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Date: 2020/05/26
 Subscriber: 813307003
 PartySite: 105140
 File No: E158873
 Project No: 4789446212
 PD No: 20025725
 Type: R
 PO Number: KANG, JEISOON

Subject: **Procedure And/Or Report Material**

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

Issue

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| 2020/05/25 | X1 | A6024 | Cert of Compliance | |
| 2020/05/25 | X1 | A6024 | Add New Proc/Report Sect | |

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| 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 | |
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| 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 | |
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| 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| UTP Power Supply Unit | SPU-400 | E158873-A20-UL | Withdrawn |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 | |

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| 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 | |
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| Network Camera | SNF-7010*, SNF-7010V*, SNF-7010VM* (* is blank or N or P: N = NTSC, P=PAL) | E158873-A69-UL | |
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| 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 | |
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| 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 | |
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| 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 | |
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| 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) SCV-5083R* (* is blank or N or | E158873-A97-UL | |

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| 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 | |

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| Optical PTZ Accessary | SBP-300HF | E158873-A126-UL | |
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| 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 | |
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| 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 | |
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| 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 | |
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| 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*, QNO-6020R*, QNO-6010R*, QNO-6070R*, QNO-7080R*, QNO-6071R* (* is blank or N or | E158873-A147-UL | |

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| Network Video Recorder | XRN-1610S* (* is blank or N or P: N=NTSC, P=PAL) XRN-1610SP/DM, XRN-1610SA | E158873-A150-UL | |
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| 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 | |
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| 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 | |
| NETWORK CAMERA | XND-8080RV*, XND-8080R*, XND-6080RV*, XND-6080R*, XND-6080V*, XND-6080* (* is | E158873-A162-UL | |

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| | blank or N or P: N = NTSC, P=PAL) | | |
| 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* (* is blank or N or P: N = NTSC, P=PAL) | E158873-A167-UL | |
| DIGITAL COLOR CAMERA | HCV-6080R*, HCV-6070R* (* 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 | |
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| 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* (* 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* (* is blank or N or P: N = NTSC, P=PAL) | E158873-A187-UL | |

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|------------------------|--|-----------------|--|
| 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* (* is blank or N or P: N = NTSC, P=PAL), SLA-T4680D, SLA-T4680DW, SLA-T4680DS, SLA-T2415, SLA-T2815B. | 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* (* 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-6021R, LNO-6011R, LNO-6011RW | E158873-A209-UL | |
| NETWORK CAMERA | LNV-6070R | E158873-A210-UL | |
| NETWORK CAMERA | LND-6070R, LND-6071R | E158873-A213-UL | |
| NETWORK CAMERA | LNV-6030R, LNV-6020R, LNV-6010R, | E158873-A214-UL | |

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| | LNV-6031R, LNV-6021R, LNV-6011R | | |
| NETWORK CAMERA | LND-6030R, LND-6020R, LND-6010R | 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 | E158873-A249-UL | |
| NETWORK CAMERA | QND-6083R, QND-6082R, QND-6073R, QND-6072R, | E158873-A250-UL | |

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| | QND-6032R, QND-6022R, QND-6012R | | |
| 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 | E158873-A255-UL | |
| NETWORK CAMERA | QNV-6083R, QNV-6082R, QNV- 6073R, QNV-6072R, QNV- 6012R, QNV-6022R, QNV- 6032R, QNV-6012RA. | 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 | E158873-A6005-UL | |
| NETWORK CAMERA | TNB-9000 | E158873-A6006-UL | |
| NETWORK CAMERA | PNO-A9081R | E158873-A6007-UL | |
| NETWORK CAMERA | PNV-A9081R | E158873-A6008-UL | |
| NETWORK CAMERA | PND-A9081RF | E158873-A6009-UL | |
| NETWORK CAMERA | QNB-8002 | E158873-A6010-UL | |
| NETWORK CAMERA | QNB-6002 | E158873-A6011-UL | |

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| 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 E158873
Report Reference E158873-A6024-UL
Issue Date 2020-MAY-26

Issued to: Hanwha Techwin Co Ltd
6, Pangyo-ro 319beon-gil, Bundang-gu
Seongnam-si Gyeonggi-do 13488 KOREA

**This certificate confirms that
representative samples of**

INFORMATION TECHNOLOGY EQUIPMENT INCLUDING
ELECTRICAL BUSINESS EQUIPMENT
NETWORK CAMERA
Model: XNO-9082R, XNO-8082R

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


Standard(s) for Safety: UL 60950-1 and 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
<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

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



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: | XNO-9082R, XNO-8082R |
| Rating: | 24 Vac, 50/60 Hz, 1.1 A or 12 Vdc, 1.1 A or PoE (48 Vdc), 0.27 A |
| Applicant Name and Address: | HANWHA TECHWIN CO LTD 6, PANGYO-RO 319BEON-GIL, BUNDANG-GU SEONGNAM-SI GYEONGGI-DO 13488 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.

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.

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Prepared By: Sungil Kim / Project Handler

Reviewed By: HanQ Choi / 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 metal and plastic enclosure and supplied by SELV and LPS.

Model Differences

- Basic model is XNO-9082R.
- The model XNO-8082R is identical to XNO-9082R except software.

Test Item Particulars

| | |
|---|------------------------------|
| Equipment mobility | Fixed |
| 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) | PD 2 |
| IP protection class | IP X0 |
| Altitude of operation (m) | Up to 2 000 |
| Altitude of test laboratory (m) | Less than 2 000 |
| Mass of equipment (kg) | 2.30 |

Technical Considerations

- The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer’s specification of : 60 °C
- The product was investigated to the following additional standards : IEC 62471-1
- The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual

Additional Information

Original (4789446212)
 - Maximum normal load: 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 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." |
| Website 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 1.1 A, 24 Vac, 1.1 A, or PoE, 0.27 A. |
| Website 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. |
| Website Manual -3 | ITE is to be connected only to PoE networks without routing to the outside plant. or 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. |

| | |
|---|--|
| Hard Copy | A. IMPORTANT B. Please check 'Manuals' from our website, before connecting to the supply. C. Company website URL (https://www.~~~) |
| 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 | | | | | | | |
| | | | | | | | | | | | | | |
| 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: | | | | | | |
| | | | | | | | | | | | | | |

| 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. 3.0 mm thickness, see enclosure for dimension. | - | - | |
| Enclosure - Front Lens Cover (Plastic) | LOTTE CHEMICAL CORPOR | NH-1035(+) | Min. 1.5 mm thickness, rated Min. V-0, 80 deg.C, see enclosure for dimension | QMFZ2 | UL (E115797) | |
| Enclosure - Front Lens Cover (Plastic) (Alternate) | LOTTE CHEMICAL CORPOR | SC-122(+) | Min. 1.5 mm thickness, rated Min. V-2, 80 deg.C, see enclosure for dimension | QMFZ2 | UL (E115797) | |
| Enclosure - Front Lens Cover (Plastic) (Alternate) | SICHUAN LONGHUA FILM CO LTD | PC-1811A | Min. 1.5 mm thickness, rated Min. V-2, 80 deg.C, see enclosure for dimension | QMFZ2 | UL (E254551) | |
| Mounting Bracket (Metal) | Interchangeable | Interchangeable | approximately 140.0 by 140.0 by 9.9 mm, Aluminium, Min. 1.7 mm thickness | - | - | |
| Internal Plastic Part Materials | Interchangeable | Interchangeable | Min. HB | QMFZ2 | UL | |
| Fuse (F1)_Power board | LITTELFUSE INC | 449* | 125 V, 2.0 A | JDYX2 | UL (E10480) | |
| Fuse (F1)_Power board (Alternate) | SEMITELELECTRONICS CO LTD | S6125S | 125 V, 2.0 A | JDYX2 | UL (E338954) | |
| Fuse (F1)_Back box board | LITTELFUSE INC | 449* | 125 V, 2.0 A | JDYX2 | UL (E10480) | |
| Fuse (F1)_Back box board (Alternate) | SEMITELELECTRONICS CO LTD | S6125S | 125 V, 2.0 A | JDYX2 | UL (E338954) | |

