Accessary	SBP-301HF	E158873-A125-UL	
Optical PTZ Accessary	SBP-300HF	E158873-A126-UL	
NETWORK CAMERA	SNV-8081R* (* is Blank or N or P: N = NTSC, P=PAL)	E158873-A127-UL	
NETWORK CAMERA	SNO-8081R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A128-UL	
NETWORK CAMERA	SNV-6085R* (* is blank or N or P: N = NTSC, P=PAL) SNV-6085* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A129-UL	
DIGITAL COLOR CAMERA	SCB-6003* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A130-UL	
DIGITAL COLOR CAMERA	SCO-6023R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A132-UL	
DIGITAL COLOR CAMERA	SCV-6083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A133-UL	
DIGITAL COLOR CAMERA	SCV-6023R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A135-UL	
DIGITAL COLOR CAMERA	SCD-6023R*, SCD-6013* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A136-UL	
DIGITAL COLOR CAMERA	SCD-6083R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A137-UL	
DIGITAL COLOR CAMERA	SCO-6083R*(* is blank or N or P: N = NTSC, P=PAL)	E158873-A138-UL	
NETWORK CAMERA	SNV-L6014RM*, SNV-L6013R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A139-UL	
DIGITAL COLOR CAMERA	PNO-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A140-UL	
NETWORK CAMERA	PNV-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A141-UL	
NETWORK CAMERA	PND-9080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A142-UL	
Digital Video Recorder	SRD-1685*, SRD-894*, HRD-842* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A143-UL	
Digital Video Recorder	SRD-1694*, HRD-1642* (* is blank or N or P, N=NTSC/ P=PAL)	E158873-A144-UL	
Network Video Recorder (NVR)	XRN-2011*, XRN-2010*, XRN-3010*, XRN-1610* (* is blank or N or P: N=NTSC, P=PAL) XRN-2010P/DM, XRN-3010P/DM, XRN-3010A, XRN-2011A, XRN-2010A, XRN-1610A	E158873-A146-UL	
NETWORK CAMERA	QNO-7030R*, QNO-7020R*, QNO-7010R*, QNO-6030R*,	E158873-A147-UL	

	QNO-6020R*, QNO-6010R*, QNO-6070R*, QNO-7080R*, QNO-6071R* (* is blank or N or P: N = NTSC, P=PAL)		
NETWORK CAMERA	QND-7030R*, QND-7020R*, QND-7010R*, QND-6030R*, QND-6020R*, QND-6010R*, QND-6070R*, QND-7080R* (* is blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A149-UL	
Network Video Recorder	XRN-1610S* (* is blank or N or P: N=NTSC, P=PAL) XRN-1610SP/DM, XRN-1610SA	E158873-A150-UL	
NETWORK CAMERA	PNF-9010RV*, PNF-9010R*, PNF-9010RVM* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A151-UL	
NETWORK CAMERA	PNM-9020V* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A152-UL	
Network Video Recorder	PRN-4011* (* is blank or N or P: N=NTSC, P=PAL)	E158873-A153-UL	
DIGITAL COLOR CAMERA	HCP-6320*, HCP-6320A*, HCP-6230* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A154-UL	
DIGITAL COLOR CAMERA	HCP-6320H*, HCP-6320HA*, HCP-6230H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A155-UL	
NETWORK CAMERA	PNP-9200RH*, XNP-6370RH*, XNP-6330RH* (* is blank or N or P: N=NT, P=PAL)	E158873-A156-UL	
NETWORK CAMERA	XNB-8000*, XNB-6000* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A157-UL	
NETWORK CAMERA	XNO-8080R*, XNO-6080R*, XNO-6120R* (* is blank or 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 blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A160-UL	
NETWORK CAMERA	XNV-8080R*, XNV-6080R*, XNV-6080*, XNV-6120R*, XNV-6120* (* is blank or N or P: N = NTSC, P=PAL) , XNV-8080RS, XNV-6080RS, XNV-6120RS,	E158873-A161-UL	

	XNV-6120RSA, XNV-6080RSA, XNV-8080RSA		
NETWORK CAMERA	XND-8080RV*, XND-8080R*, XND-6080RV*, XND-6080R*, XND-6080V*, XND-6080* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A162-UL	
AHD Multi Directional Camera	HCM-9020VQ* (is blank or N or P: N = NTSC, P=PAL)	E158873-A163-UL	
NETWORK CAMERA	XNO-8020R*, XNO-8030R*, XNO-8040R*, XNO-6010R*, XNO-6020R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A164-UL	
NETWORK CAMERA	XNV-6011* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A165-UL	
DIGITAL COLOR CAMERA	HCD-6080R*, HCD-6070R*, SCD-6085R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A167-UL	
DIGITAL COLOR CAMERA	HCV-6080R*, HCV-6070R*, SCV-6085R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A168-UL	
NETWORK CAMERA	XNP-6120H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A169-UL	
NETWORK CAMERA	XND-8020F*, XND-6011F* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A170-UL	
NETWORK CAMERA	PNM-9080VQ* (* is blank or N or P: N = NTSC, P = PAL)	E158873-A172-UL	
Network Storage	SRB-160S	E158873-A173-UL	
NETWORK CAMERA	TNB-6030* (* is blank or N or P: N = NTSC, P = PAL)	E158873-A174-UL	
NETWORK CAMERA	PNM-9081VQ* (* is blank or N or P: N = NTSC, P = PAL)	E158873-A176-UL	
NETWORK CAMERA	XNO-6085R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A177-UL	
NETWORK CAMERA	XNB-6005* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A178-UL	
NETWORK VIDEO RECORDER	SNR-D5401N	E158873-A179-UL	
NETWORK CAMERA	XND-6085*, XND-6085V* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A180-UL	
NETWORK CAMERA	XNV-6085* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A181-UL	
NETWORK CAMERA	XNP-6040H* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A182-UL	
NETWORK VIDEO DECODER	SPD-150* (* is blank or N or P: N = NTSC, P=PAL), SPD-151	E158873-A184-UL	
DIGITAL COLOR CAMERA	HCB-6000*, HCB-7000*, SCB-6005* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A185-UL	
DIGITAL COLOR CAMERA	HCZ-6320*, HCZ-6321* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A186-UL	

NETWORK CAMERA	XNF-8010RVM*, XNF-8010RV*, XNF-8010R*, XNF-8010RW, XNF-8010RVMNB (* is blank or N or P: N = NTSC, P=PAL)	E158873-A187-UL	
DIGITAL COLOR CAMERA	HCO-6070R*, HCO-6080R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A188-UL	
NETWORK CAMERA	XNB-6001* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A189-UL	
DIGITAL COLOR CAMERA	HCO-7070R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A190-UL	
LENS MODULE	SLA-T2480*, SLA-T2480V*, SLA-T4680*, SLA-T4680V*, SLA-T4680D, SLA-T4680DW, SLA-T4680DS, SLA-T2415, SLA-T2815B, SLA-T2480A, SLA-T2480VA, SLA-T4680A, SLA-T4680VA (* is blank or N or P: N = NTSC, P=PAL)	E158873-A191-UL	
DIGITAL COLOR CAMERA	HCD-7070R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A192-UL	
DIGITAL COLOR CAMERA	HCV-7070R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A193-UL	
NETWORK VIDEO RECORDER	TRM-1610S	E158873-A194-UL	
LENS MODULE	SLA-T1080F*, SLA-T1080FA (* is blank or 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 blank or N or P: N = NTSC, P=PAL)	E158873-A197-UL	
DIGITAL COLOR CAMERA	HCD-7010R*, HCD-7020R*, HCD-7030R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A198-UL	
DIGITAL COLOR CAMERA	HCO-7010R*, HCO-7020R* , HCO-7030R* (* is blank or N or P: N = NTSC, P=PAL)	E158873-A199-UL	
NETWORK CAMERA	XNP-6320, QNP-6230, XNP-6321	E158873-A200-UL	
NETWORK CAMERA	XNP-6320H, XNP-6320HS, QNP-6230H, XNP-6321H	E158873-A201-UL	
NETWORK THERMAL CAMERA	TNO-4050T, TNO-4030T, TNO-4040T	E158873-A202-UL	
NETWORK THERMAL CAMERA	TNO-4051T, TNO-4041T	E158873-A204-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, LNO-6071R	E158873-A208-UL	
NETWORK CAMERA	LNO-6030R, LNO-6020R, LNO-6010R, LNO-6031R, LNO-	E158873-A209-UL	