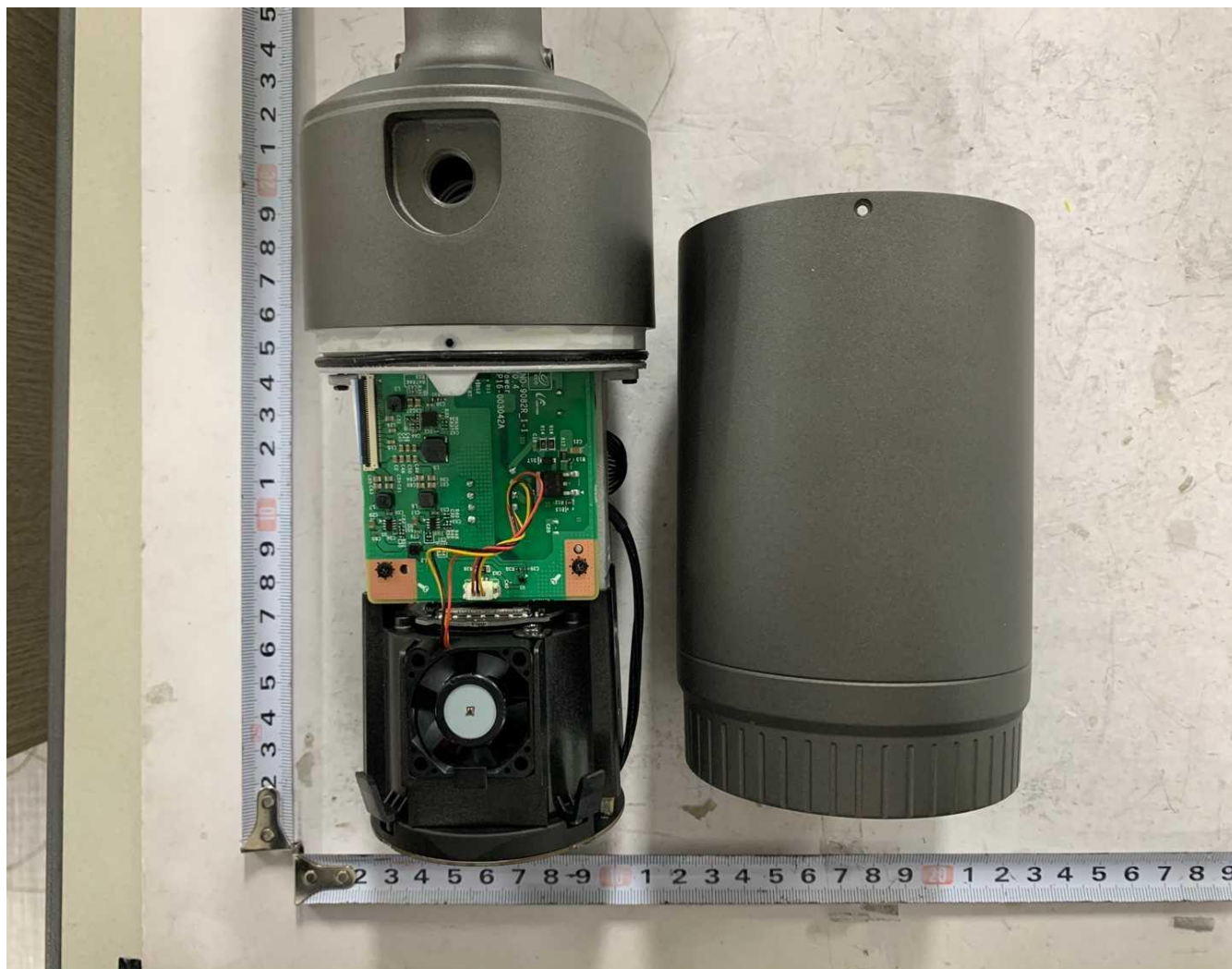
| | | | | | | |
|------------------------------------|--|-----------------|---|----------------|--------------|--|
| Transformer(T8) | SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD | EE1936R | 130 deg.C, see enclosure for detail. | - | - | |
| Line Filter (T3) | SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD | PCM10020R | Rated Min. 3.0 mH, Base: V-0 | - | - | |
| Line Filter (T7) | SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD | PCM10021R | Rated Min. 18 mH, Base: V-0 | - | - | |
| Optocoupler (LS1) | LITE-ON TECHNOLOGY CORP | LTV-816 | Isolation Voltage: 5300. Max. Operation Temperature: 115 deg. C | FPQU2 | UL (E113898) | |
| DC Fan | MINEBEAMITSUMI INC. | 1204KL-04W-B39 | 12 Vdc, 0.09 A | GPWV2/8 | UL (E89936) | |
| Lithium Battery (BAT1) | SEIKO INSTRUMENT INC MICRO-ENERGY DIV | ML414H | Lithium (Coin), Rechargeable, Max. 3.4Vdc, Norminal Capacity 1.0 mAH, Maximum charging current: 300 mAh | BBCV2 | UL (MH15628) | |
| IR LED (LD1, LD2, LD5)(3ea) | OSRAM | SFH4718A | VF =Max. 2.3 V, IF=Max.1.0A | - | - | |
| IR LED (LD3, LD4, LD6)(3ea) | OSRAM | SFH4714A | VF =Max. 2.3 V, IF=Max.1.0A | - | - | |
| Heater resister (R4 to R25, 22 ea) | Interchangeable | Interchangeable | 5.6 ohm , 1/4 W each | - | - | |
| Thermal Pad | KOMOTECH CO LTD | KGP-1(a) | Min. 0.2 mm thickness, rated V-0, 150 deg. C | QMFZ2 | UL (E245303) | |
| FPWB | Interchangeable | Interchangeable | Min. V-0, 80 deg.C. | QMFZ2 or QMTS2 | UL | |

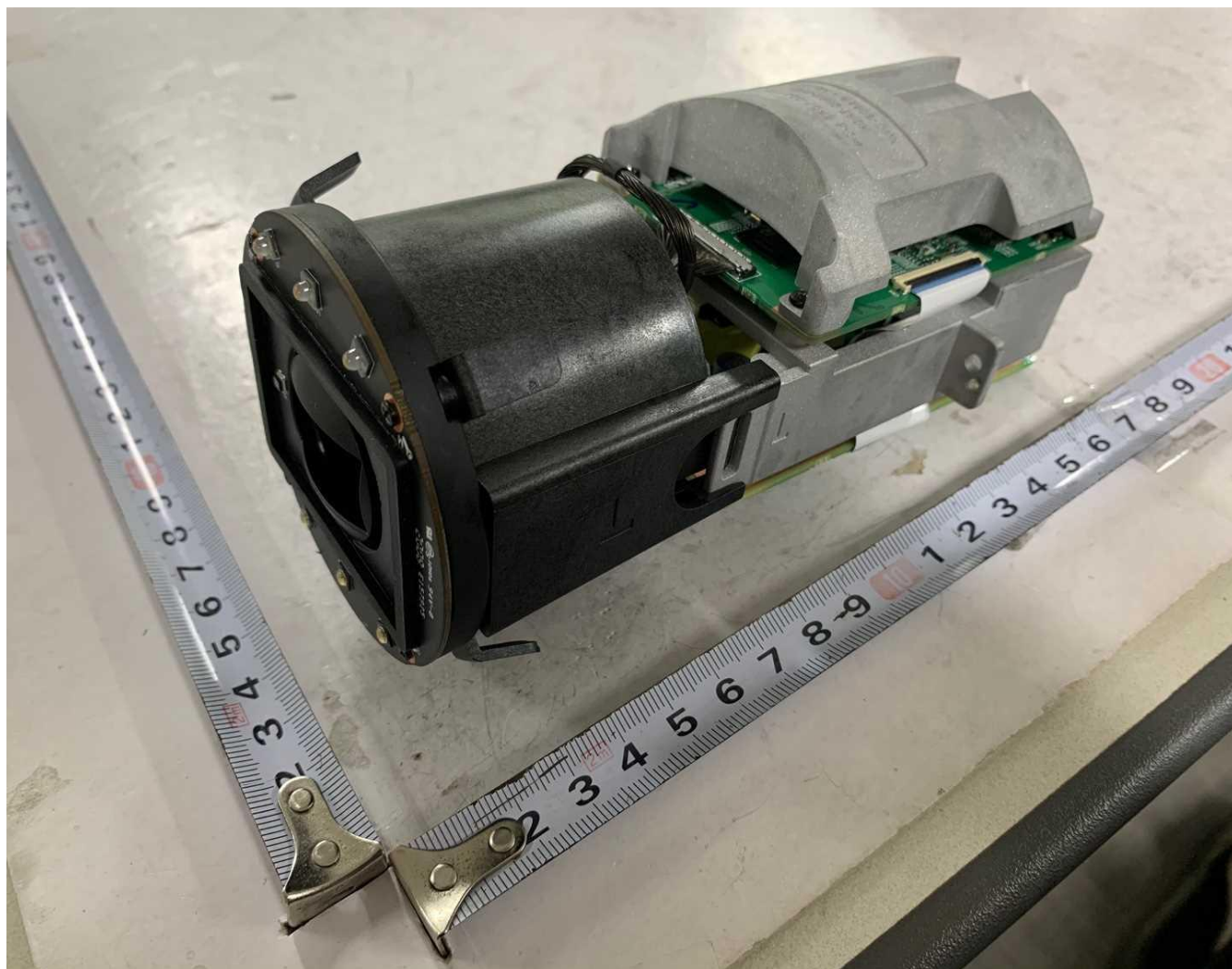
| | | | | | | |
|--|-------------------------------|-----------------|--|----------------|--------------|--|
| PWB | EXPRESS ELECTRONICS LTD | 14MV0 | Min. V-0, 130 deg.C. | ZPMV2 | UL (E157925) | |
| PWB (Alternate) | Interchangeable | Interchangeable | Min. V-1, Min 105 deg.C. | ZPMV2 | UL | |
| Connectors 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 | |
| Label | Interchangeable | Interchangeable | Min.60 deg. C if max. surface temperature not specified. | PGDQ2 or PGJ12 | UL | |