	6021R, LNO-6011R, LNO-6011RW		
NETWORK CAMERA	LNV-6070R, LNV-6071R	E158873-A210-UL	
NETWORK CAMERA	LND-6070R, LND-6071R	E158873-A213-UL	
NETWORK CAMERA	LNV-6030R, LNV-6020R, LNV-6010R, LNV-6031R, LNV-6021R, LNV-6011R	E158873-A214-UL	
NETWORK CAMERA	LND-6030R, LND-6020R, LND-6010R, LND-6031R, LND-6021R, LND-6011R.	E158873-A215-UL	
NETWORK CAMERA	XNV-L6080R, XNV-L6080	E158873-A216-UL	
NETWORK CAMERA	XND-L6080RV, XND-L6080R, XND-L6080V	E158873-A217-UL	
NETWORK CAMERA	XNO-L6080R	E158873-A218-UL	
NETWORK CAMERA	PNM-7000VD	E158873-A220-UL	
NETWORK VIDEO ENCODER	SPE-410, SPE-410A* (* is Blank or N or P, N = NTSC, P = PAL)	E158873-A222-UL	
NETWORK VIDEO ENCODER	SPE-1610, SPE-1610A* (* is Blank or N or P, N = NTSC, P = PAL), NVE3016	E158873-A223-UL	
NETWORK POSITIONING CAMERA	TNU-6320, TNU-6321	E158873-A224-UL	
Network Video Recorder	QRN-1610S, QRN-1620S, LRN-1610S	E158873-A225-UL	
NETWORK CAMERA	QNE-7080RV, QNE-6080RV	E158873-A226-UL	
NETWORK CAMERA	PNM-9000VQ	E158873-A227-UL	
Network Camera	XNP-6550RH, XNP-6320RH, XNP-6250RH, QNP-6230RH	E158873-A229-UL	
NETWORK CAMERA	PNM-9320VQP, PNM-9321VQP.	E158873-A230-UL	
NETWORK CAMERA	XNZ-6320	E158873-A231-UL	
NETWORK ENCODER	SPE-110N, SPE-110A* (* is Blank or N or P, N = NTSC, P = PAL)	E158873-A232-UL	
THERMAL POSITIONING CAMERA	TNU-4041T, TNU-4051T	E158873-A233-UL	
NETWORK CAMERA	PNM-9030V	E158873-A234-UL	
NETWORK CAMERA	TNV-7010RC	E158873-A235-UL	
NETWORK CAMERA	XND-8081VZ, XND-8081FZ, XND-6081VZ, XND-6081FZ	E158873-A236-UL	
DIGITAL COLOR CAMERA	HCF-8010V	E158873-A239-UL	
ANALOG CAMERA	HCO-6020R	E158873-A241-UL	
NETWORK CAMERA	XNV-6081, XNV-6081R, XNV-8081R	E158873-A242-UL	
NETWORK VIDEO RECORDER	TRM-810S, TRM-410S	E158873-A243-UL	
ANALOG CAMERA	HCD-6020R, HCD-6010	E158873-A244-UL	

NETWORK CAMERA	XND-6081V, XND-6081F, XND-6081RV, XND-6081RF, XND-8081RV, XND-8081RF	E158873-A245-UL	
NETWORK CAMERA	XND-L6080	E158873-A246-UL	
NETWORK CAMERA	TNO-6010M	E158873-A247-UL	
ANALOG CAMERA	SCO-6085R	E158873-A248-UL	
NETWORK CAMERA	PNM-9000VD, PNM-7002VD	E158873-A249-UL	
NETWORK CAMERA	QND-6083R, QND-6082R, QND-6073R, QND-6072R, QND-6032R, QND-6022R, QND-6012R, QND-6012R1, QND-6022R1, QND-6032R1, QND-6072R1, QND-6082R1	E158873-A250-UL	
NETWORK CAMERA	QNE-8021R, QNE-8011R	E158873-A251-UL	
NETWORK CAMERA	QND-8021, QND-8011	E158873-A252-UL	
NETWORK CAMERA	QNO-8080R, QNO-8010R, QNO-8020R, QNO-8030R	E158873-A253-UL	
NETWORK CAMERA	QND-6021, QND-6011	E158873-A254-UL	
NETWORK CAMERA	QNO-6083R, QNO-6082R, QNO-6012R, QNO-6022R, QNO-6032R, QNO-6072R, QNO-6073R, QNO-6012R1, QNO-6022R1, QNO-6032R1, QNO-6072R1, QNO-6082R1	E158873-A255-UL	
NETWORK CAMERA	QNV-6083R, QNV-6082R, QNV-6073R, QNV-6072R, QNV-6012R, QNV-6022R, QNV-6032R, QNV-6012RA, QNV-6012R1, QNV-6022R1, QNV-6032R1, QNV-6072R1, QNV-6082R1	E158873-A256-UL	
NETWORK CAMERA	QNV-8080R, QNV-8010R, QNV-8020R, QNV-8030R	E158873-A257-UL	
NETWORK CAMERA	QND-8080R, QND-8010R, QND-8020R, QND-8030R	E158873-A258-UL	
NETWORK CAMERA	QNF-8010	E158873-A259-UL	
NETWORK CAMERA	LNV-6012R, LNV-6022R, LNV-6032R	E158873-A260-UL	
NETWORK CAMERA	LNV-6072R	E158873-A261-UL	
NETWORK CAMERA	LND-6012R, LND-6022R, LND-6032R	E158873-A262-UL	
NETWORK CAMERA	LND-6072R	E158873-A263-UL	
NETWORK CAMERA	QNV-6024RM, QNV-6023R	E158873-A264-UL	
NETWORK CAMERA	LNO-6012R, LNO-6022R, LNO-6032R	E158873-A265-UL	
NETWORK CAMERA	LNO-6072R	E158873-A266-UL	
Digital Video Recorder	HRX-1621* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A267-UL	
Digital Video Recorder	HRX-821* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A268-UL	
NETWORK THERMAL CAMERA	TNO-3010T, TNO-3020T, TNO-3030T	E158873-A269-UL	
NETWORK CAMERA	PNM-9084QZ	E158873-A270-UL	

NETWORK CAMERA	XNP-6371RH	E158873-A275-UL	
NETWORK CAMERA	XNZ-L6320	E158873-A276-UL	
NETWORK CAMERA	PNM-9084RQZ*, PNM-9085RQZ* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A6001-UL	
NETWORK VIDEO RECORDER	WRN-1610S	E158873-A6002-UL	
NETWORK VIDEO RECORDER	WRN-810S* (* is Blank or N or P : P=PAL, N=NTSC)	E158873-A6003-UL	
NETWORK CAMERA	PNB-A9001, PNB-A9001LP, PNB-A9001OP	E158873-A6005-UL	
NETWORK CAMERA	TNB-9000	E158873-A6006-UL	
NETWORK CAMERA	PNO-A9081R, PNO-A9081RLP, PNO-A9081ROP	E158873-A6007-UL	
NETWORK CAMERA	PNV-A9081R, PNV-A9081RLP, PNV-A9081ROP	E158873-A6008-UL	
NETWORK CAMERA	PND-A9081RF	E158873-A6009-UL	
NETWORK CAMERA	QNB-8002	E158873-A6010-UL	
NETWORK CAMERA	QNB-6002	E158873-A6011-UL	
NETWORK CAMERA	PND-A9081RV	E158873-A6012-UL	
NETWORK CAMERA	QNF-9010	E158873-A6013-UL	
NETWORK CAMERA	XNV-8081RE, XNV-6081RE, XND-8081REV, XND-6081REV	E158873-A6014-UL	
NETWORK CAMERA	XNB-9002, XNB-8002	E158873-A6022-UL	
NETWORK CAMERA	XNV-9082R, XNV-8082R	E158873-A6023-UL	
NETWORK CAMERA	XNO-9082R, XNO-8082R	E158873-A6024-UL	
NETWORK CAMERA	XND-9082RV, XND-8082RV, XND-9082RF, XND-8082RF	E158873-A6025-UL	

CERTIFICATE OF COMPLIANCE

Certificate Number	UL-US-L158873-26X1A256-42509102-1
Report Reference	E158873-20190524
Date	25-Aug-2021
Issued to:	Hanwha Techwin Co Ltd 6, Pangyo-ro 319beon-gil, Bundang-gu Seongnam-si, Gyeonggi-do Republic of Korea 13488
This is to certify that representative samples of	NWGQ - Information Technology Equipment Including Electrical Business Equipment See Addendum Page for Product Designation(s). Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 60950-1, 2nd Ed., Issue Date: 2007-03-27, Revision Date: 2019-05-09
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number UL-US-L158873-26X1A256-42509102-1
Report Reference E158873-20190524
Date 25-Aug-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
QNV-6012R	NETWORK CAMERA
QNV-6012R1	NETWORK CAMERA
QNV-6012RA	NETWORK CAMERA
QNV-6022R	NETWORK CAMERA
QNV-6022R1	NETWORK CAMERA
QNV-6032R	NETWORK CAMERA
QNV-6032R1	NETWORK CAMERA
QNV-6072R	NETWORK CAMERA
QNV-6072R1	NETWORK CAMERA
QNV-6073R	NETWORK CAMERA
QNV-6082R	NETWORK CAMERA
QNV-6082R1	NETWORK CAMERA
QNV-6083R	NETWORK CAMERA

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	UL-CA-L158873-28X1A256-42509102-1
Report Reference	E158873-20190524
Date	25-Aug-2021
Issued to:	Hanwha Techwin Co Ltd 6, Pangyo-ro 319beon-gil, Bundang-gu Seongnam-si, Gyeonggi-do Republic of Korea 13488
This is to certify that representative samples of	NWGQ7 - Information Technology Equipment Including Electrical Business Equipment Certified for Canada See Addendum Page for Product Designation(s). Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	CSA C22.2 No. 60950-1 - 2nd Ed. - Issue Date: 2007-03-27 - Revision Date: 2014-10-01
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information

This Certificate of Compliance does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number UL-CA-L158873-28X1A256-42509102-1
Report Reference E158873-20190524
Date 25-Aug-2021

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

Model	Category Description
QNV-6012R	NETWORK CAMERA
QNV-6012R1	NETWORK CAMERA
QNV-6012RA	NETWORK CAMERA
QNV-6022R	NETWORK CAMERA
QNV-6022R1	NETWORK CAMERA
QNV-6032R	NETWORK CAMERA
QNV-6032R1	NETWORK CAMERA
QNV-6072R	NETWORK CAMERA
QNV-6072R1	NETWORK CAMERA
QNV-6073R	NETWORK CAMERA
QNV-6082R	NETWORK CAMERA
QNV-6082R1	NETWORK CAMERA
QNV-6083R	NETWORK CAMERA

Bruce Mahrenholz, Director North American Certification Program

UL LLC

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2019-05-09 (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:	NWGQ, NWGQ7 (Information Technology Equipment Including Electrical Business Equipment)
Complementary CCN:	N/A
Product:	NETWORK CAMERA
Model:	QNV-6083R, QNV-6082R, QNV-6073R, QNV-6072R, QNV-6012R, QNV-6022R, QNV-6032R, QNV-6012RA, QNV-6012R1, QNV-6022R1, QNV-6032R1, QNV-6072R1, QNV-6082R1
Rating:	12 Vdc, 0.55 A or PoE (48 Vdc), 0.16 A (for model QNV-6083R, QNV-6082R, QNV-6073R, QNV-6072R, QNV-6072R1, QNV-6082R1) 12 Vdc, 0.54 A or PoE (48 Vdc), 0.16 A (for model QNV-6012R, QNV-6022R, QNV-6032R, QNV-6012RA, QNV-6012R1, QNV-6022R1, QNV-6032R1)
Applicant Name and Address:	HANWHA TECHWIN CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI KOREA, REPUBLIC OF

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.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Lawrence Lee / Project Handler Reviewed By: SeulKi Park / Reviewer

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 intended for indoor use.

Electronic components were mounted on PWB and housed in plastic and metal enclosure and supplied by SELV and LPS.

Model Differences

- Basic model is QNV-6083R.

(Audio in/out, Lens Zoom/focus, Lens switch, Len Automatic variable type)

- Model QNV-6082R is identical to basic model QNV-6083R except for without audio out.

- Model QNV-6073R is identical to basic model QNV-6083R except for with IRIS without Lens Zoom/focus, Lens switch, Len Automatic variable type.

- Model QNV-6072R is identical to basic model QNV-6083R except for with IRIS without Lens Zoom/focus, Lens switch, Len Automatic variable type, audio out.

- Model QNV-6012R is identical to basic model QNV-6083R except for rated input.

- Model QNV-6022R is identical to basic model QNV-6083R except for rated input.

- Model QNV-6032R is identical to basic model QNV-6083R except for rated input.

- Model QNV-6012RA is identical to model QNV-6012R except for model designation.

- Model QNV-6012R1, QNV-6022R1, QNV-6032R1, QNV-6072R1, QNV-6082R1 are identical to basic model QNV-6083R except for model designation and without Audio function.

Test Item Particulars

Mass of equipment (kg)	0.698
Equipment mobility	Fixed
Connection to the mains	N/A
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)	PD 2
IP protection class	IP X0
Altitude of operation (m)	less than 2000 meters
Altitude of test laboratory (m)	less than 2000 meters

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 55 °C
- The product was investigated to the following additional standards : IEC 62471
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

Original (4788960246)
- Maximum normal load: Continuous operation with IR LED on.

Revision (4789037584)
- Addition of model name. (QNV-6012R, QNV-6022R, QNV-6032R)

Revision (4789251661)
- Add model QNV-6012RA.

Revision (4789644302)
-Change Enclosure (Transparent Plastic)
From R/C (QMFZ2), SABIC INNOVATIVE PLASTICS B V (E121562), Model No. HF1130R(f2)
To R/C (QMFZ2), MITSUBISHI ENGINEERING-PLASTICS CORP (E41179), Model No. S-2000V+(f1)

4790055924
- Add model name; QNV-6012R1, QNV-6022R1, QNV-6032R1, QNV-6072R1, QNV-6082R1.