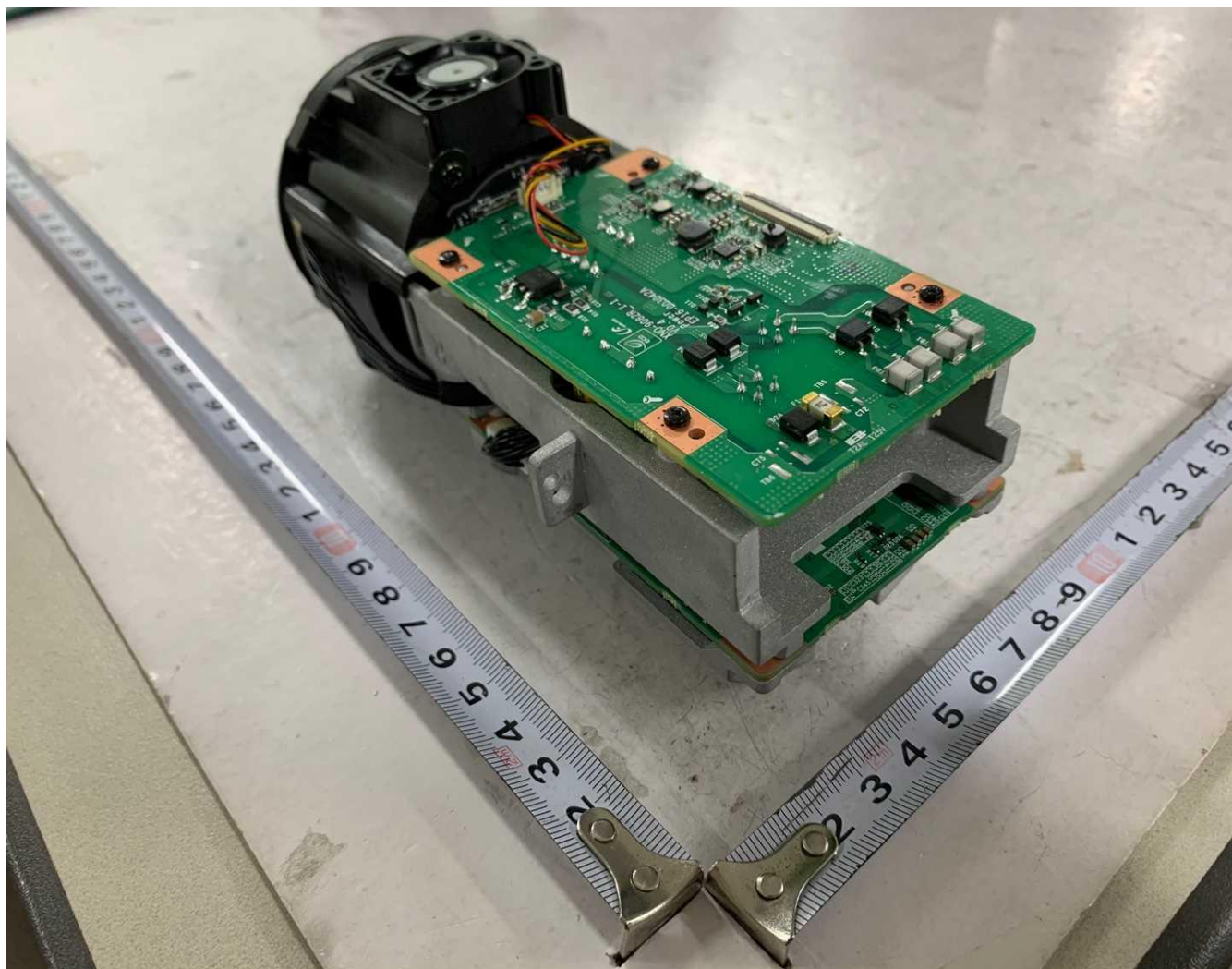
Enclosures

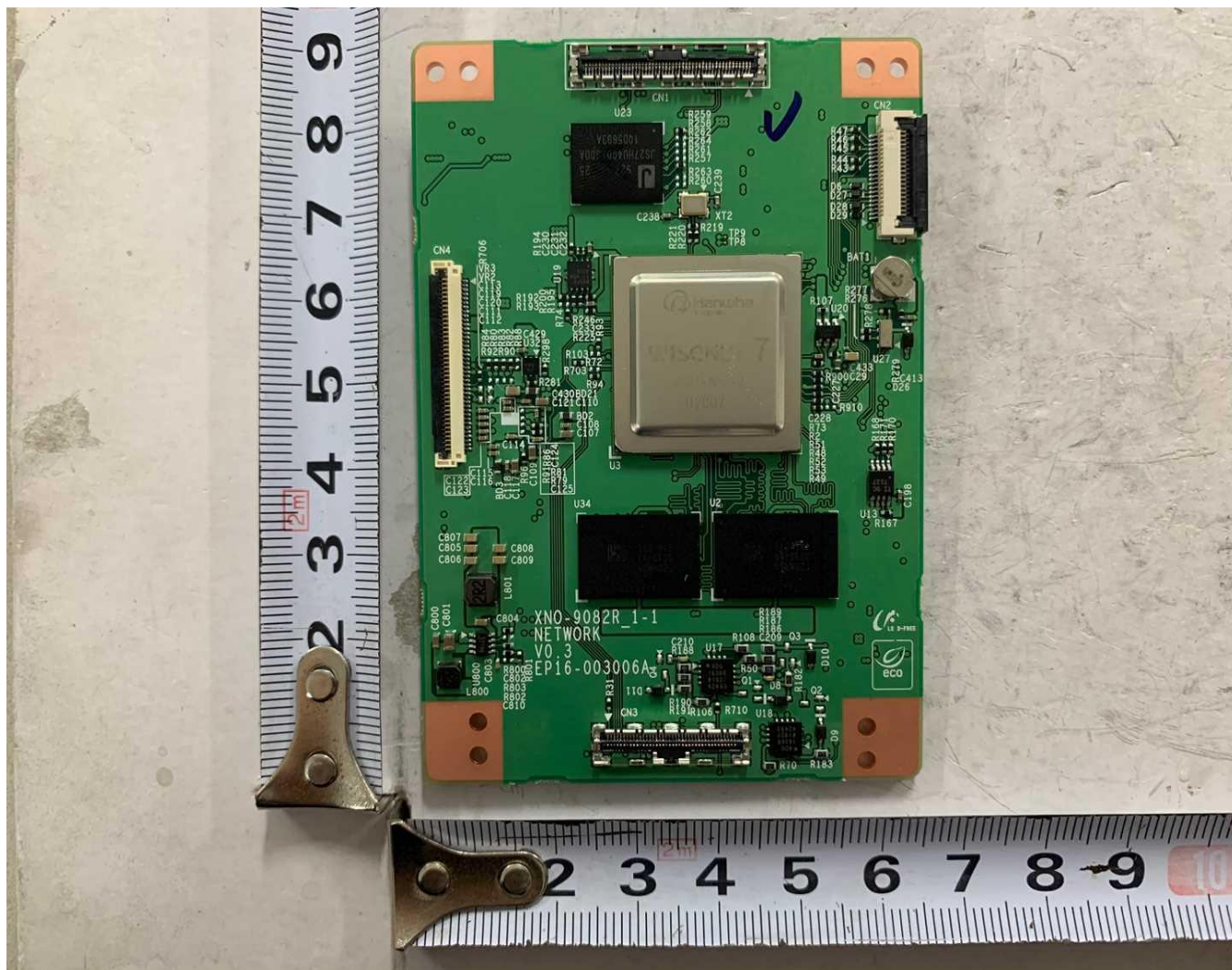
| Type | Supplement Id | Description |
|---------------|----------------------|-----------------------------------|
| Photographs | 03-01 | Overall |
| Photographs | 03-02 | Internal -1 |
| Photographs | 03-03 | Internal -2 |
| Photographs | 03-04 | Internal -3 |
| Photographs | 03-05 | Network board (Top) |
| Photographs | 03-06 | Network board (Bottom) |
| Photographs | 03-07 | Power board (Top) |
| Photographs | 03-08 | Power board (Bottom) |
| Manuals | 06-01 | Manual |
| Miscellaneous | 07-01 | Transformer (T8) spec |
| Miscellaneous | 07-02 | Line Filter (T3) spec |
| Miscellaneous | 07-03 | Line Filter (T7) spec |
| Miscellaneous | 07-04 | Label |
| Miscellaneous | 07-05 | Enclosure dimension |
| Miscellaneous | 07-06 | Dual language safety labeling CRD |