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 companys name, Trade Name, Trademark or File Number
Power rating - Model	Model Number

Fuses - Rating	Rated current and voltage and type located on or adjacent to fuse or fuseholder.
Replaceable batteries	"CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions."
Manual -1	This product is intended to be supplied by a Listed Power Supply Unit marked “Class 2” or “LPS” and rated from 12 Vdc, 0.55 A or PoE(48V), 0.16 A.
Manual -2	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.
Manual -3	ITE is to be connected only to PoE networks without routing to the outside plant. 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.
Special Instructions to UL Representative N/A	

BD1.0	**TABLE: Production-Line Testing Requirements**					
BD1.1	**Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.**					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
N/A	N/A	N/A	N/A	N/A	N/A	N/A
BD1.2	**Earthing Continuity Test Exemptions – This test is not required for the following models:**					
	All models					
BD1.3	**Electric Strength Test Exemptions – This test is not required for the following models:**					
	All models					
BD1.4	**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:**					
	All models					

BE1.0	**Sample and Test Specifics for Follow-Up Tests at UL**				
Model	Component	Material	Test	Sample (s)	Test Specifics
-	-	-	-	-	-

1.5.1	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Enclosure (Metal)	Interchangeable	Interchangeable	Aluminium, Min. 2.5 mm thickness, see enclosure for dimension.	-	-	
Enclosure (White)	LOTTE CHEMICAL CORPORATION	NH-1035(+)	Min. 1.5 mm thickness, rated Min. V-0, 80 deg.C, see enclosure for dimension.	QMFZ2/8	UL (E115797)	
Enclosure (Transparent Plastic)	SABIC INNOVATIVE PLASTICS US L L C	ML7622(f2), HFR1723(f2)	Min. 1.5 mm thick, rated V-2, 130 deg. C. No openings.	QMFZ2/8	UL (E121562)	
Enclosure (Transparent Plastic)	MITSUBISHI ENGINEERING-PLASTICS CORP	S-2000V+(f1)	Min. 1.5 mm thick, rated V-2, 115 deg. C., see enclosure for dimension.	QMFZ2/8	UL (E41179)	
Internal Plastic Part Materials	LOTTE CHEMICAL CORPORATION	NH-1035(+)	Min. 1.5 mm thickness, rated Min. V-0, 80 deg.C.	QMFZ2/8	UL (E115797)	
Transformer (T301)	SHENZHENGROUP-TEK ELECTRONICS TECHNOLOGY CO LTD	PDT2433ASR	130 deg.C, See enclosure for more detail.	-	-	
Fuse (F401)	SEMITEL ELECTRONICS CO LTD	S6125S	125 V, 1.5 A	JDXY2/8	UL (E338954)	
Optocoupler (LS1, LS301)	LITE-ON TECHNOLOGY CORP	LTV-356T(%)(c)	Isolation Voltage: 3750. Max. Operation Temperature:110 deg.C	FPQU2	UL (E113898)	

Lithium Battery (BAT1)	SEIKO INSTRUMENTS INC MICRO-ENERGY DIV	ML414H	Lithium (Coin), Rechargeable, Max. Charging Voltage: 3.4 Vdc, Max. Charging Current: 300 mAh	BBCV2	UL (MH15628)	
Thermal Pad	KOMOTECH CO LTD	KGP-1(a)	Min. 0.2 mm thickness, rated V-0, 150 deg.C	QMFZ2	UL (E245303)	
Connectors and Receptacles (Secondary circuits)	Interchangeable	Interchangeable	-	ECBT2 or RTRT2	UL	
Connectors and Receptacles (Secondary circuits) (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 V, 80 deg.C	AVLV2	UL	
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 PGJI2	UL	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	Overall
Photographs	03-02	Rear
Photographs	03-03	Internal -1
Photographs	03-04	Internal -2
Photographs	03-05	Network board (Top)
Photographs	03-06	Network board (Bottom)
Photographs	03-08	LED board (Top)
Photographs	03-09	LED board (Bottom)
Manuals	06-01	Manual
Miscellaneous	07-01	Enclosure dimension
Miscellaneous	07-02	Transformer (T301) spec
Miscellaneous	07-03	Label
Miscellaneous	07-05	Dual language safety labeling CRD
Miscellaneous	07-06	LED report
Miscellaneous	07-08	Label (Model QNV-6012R)
Miscellaneous	07-09	Label (Model QNV-6022R)
Miscellaneous	07-10	Label (Model QNV-6032R)
Miscellaneous	07-11	Label (QNV-6012RA)

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 lighting 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 a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.55A or PoE(48V), 0.16A. (QND-6073R/6083R, QNV-6073R/6083R)
16. This product is intended to be a Listed Power Supply Unit marked "Class2" or "LPS" and rated from 12Vdc, 0.55A or PoE(48V), 0.16A. (QNO-6073R/6083R)
17. This product is intended to be supplied by isolation power.
18. 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.
19. 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.
20. 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.
21. 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.
22. Installing or using the product in water can cause serious damage to the product.
23. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.

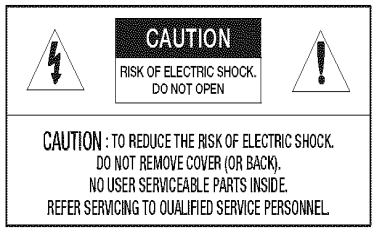
WARNING

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 OPENNINGS 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.

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.

The battery cannot be replaced.

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.

ATTENTION

IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE BATTERIE DE TYPE INCORRECT.
METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX 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.

WARNING

To Prevent damage which may caused by IR LED, don't stare at operating lamp.

For below models only.

QND-6073R/QND-6083R

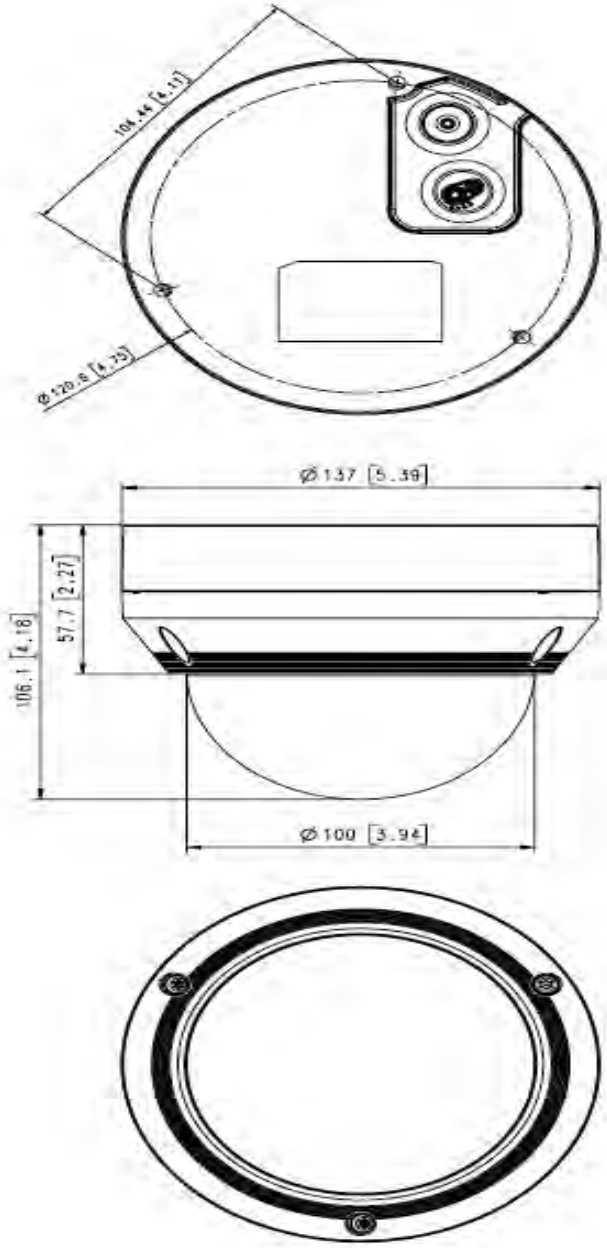
QNO-6073R/QNO-6083R

QNV-6073R/QNV-6083R

Risk Group 1
WARNING IR emitted from this product. **Do not stare at operating lamp.**
Product tested against IEC 62471

QNV-6073R/QNV-6083R

Unit : mm (inch)



GROUP-TEK®

RoHS

承 认 书

SPECIFICATION FOR APPROVAL

客户名称 CUSTOMER	
客户料号 MODEL NO.	
产品名称 PART NAME	POWER TRANSFORMER
产品型号 PART TYPE	PDT2433ASR
版本 REV	X4
签名 SIGNATURE	制图： Drawn by 联泰兴 2018-05-15 黄春梅　审核： Checked by 联泰兴 2018-05-15 杨时启　批准： Approved by 联泰兴 2018-05-15 欧阳佰萍
客户承认 CUSTOMER APPROVAL	承认印: SIGNET　　签名: SIGNATURE

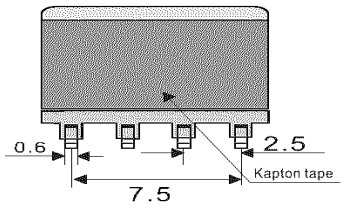
深 圳 市 联 泰 兴 电 子 科 技 有 限 公 司
SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD
地 址 ： 深圳市宝安区石岩街道应人石工业区伟泰路 1栋 （P. C：518108）
ADD: No.1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen,
TEL：+86-755-29810619　29810976　FAX：+86-755-29810159
Http://www.group-tek.com　E-mail:sale1@group-tek.com

1.Revision History:

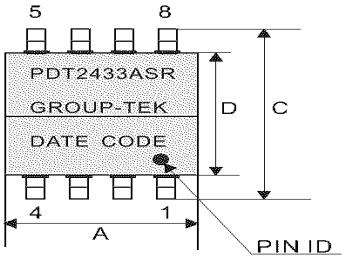
Revision	Revision Descriptions	Drawn by	Checked by	Approved by	Issued data
X0	New revision	黄石凤	杨时启	欧阳佰萍	2015-04-23
X1	Change the DCR	黄石凤	杨时启	欧阳佰萍	2015-04-30
X2	Add Mechanical Dimensions “E”.	黄石凤	杨时启	欧阳佰萍	2016-05-30
X3	Change kapton tape to wrap core	黄石凤	杨时启	欧阳欧阳	2017-06-29
X4	Correct glue model name	黄石凤	杨时启	欧阳欧阳	2018-05-15

2. Mechanical Dimensions:

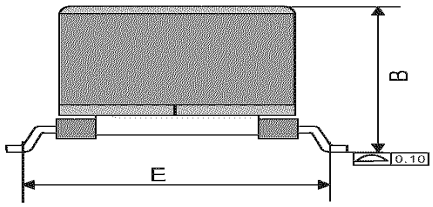
FRONT VIEW



TOP VIEW



SIDE VIEW



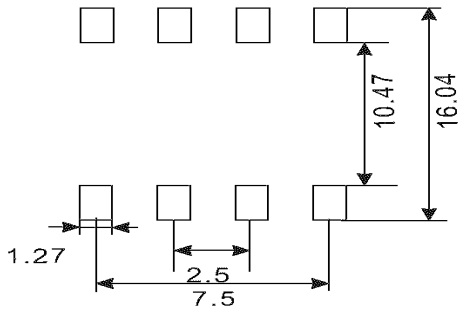
Note:
1.Wrap 2Ts of 6mm tape around the finished part.

Unit: mm

A MAX	B MAX	C MAX	D TYP	E TYP
12.7	11.43	15.24	10.60	12.60

SUGGESTED PAD LAYOUT

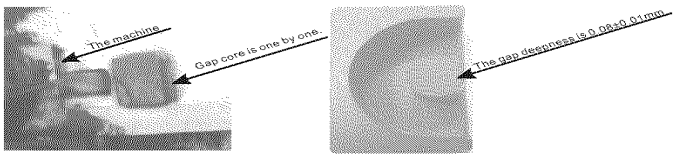
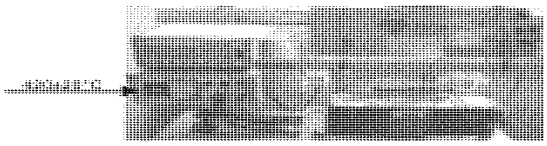
Unit: mm Tolerances:+/-0.2



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	33uH+/-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	0.15Ω Max.
7		(2-1) @ 25°C	0.30Ω Max.
8	HI-POT	PRI TO SEC	1500Vac 1mA 3Sec.
9	T/R	(3-4):(9+10-7+8):(2-1)	33:15:14±2%.

4.Overhauling List.

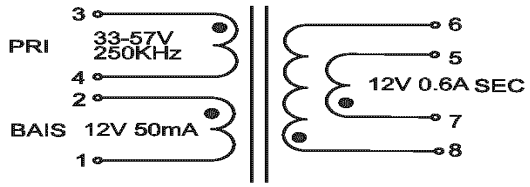
NO.	ITEM	SPECIFICATION
1	Tape turns	2T
2	Margin tape thickness	0.15mm
3	Winding turns	N1:33T N2:15T N3:14T
4	Pins order/Pin connection .	1T
5	Marking Information	PDT2433ASR GROUP-TEK DATE CODE
6	Gap the center leg	
7	Solder Temperature	

5.Winding Information:

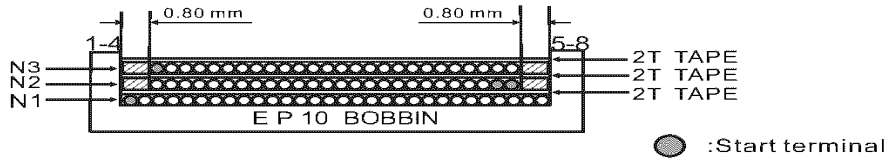
WINDING SEQ.	ST-FN	WIRE/FOIL	TURNS	WRAP INSUL.	MARGIN TAPE	SLEEVE	NOTE
1	3--4	0.30mm 2UEW	33	2T w6.0mm	N/A	N/A	1
2	8--6 7--5	0.20mm 2UEW R 0.20mm 2UEW N	15	2T w6.0mm	2T W0.60mm	N/A	1
3	2--1	0.23mm 2UEW	14	2T w6.0mm	2T W0.80mm	N/A	1

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

6.Schematic:



7.Winding construction



8.Material List

NO.	ITEM.	MATERIALS	SUPPLIERS/MANUFAXTURES	UL FILE NO.
1	BOBBIN	PHENOLIC T375J UL RATING: 94V-0	Chang Chun Plastics Co.,Ltd	E59481 (S)
2	CORE	E P10 PG 232A	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.:519(kapton tape) THERMAL RATING:200°C Kapton tape: for outside of core	Shen zhen guangye electronics technology Co.,Ltd	E309332
6	SOLDER	SN/CU: 99.3/0.7	Gao Xin stannum industry Co.,Ltd	N/A
7	Glue	E-500(TX) THERMAL RATING:130°C	Dong Guan city eatto electronic material Co.,Ltd	E218090

9.PACKING INFORMATION:

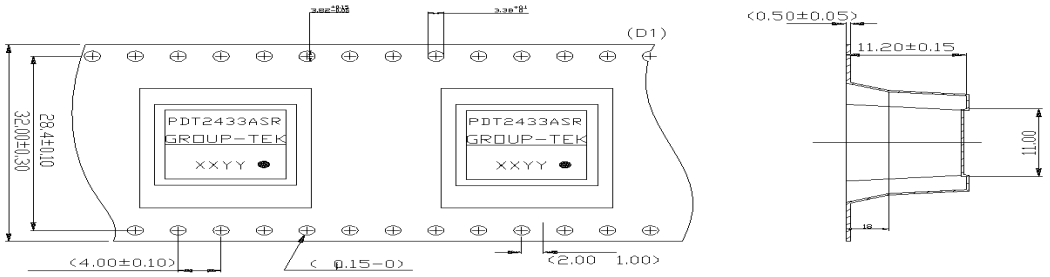
DESCRIPTION	QTY
PIECES PER REEL	250
PIECES PER POCKET	1
PIECES PER BOX	750
REEL PER BOX	3
GROSS WEIGHT PER BOX(KG)	TBD
NET WEIGHT PER BOX(KG)	TBD