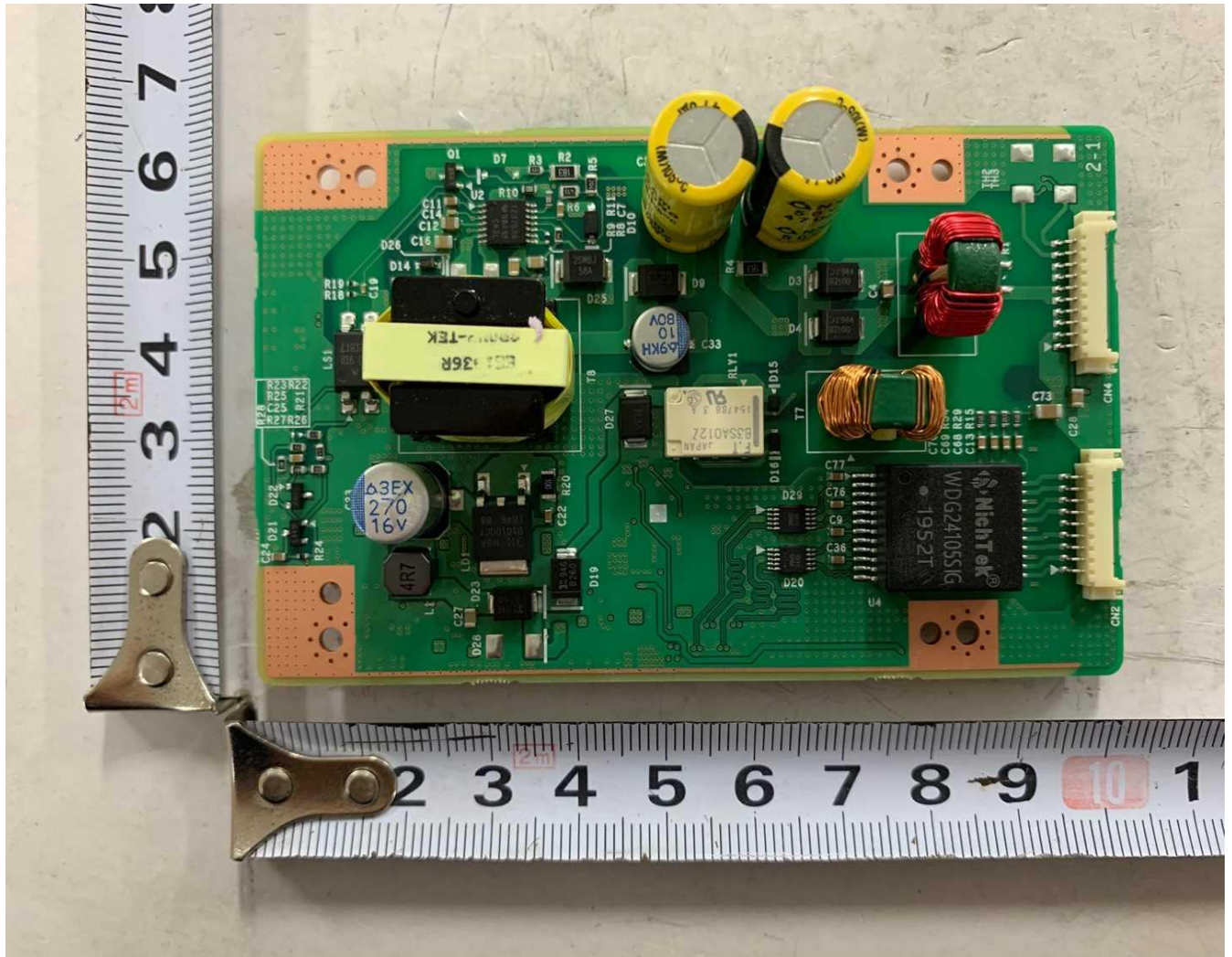


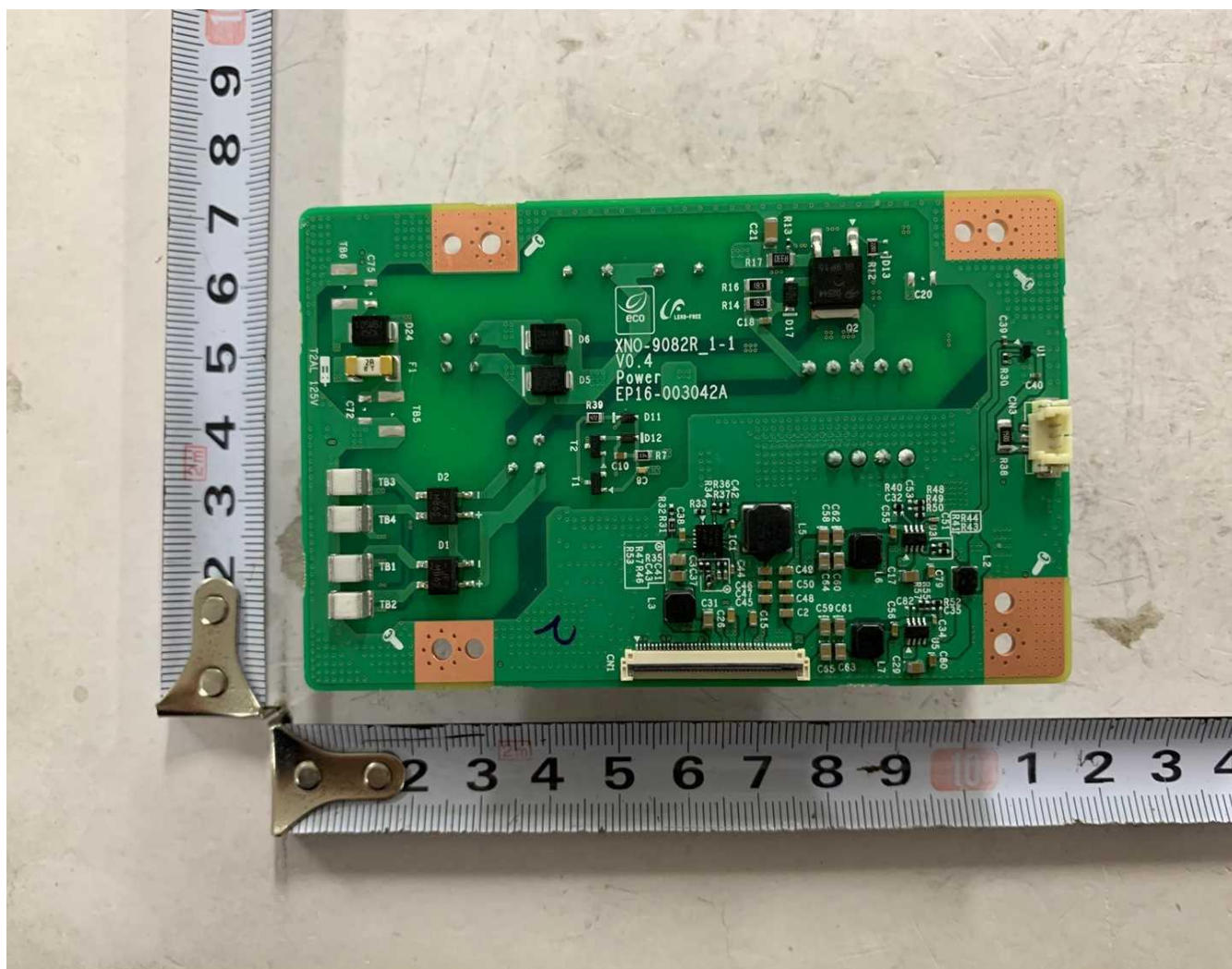













overview

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 12 Vdc, 1.0 A or PoE, 0.27 A. (XND-8082RV/XND-8082RF/XND-8082RF/XND-8082RF)
16. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 12 Vdc, 1.0 A, 24 Vac, 1.1 A, or PoE, 0.27 A. (XNV-9082R/XNV-8082R)
17. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 12 Vdc, 1.1 A, 24 Vac, 1.1 A, or PoE, 0.27 A. (XNO-8082R/XNO-8082R)
18. This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" and rated from 12 Vdc, 0.96 A, 24 Vac, 0.97 A, or PoE, 0.27 A. (XNB-9002/XNB-8002)
19. This product is intended to be supplied by isolation power.
20. 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.
21. 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.

22. When installing the product, be careful not to allow the surfaces 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.
23. 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.
24. Installing or using the product in water can cause serious damage to the product.
25. Although a rapid change in temperature could cause frost inside the dome, there will be no problem with the video.

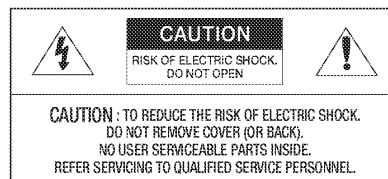
WARNING

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 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.

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.

CAUTION

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.

We do not guarantee the quality of third-party products (e.g. lenses, accessories) that you separately purchase.

WARNING

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

For below models only.

XNV-9082R/XNV-8082R

XND-9082RV/XND-8082RV

XND-9082RF/XND-8082RF

XNO-9082R/XNO-8082R

Risk Group 1

WARNING IR emitted from this product.

Do not stare at operating lamp.

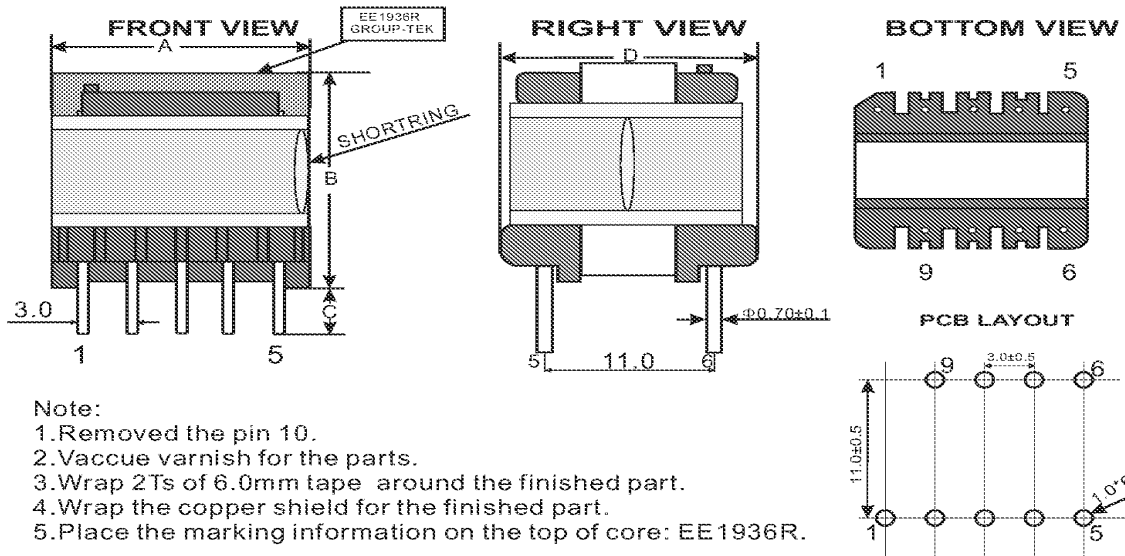
Product tested against IEC 62471

GROUP-TEK®

A Leading Supplier of Magnetic Components

EE1936R

2. Mechanical Dimensions:



Note:

1. Removed the pin 10.
2. Vacuum varnish for the parts.
3. Wrap 2Ts of 6.0mm tape around the finished part.
4. Wrap the copper shield for the finished part.
5. Place the marking information on the top of core: EE1936R.

Unit: mm

| A | B | C | D |
|------|------|--------|------|
| Max | Max | +/-0.5 | Max |
| 20.5 | 20.0 | 3.5 | 16.5 |



A Leading Supplier of Magnetic Components

EE1936R

3. Electrical Characteristics :

| Specifications: at 25°C . Operating Temperature -40 to +125°C | | | |
|---|-----------------------|--|-------------------|
| NO. | ITEM | TEST CONDITION | SPECIFICATION |
| 1 | Inductance | (1-3)@200kHz, 1.0Vac | 160uH±7%. |
| 2 | Inductance | (4-5)@200kHz, 1.0Vac | 76.5uH±15%. |
| 3 | Inductance | (7-9)@200kHz, 1.0Vac | 60uH±15%. |
| 4 | Leakage Inductance | (1-3)@200kHz, 1.0Vac shorted other pins. | 15uH Max. |
| 5 | DCR | (1-3) @ 25°C | 0.265Ω Max. |
| 6 | DCR | (4-5) @ 25°C | 0.970Ω Max. |
| 7 | DCR | (7-9) @ 25°C | 0.096Ω Max. |
| 8 | HI-POT | PRI--SEC,AUX | 1000Vac,5mA,60SEC |
| 9 | HI-POT | PRI,SEC,AUX--CORE | 1000Vac,5mA,60SEC |
| 10 | INSULATION RESISTANCE | PRI--SEC DC500V | 100MΩ Min. |
| 11 | | PRI--CORE DC500V | 100MΩ Min. |
| 12 | | SEC--CORE DC500V | 100MΩ Min. |

GROUP-TEK®

A Leading Supplier of Magnetic Components

EE1936R

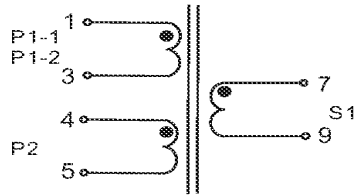
4. Winding Information:

| WINDING SEQ. | ST-FN | WIRE/FOIL | TURNS | TURNS/LAYER (REF) | WRAP INSUL. | SLEEVE | NOTE |
|--------------|-------|---------------|-------|-------------------|-------------|--------|------|
| P1-1 | 1--3 | 0.30mm 2UEW | 50 | 50 | 2T w9.3mm | N/A | 1,2. |
| S1 | 7--9 | 3*0.32mm 2UEW | 30 | 30 | 2T w9.3mm | N/A | 1,2. |
| P1-2 | 1--3 | 0.30mm 2UEW | 50 | 50 | 2T w9.3mm | N/A | 1,2. |
| P2 | 4--5 | 0.20mm 2UEW | 32 | 32 | 3T w9.3mm | N/A | 1,2. |

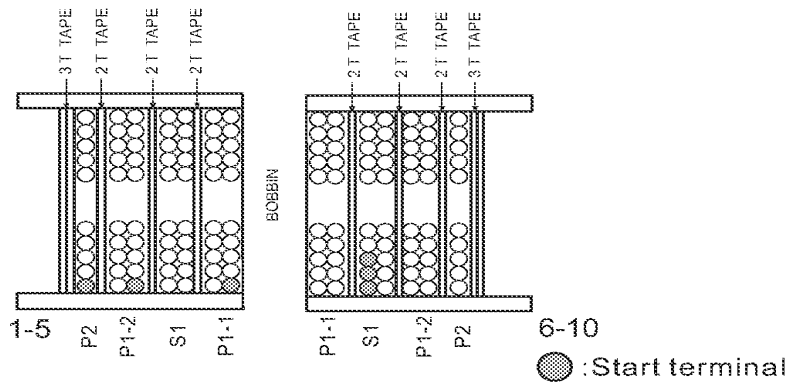
Note:

1. Place the bobbin pins left side of operator.
2. Clockwise and close winding.

5. Schematic:



6. Winding construction



GROUP-TEK®

A Leading Supplier of Magnetic Components

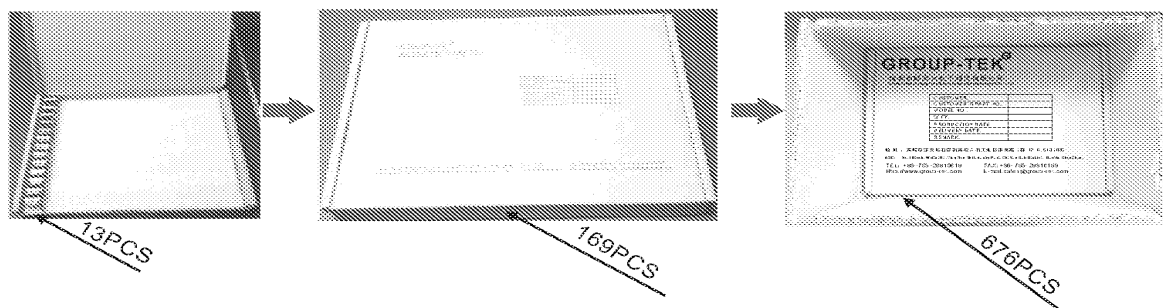
EE1936R

7. Material List

| NO. | ITEM. | MATERIALS | SUPPLIERS/MANUFACTURES | UL FILE NO. |
|-----|---------|--|--|---------------|
| 1 | BOBBIN | PHENOLIC T375J UL RATING: 94V-0 | CHANG CHUN PLASTICS CO.LTD. | QMFZ2.E59481 |
| 2 | CORE | EE 19 PG 232 | High-tech Electronics Co.,Ltd | N/A |
| 3 | WIRE | POLYURETHANE ENAMELED TYPE NO. 2UEW / MW62-C THERMAL RATING: 180°C | ZHU HAI SUNTEK WIRE COLTD | OBMW2.E234867 |
| 4 | TAPE | ADHESIVE POLYESTER TAPE TYPE NO.: HMT803(YELLOW) THERMAL RATING: 130°C | Shen zhen XinHuaHui Packing material Co.,Ltd | E328315 |
| 5 | SOLDER | SN/CU: 99.3/0.7 | Gao Xin stannum industry Co.,Ltd | N/A |
| 6 | Varnish | E962 | ZHU HAI CHANGXIAN NEW MATERIALS TECHNOLOGY CO.LTD. | OBOR2.E335405 |