GROUP-TEK®
A Leading Supplier of Magnetic Components

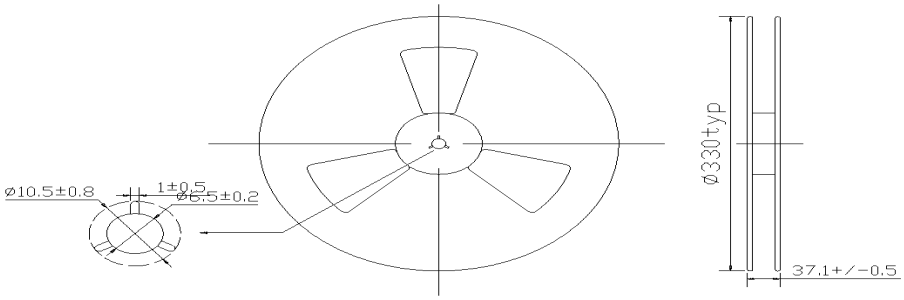
PDT2433ASR

Tape and Reel Package（包装图）

1.TapeSize:



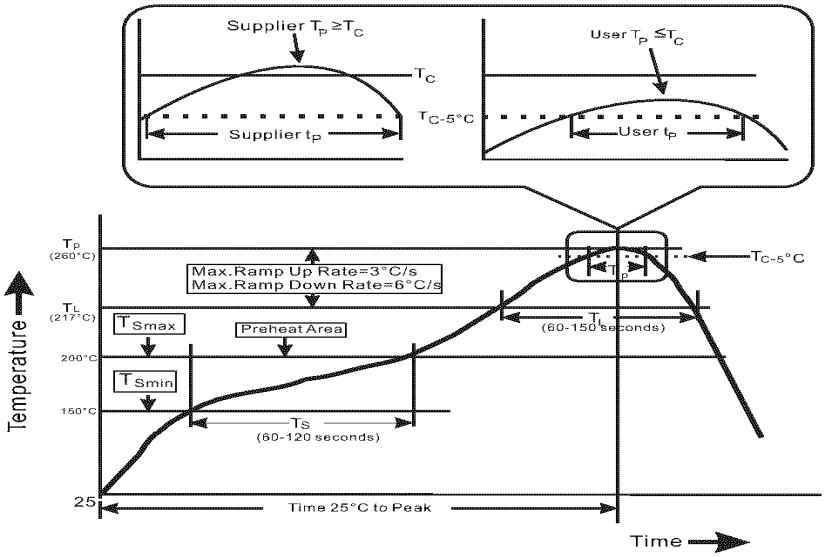
2.Reel Size:



3.Packaging:

3.1 Quantity per reel: 250pcs.
3.2 Quantity per carton: 750pcs.
3.3 Carton size: 37.3*37.3*21CM3.
3.4 Unit weight: 3.95g.
3.5 Carton weight: 5.11kg.

1.Recommended Lead Free IR Reflow Curve



Item	Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
1	Preheat/Soak Temperature Min (Tsmin) Temperature Max (Tsmax) Time (ts) from (Tsmin to Tsmax)	100 °C 150 °C 60-120 seconds	150 °C 200 °C 60-120 seconds
2	Ramp-up rate (TL to Tp)	3 °C/second max.	3 °C/second max.
3	Liquidous temperature (TL) Time (tL) maintained above TL	183 °C 60-150 seconds	217 °C 60-150 seconds
4	Peak package body temperature (Tp)	For users Tp must not exceed the Classification temp in Table 4-1(IPC/JEDEC J-STD-020D.1). For suppliers Tp must equal or exceed the Classification temp in Table 4-1(IPC/JEDEC J-STD-020D.1).	For users Tp must not exceed the Classification temp in Table 4-2(IPC/JEDEC J-STD-020D.1). For suppliers Tp must equal or exceed the Classification temp in Table 4-2(IPC/JEDEC J-STD-020D.1).
5	Time (tp)* within 5 °C of the specified classification temperature (Tc), seeFigure 5-1 (IPC/JEDEC J-STD-020D.1).	20* seconds	30* seconds
6	Ramp-down rate (Tp to TL)	6 °C/second max.	6 °C/second max.
7	Time 25 °C to peak temperature	6 minutes max.	8 minutes max.
* Tolerance for peak profile temperature (Tp) is defined as a supplier minimum and a user maximum.			

Note:
1: All temperatures refer to the center of the package, measured on the package body surface that is facing up during assembly reflow (e.g., live-bug). Ifparts are reflowed in other than the normal live-bug assembly reflow orientation (i.e., dead-bug), Tp shall be within ± 2 °C of the live-bug Tp and still to accurately measure actual peak package body temperaturesrefer to JEP140 for recommended thermocouple use.meet the Tc requirements, otherwise, the profile shall be adjusted to achieve the latter.

2: Reflow profiles in this document are for classification/preconditioning and are not meant to specify board assembly profiles. Actual board assembly profiles should be developed based on specific process needs and board designs and should not exceed the parameters in Table 5-2.For example, if Tc is 260 °C and time tp is 30 seconds, this means the following for the supplier and the user. For a supplier: The peak temperature must be at least 260 °C. The time above 255 °C must be at least 30 seconds.For a user: The peak temperature must not exceed 260 °C. The time above 255 °C must not exceed 30 seconds.

3: All components in the test load shall meet the classification profile requirements.

4: SMD packages classified to a given moisture sensitivity level by using Procedures or Criteria defined within any previous version of J-STD-020,JESD22-A112 (rescinded), IPC-SM-786 (rescinded) do not need to be reclassified to the current revision unless a change in classification level or a higher peak classification temperature is desired.

2. Reliability Test Criteria.

2.1 Operating temperature range: 0℃ to 70℃
2.2 Terminal strength: Pull test withstand 9.8N 60+/-0.5S no looseness or movement.
2.3 Solderbility: Dipped in 245℃+/-5℃ molten solder for 3+/-0.5 seconds,95% min shall besmooth any and bright
2.4 Resistance to soldering heat : Convection reflow condition setting: peak temperature at 260℃+0/-5℃ above 217℃ for 60-150 seconds, ramp-up rate 2-3℃/s. Ramp-down rate 6℃/s Max. No mechanical problem found. No electrical failure found per our specification.
2.5 Vibration: 1.5mm amplitude total excursion 10-55-10 Hz traversed in 1minute, x.y.z, axis for 2 hours. Shall not be any abnormality.
2.6 Random drop (Packing condition): Height 60cm, 3 times on the wood floorboard ,shall not be any abnormality.
2.7 Damp Heat: 60+/-2℃, 93+/-3% RH 96 hours.
2.8 Change of temperature: exposed 5 cycle; each consisting of 30 minutes at -20+/-2℃, 2-3 minutes at 20+/-2℃,30 minutes at 85+/-2℃, 2-3 minutes at 20+/-2℃.
Remarks:
After reliability test per item 7,8,9,10 in prior to the test as specified, the transformer / coil would be exposed to the room temperature for 1-2 hours,the component meets all requirements according to this specification.