8. Packing Information:

| DESCRIPTION | QTY |
|--------------------------|------|
| PIECES PER CELL | 1 |
| PIECES PER TRAY | 169 |
| PIECES PER BOX | 676 |
| GROSS WEIGHT PER BOX(KG) | 7.85 |
| NET WEIGHT PER BOX(KG) | 9.25 |

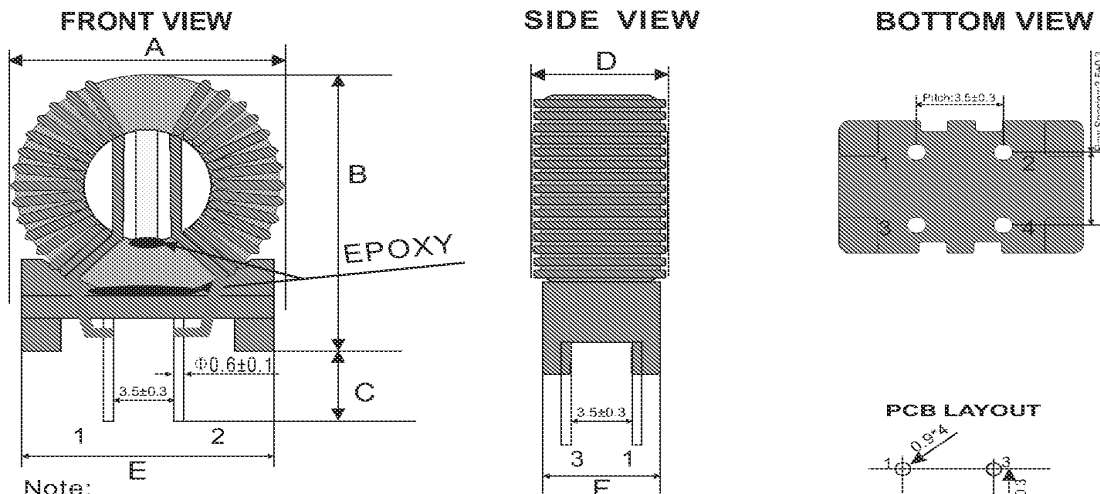


GROUP-TEK®

A Leading Supplier of Magnetic Components

PCM10020R

2. Mechanical Dimensions:



Note:
1. Fix epoxy for PCB and BASE.

Unit: mm

| A | B | C | D | E | F |
|--------|--------|--------|--------|--------|--------|
| +/-1.0 | +/-0.5 | +/-0.5 | +/-1.0 | +/-0.5 | +/-0.5 |
| 12.0 | 14.3 | 3.8 | 7.0 | 9.0 | 5.8 |

3. Electrical Characteristics :

| Specifications: at 25°C. Operating Temperature -40 to +125°C | | | | |
|--|---------------|----------------------------|---------------------|---------|
| NO. | ITEM | TEST CONDITION | SPECIFICATION | REMARKS |
| 1 | Rated Voltage | Line to Line | AC250V | |
| 2 | Inductance | (1-3)(2-4) @16KHz, 1.0V | 3.0mH+50% -30% | TH-2819 |
| 3 | DCR | (1-3)(2-4) @25°C | 79.0mΩ Max. | TH-2819 |
| 4 | HI-POT | (1-3) to (2-4) | 1500Vac, 1mA, 2SEC. | RK2670A |
| 5 | Rated current | @70°C | 1.50A. | |
| 6 | ΔL | L(1-3)-L(2-4) @16KHz, 1.0V | 0.20mH Max. | TH-2819 |

Remark: Use manual trigger mode of instrument for test.

4. Winding Information:

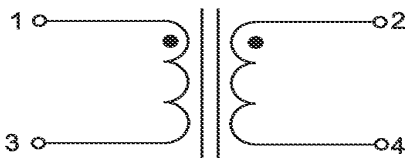
| WINDING SEQ. | ST-FN | WIRE/FOIL | TURNS | WRAP INSUL. | MARGIN TAPE | SLEEVE | NOTE |
|--------------|-------|------------------|----------|-------------|-------------|--------|------|
| 1 | 1---3 | 0.40mm 2UEW(Red) | 28±2.0T. | | | | |
| 2 | 2---4 | 0.40mm 2UEW(Red) | 28±2.0T. | | | | |

GROUP-TEK®

A Leading Supplier of Magnetic Components

PCM10020R

5. Schematic:

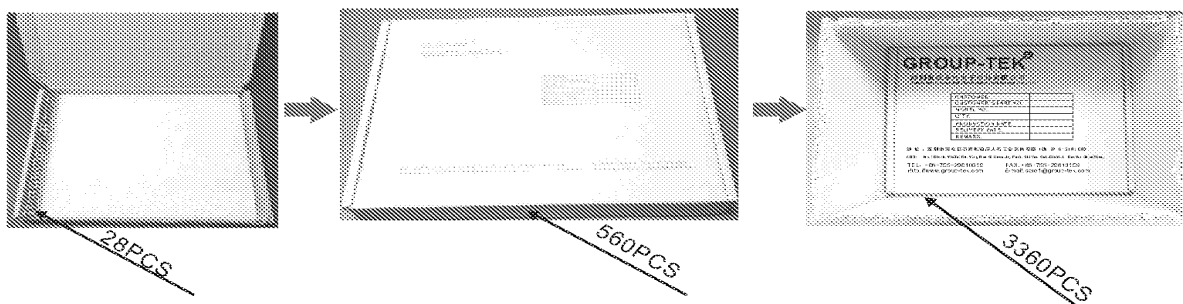


6. Material List

| NO. | ITEM. | MATERIALS | SUPPLIERS/MANUFACTURES | UL FILE NO. |
|-----|--------|--|---|---------------|
| 1 | CORE | T10*6*5 TTS-TH10 | TTS Technology Co., Ltd. | N/A |
| 2 | WIRE | POLYURETHANE ENAMELED TYPE NO: 2UEW/MW62-C Ø0.49mm THERMAL RATING: 180°C | ZHU HAI SUNTEK WIRE COLTD | OBMW2.E234667 |
| 3 | SOLDER | SN/CU: 99.3/0.7 | Gao Xin stannum industry Co., Ltd | N/A |
| 4 | Glue | E-500(XX) (E-504H-1) | Dong Guan city eatto electronic material Co., Ltd | QMFZ2.E218090 |
| 5 | BASE | PHENOLIC T375J UL RATING: 94V-0 | CHANG CHUN PLASTICS CO LTD. | QMFZ2.E59481 |

7. Packing Information:

| DESCRIPTION | QTY |
|--------------------------|-----------|
| PIECES PER CELL | 1 |
| PIECES PER TRAY | 560 |
| PIECES PER BOX | 3360 |
| GROSS WEIGHT PER BOX(KG) | 10.5(kg) |
| NET WEIGHT PER BOX(KG) | 8.736(kg) |






No. 1 Block, Wei Tai Rd, Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao An Shen Zhen TEL:+86-755-29810619 FAX:+86-0755-29810159 Http://www.group-tek.com

GROUP-TEK[®]



承认书

SPECIFICATION FOR APPROVAL

| | |
|---------------------------|---|
| 客户名称 CUSTOMER | |
| 客户料号 MODEL NO. | EP07-001193A |
| 产品名称 PART NAME | COMMON MODE CHOKE |
| 产品型号 PART TYPE | PCM10021R |
| 版本 REV | X1 |
| 签名 SIGNATURE | 制图:  2017.02.06 Drawn by 审核:  2017.02.09 Checked by 批准:  2017.02.09 Approved by |
| 客户承认 CUSTOMER APPROVAL | 承认印: SIGNET 签名: SIGNATURE |