NETWORK CAMERA
MODEL: QNV-6083R
DC 12V ⎓ 0.55A / PoE (48V ⎓) 0.16A
M/C: QNV-6083R/KCH Fac. ID: D

제조년월 S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA

NETWORK CAMERA
MODEL: QNV-6082R
DC 12V ⎓ 0.55A / PoE (48V ⎓) 0.16A
M/C: QNV-6082R/KAN Fac. ID: D

제조년월 S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA

NETWORK CAMERA
MODEL: QNV-6073R
DC 12V ⎓ 0.55A / PoE (48V ⎓) 0.16A
M/C: QNV-6073R/KCH Fac. ID: D

제조년월 S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA

NETWORK CAMERA
MODEL: QNV-6072R
DC 12V ⎓ 0.55A / PoE (48V ⎓) 0.16A
M/C: QNV-6072R/KAN Fac. ID: D

제조년월 S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA

Project No. 4788960246 File E158873 Page 1

Compliance Review Conducted by: _____ Date _____

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 Yes	Comply No	Comply N/A	Comments/Measurements	Inst. ID No.
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. 4788960246 File E158873 Page 2

Compliance Review Conducted by: _____ Date _____

Printed Name Signature

Clause/Par. Reference and Construction Requirement	Comply Yes	Comply No	Comply N/A	Comments/Measurements	Inst. ID No.
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

SGS

TEST REPORT
IEC 62471 and/or EN 62471
Photobiological safety of lamps and lamp systems

Report Reference No. ..... :	F690501/RF-SAF011107
Order No.	G-44-2019-01530
Tested by (name + signature) ..... :	Ethan Kim
Approved by (name + signature) ..... :	Doonam Choi
Date of issue ..... :	May 16, 2019
Total number of pages ..... :	14 pages
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 ..... :	6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
Test specification:	
Standard ..... :	☒ IEC 62471: 2006 (First Edition) ☐ 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 ..... :	QNV-6072R
Ratings ..... :	12 Vd.c.; 0,55 A or PoE 48 V d.c.; 0,16 A

Miscellaneous-06 Page-2

Summary of testing: - The submitted samples were found to be in compliance with IEC 62471	
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 4.3.6 Retinal thermal hazard exposure limit – weak visual stimulus	**Testing location:** Refer to page 1.
Summary of compliance with National Differences: None	
Copy of marking plate:	

Miscellaneous-06 Page-3

Test item particulars	—
Tested lamp	☒ continuous wave lamps ☐ pulsed lamps
Tested lamp system	—
Lamp classification group	☐ exempt ☒ risk 1 ☐ risk 2 ☐ 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 : May 14, 2019

Date (s) of performance of tests : May 14, 2019

General remarks:

Throughout this report a ☒ comma / ☐ 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.

General product information:

- LED used
- Testing were performed with power adapter supplied by client.

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
	$E_{eff} = \sum_{200}^{400} \sum_{t} E_\lambda(\lambda,t) \cdot S_{UV}(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 30$ J·m^{-2}		P
	The permissible time for exposure to ultraviolet radiation incident upon the unprotected eye or skin shall be computed by:		P
	$t_{max} = \frac{30}{E_S}$ 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
	$t_{max} \le \frac{10\,000}{E_{UVA}}$ 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(λ), 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
	$L_B \cdot t = \sum_{300}^{700} \sum_{t} L_\lambda(\lambda,t) \cdot B(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 10^6$ J · m^{-2} · sr^{-1}		P
	$L_B = \sum_{300}^{700} L_\lambda \cdot B(\lambda) \cdot \Delta\lambda \le 100$ W · m^{-2} · 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(λ) shall not exceed the levels defined by:		N/A
	$E_B \cdot t = \sum_{300}^{700} \sum_{t} E_\lambda(\lambda,t) \cdot B(\lambda) \cdot \Delta t \cdot \Delta\lambda \le 100$ J · m^{-2}		N/A
	$E_B = \sum_{300}^{700} E_\lambda \cdot B(\lambda) \cdot \Delta\lambda \le 1$ W · 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
	$L_R = \sum_{380}^{1400} L_\lambda \cdot R(\lambda) \cdot \Delta\lambda \le \frac{50\,000}{\alpha \cdot t^{0,25}}$ W · m^{-2} · 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
	$L_{IR} = \sum_{780}^{1400} L_\lambda \cdot R(\lambda) \cdot \Delta\lambda \le \frac{6\,000}{\alpha}$ W · m^{-2} · 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
	$E_{IR} = \sum_{780}^{3\,000} E_\lambda \cdot \Delta\lambda \le 18\,000 \cdot t^{-0,75}$ W · m^{-2}		N/A
	For times greater than 1000 s the limit becomes:		N/A

IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	$E_{IR} = \sum_{780}^{3\,000} E_\lambda \cdot \Delta\lambda \le 100 \quad W \cdot m^{-2}$		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
	$E_{H,t} = \sum_{380}^{3\,000} \sum_{t} E_\lambda(\lambda,t) \cdot \Delta t \cdot \Delta\lambda \le 20\,000 \cdot t^{0.25} \quad J \cdot m^{-2}$		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		N/A
	In the exempt group are lamps, which do not pose any photobiological hazard. The requirement is met by any lamp that does not pose:		N/A
	– an actinic ultraviolet hazard (E_S) within 8-hours exposure (30000 s), nor		N/A
	– a near-UV hazard (E_{UVA}) within 1000 s, (about 16 min), nor		N/A
	– a retinal blue-light hazard (L_B) within 10000 s (about 2,8 h), nor		N/A
	– a retinal thermal hazard (L_R) within 10 s, nor		N/A
	– 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		P
	– a near ultraviolet hazard (E_{UVA}) within 300 s, nor		P
	– a retinal blue-light hazard (L_B) within 100 s, nor		P
	– a retinal thermal hazard (L_R) within 10 s, nor		P
	– an infrared radiation hazard for the eye (E_{IR}) within 100 s		P
	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.		P
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
	– an actinic ultraviolet hazard (E_S) within 1000 s exposure, nor		N/A

IEC / EN 62471			
Clause	Requirement + Test	Result – Remark	Verdict
	– 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	3,81E-05	0,003	—	0,03	—
Near UV	—	E_{UVA}	$W \cdot m^{-2}$	10	4,04E-05	33	—	100	—
Blue light	$B(\lambda)$	L_B	$W \cdot m^{-2} \cdot sr^{-1}$	100	0,0014	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	9,95E+06	6000/α	9,57E+03	6000/α	9,57E+03
IR radiation, eye	—	E_{IR}	$W \cdot m^{-2}$	100	—	570	—	3200	—

* Small source defined as one with α < 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

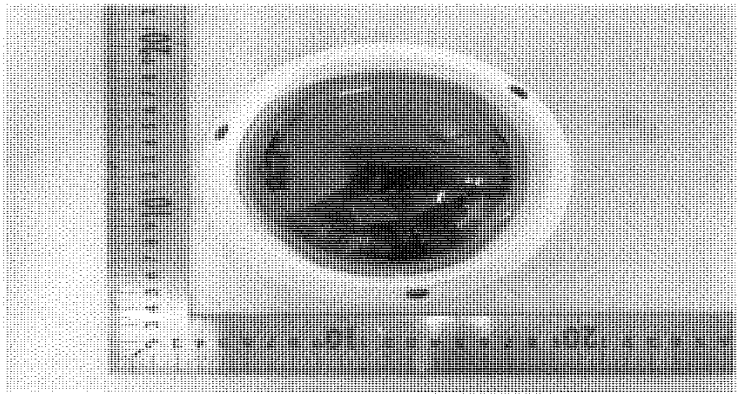
Table 6.1 Emission limits for risk groups of continuous wave lamps (based on EU Directive 2006/25/EC) — N/A

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≤ α ≤ 0,011	—				
				6000/α 0,011≤ α ≤ 0,1	—				
IR radiation, eye	—	E_{IR}	$W \cdot m^{-2}$	100	—	570	—	3200	—

* Small source defined as one with α < 0,011 radian. Averaging field of view at 10000 s is 0,1 radian.
** Involves evaluation of non-GLS source

Photo documentation

Front view



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

Risk Group 1
WARNING IR emitted from this product. Do not stare at operating lamp
Product tested against IEC62471

- END OF TEST REPORT -


M/C: QNV-6012R/KAN
S/N: [제조번호]
MAC: XX-XX-XX-XX-XX-XX
MAC ADDRESS: XX-XX-XX-XX-XX-XX
ITE
US LISTED
9T96 E158873
NETWORK CAMERA
MODEL: QNV-6012R
DC 12V 0.54A / PoE (48V) 0.16A
M/C: QNV-6012R/KAN
Fac. ID: D
제조년월
S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA


M/C: QNV-6022R/KAN
S/N: [제조번호]
MAC: XX-XX-XX-XX-XX-XX
MAC ADDRESS: XX-XX-XX-XX-XX-XX
ITE
US LISTED
9T96 E158873
NETWORK CAMERA
MODEL: QNV-6022R
DC 12V 0.54A / PoE (48V) 0.16A
M/C: QNV-6022R/KAN Fac. ID: D
제조년월 S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA


M/C: QNV-6032R/KAN
S/N: [제조번호]
MAC: XX-XX-XX-XX-XX-XX
MAC ADDRESS: XX-XX-XX-XX-XX-XX
ITE
US LISTED
9T96 E158873
NETWORK CAMERA
MODEL: QNV-6032R
DC 12V 0.54A / PoE (48V) 0.16A
M/C: QNV-6032R/KAN
Fac. ID: D
제조년월
S/N: [제조번호]
MAC ADDRESS: XX-XX-XX-XX-XX-XX
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN KOREA


ITE
US LISTED
9T96 E158873
NETWORK CAMERA
MODEL: QNV-6012RA
DC 12V ⎓ 0.54A
PoE (48V ⎓) 0.16A
M/C: QNV-6012RA/VUS Fac. ID: V
'2019.05 S/N: ZMQ170GM500004L
MAC ADDRESS: 00-09-18-5F-83-4A
CAN ICES-3(A)/NMB-3(A)
HANWHA TECHWIN CO.,LTD.
MADE IN VIETNAM

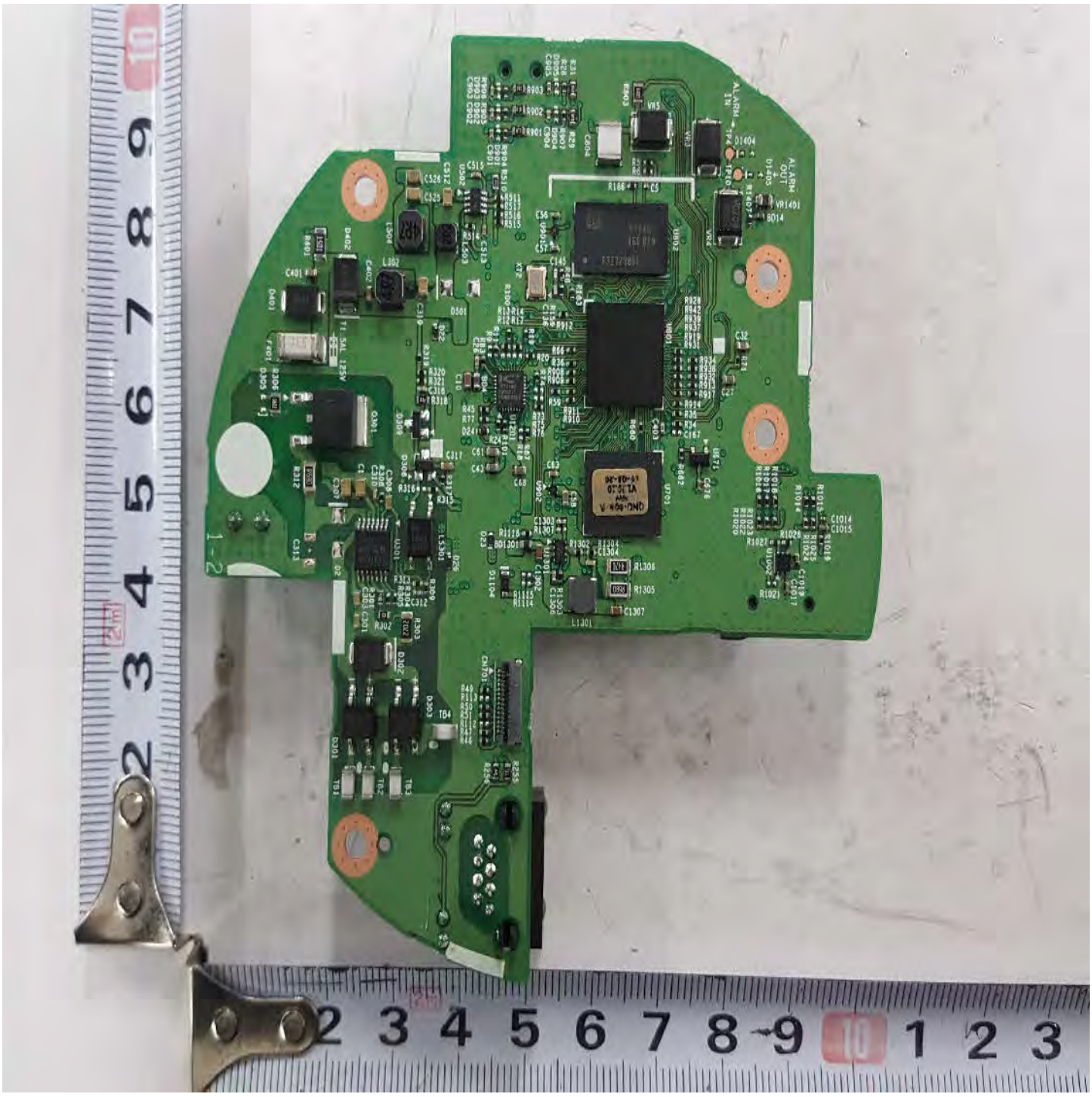
Photographs-02 Page-1

Photographs-03 Page-1

Photographs-04 Page-1

Photographs-05 Page-1

Photographs-06 Page-1



Photographs-08 Page-1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Test Record No. 1

1. Test result relate only to the items tested.

2. The manufacturer submitted representative production samples of NETWORK CAMERA, QNV-6083R.

3. Only the test listed were considered necessary.

The following tests were conducted:

Tests performed (name of test and test clause):	**Testing location:**
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)	
Battery (4.3.8)	
Heating (4.5.1, 1.4.12, 1.4.13)	
Component Failure (5.3.1, 5.3.4, 5.3.7)	
The following tests were waived:	**Rationale for Waiving**
Limited Power Source Measurements (2.5)	Supplied by LPS

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 part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description
Attachment	02-01	Datasheet

Test Record No. 2

No test was considered necessary due to addition of model name under engineer consideration.
(QNV-6012R, QNV-6022R, QNV-6032R)

The following tests were conducted:

Tests performed (name of test and test clause): None	**Testing location: None**
The following tests were waived: None	**Rationale for Waiving**

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 part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description

Test Record No. 3

No test was considered necessary because of addition of model name QNV-6012RA under engineer consideration.

The following tests were conducted:

Tests performed (name of test and test clause): None	**Testing location: None**
The following tests were waived: None	**Rationale for Waiving**

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 part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description

Test Record No. 4

Due to similarity to basic model for this manufacturer, no tests were considered necessary to Change Enclosure (Transparent Plastic)
From R/C (QMFZ2), SABIC INNOVATIVE PLASTICS B V (E121562), Model No. HF1130R(f2)
To R/C (QMFZ2), MITSUBISHI ENGINEERING-PLASTICS CORP (E41179), Model No. S-2000V+(f1)

The following tests were conducted:

Tests performed (name of test and test clause): None	**Testing location: None**
The following tests were waived: None	**Rationale for Waiving**

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 part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description

Test Record No. 5

No test was considered necessary in order to below revision.
- Add model name; QNV-6012R1, QNV-6022R1, QNV-6032R1, QNV-6072R1, QNV-6082R1.

The following tests were conducted:

Tests performed (name of test and test clause): None	**Testing location: None**
The following tests were waived: None	**Rationale for Waiving**

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 part of this Test Record. NOTE: These supplements are only available to the Applicant via the myUL™ Client Portal.

Type	Supplement Id	Description