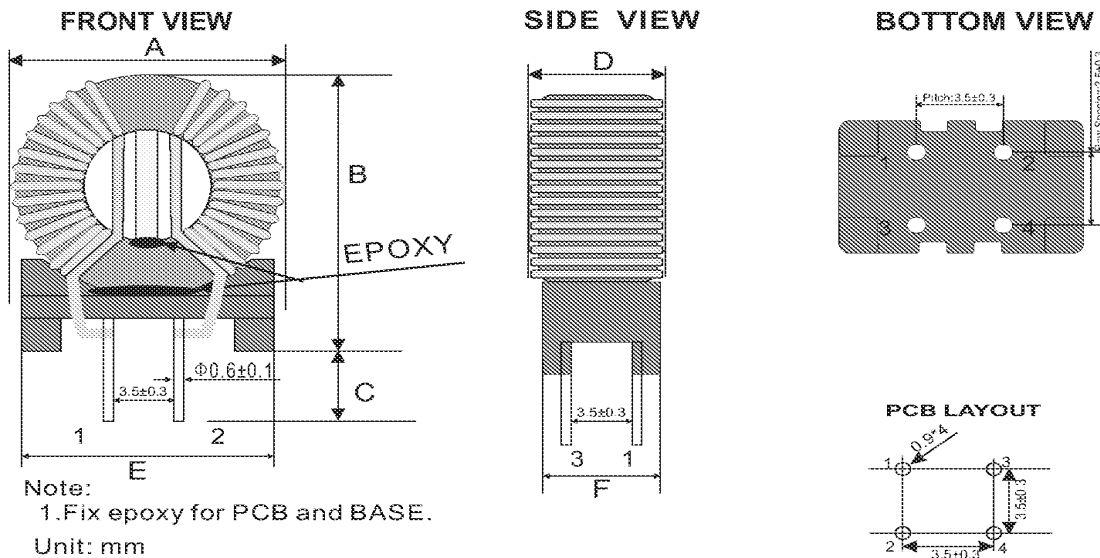
深圳市联泰兴电子科技有限公司
 SHENZHEN GROUP-TEK ELECTRONICS TECHNOLOGY CO., LTD
 地址: 深圳市宝安区石岩街道应人石工业区伟泰路 1 栋 (P. C: 518108)
 ADD: No.1 Block, WeiTai Rd. Ying Ren Shi Industry Park, Shi Yan Sub-District, Bao'An ShenZhen.
 TEL: +86-755-29810619 29810976 FAX: +86-755-29810159
 Http://www.group-tek.com E-mail:sale1@group-tek.com

GROUP-TEK[®]

A Leading Supplier of Magnetic Components

PCM10021R

2. Mechanical Dimensions:



| A | B | C | D | E | F |
|--------|--------|--------|--------|--------|--------|
| +/-1.0 | +/-0.5 | +/-0.5 | +/-1.0 | +/-0.5 | +/-0.5 |
| 12.0 | 14.3 | 3.8 | 7.0 | 9.0 | 5.8 |

3. Electrical Characteristics :

| Specifications: at 25°C. Operating Temperature -40 to +125°C | | | | |
|--|---------------|----------------------------|---------------------|---------|
| NO. | ITEM | TEST CONDITION | SPECIFICATION | REMARKS |
| 1 | Rated Voltage | Line to Line | AC250V | |
| 2 | Inductance | (1-3)(2-4) @16KHz, 1.0V | 18mH+50% -30% | TH-2819 |
| 3 | DCR | (1-3)(2-4) @25°C | 500.0mΩ Max. | TH-2819 |
| 4 | HI-POT | (1-3) to (2-4) | 1500Vac, 1mA, 2SEC. | RK2670A |
| 5 | Rated current | @70°C | 0.50A. | |
| 6 | ΔL | L(1-3)-L(2-4) @16KHz, 1.0V | 0.60mH Max. | TH-2819 |

Remark: Use manual trigger mode of instrument for test.

4. Winding Information:

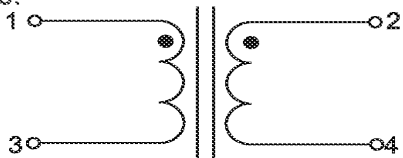
| WINDING SEQ. | ST-FN | WIRE/FOIL | TURNS | WRAP INSUL. | MARGIN TAPE | SLEEVE | NOTE |
|--------------|-------|-------------|----------|-------------|-------------|--------|------|
| 1 | 1---3 | 0.25mm 2UEW | 67±3.0T. | | | | |
| 2 | 2---4 | 0.25mm 2UEW | 67±3.0T. | | | | |

GROUP-TEK®

A Leading Supplier of Magnetic Components

PCM10021R

5. Schematic:

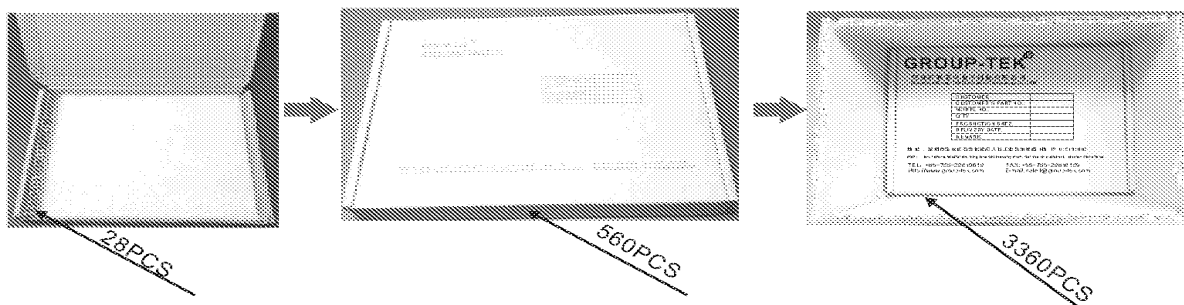


6. Material List

| NO. | ITEM. | MATERIALS | SUPPLIERS/MANUFACTURES | UL FILE NO. |
|-----|--------|---|---|---------------|
| 1 | CORE | T10*6*5 TTS-TH10 | TTS Technology Co., Ltd. | N/A |
| 2 | WIRE | POLYURETHANE ENAMELED TYPE NO: 2UEW/MW B2-C Ø0.25mm THERMAL RATING: 180°C | ZHU HAI SUNTEK WIRE COLTD | OBMW2.E234867 |
| 3 | SOLDER | SN/CU: 99.3/0.7 | Gao Xin stannum industry Co., Ltd | N/A |
| 4 | Glue | E-500(XX) (E-504H-1) | Dong Guan city eatto electronic material Co., Ltd | QMFZ2.E218090 |
| 5 | BASE | PHENOLIC T375J UL RATING: 94V-0 | CHANG CHUN PLASTICS CO LTD. | QMFZ2.E59481 |

7. Packing Information:

| DESCRIPTION | QTY |
|--------------------------|-----------|
| PIECES PER CELL | 1 |
| PIECES PER TRAY | 560 |
| PIECES PER BOX | 3360 |
| GROSS WEIGHT PER BOX(KG) | 10.14(kg) |
| NET WEIGHT PER BOX(KG) | 9.50(kg) |





NETWORK CAMERA
 MODEL: XNO-9082R
 AC 24V ~ 50/60Hz 1.1A/DC 12V 1.1A/
 PoE(48V) 0.27A

M/C: XNO-9082R/KAN Fac. ID: D



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



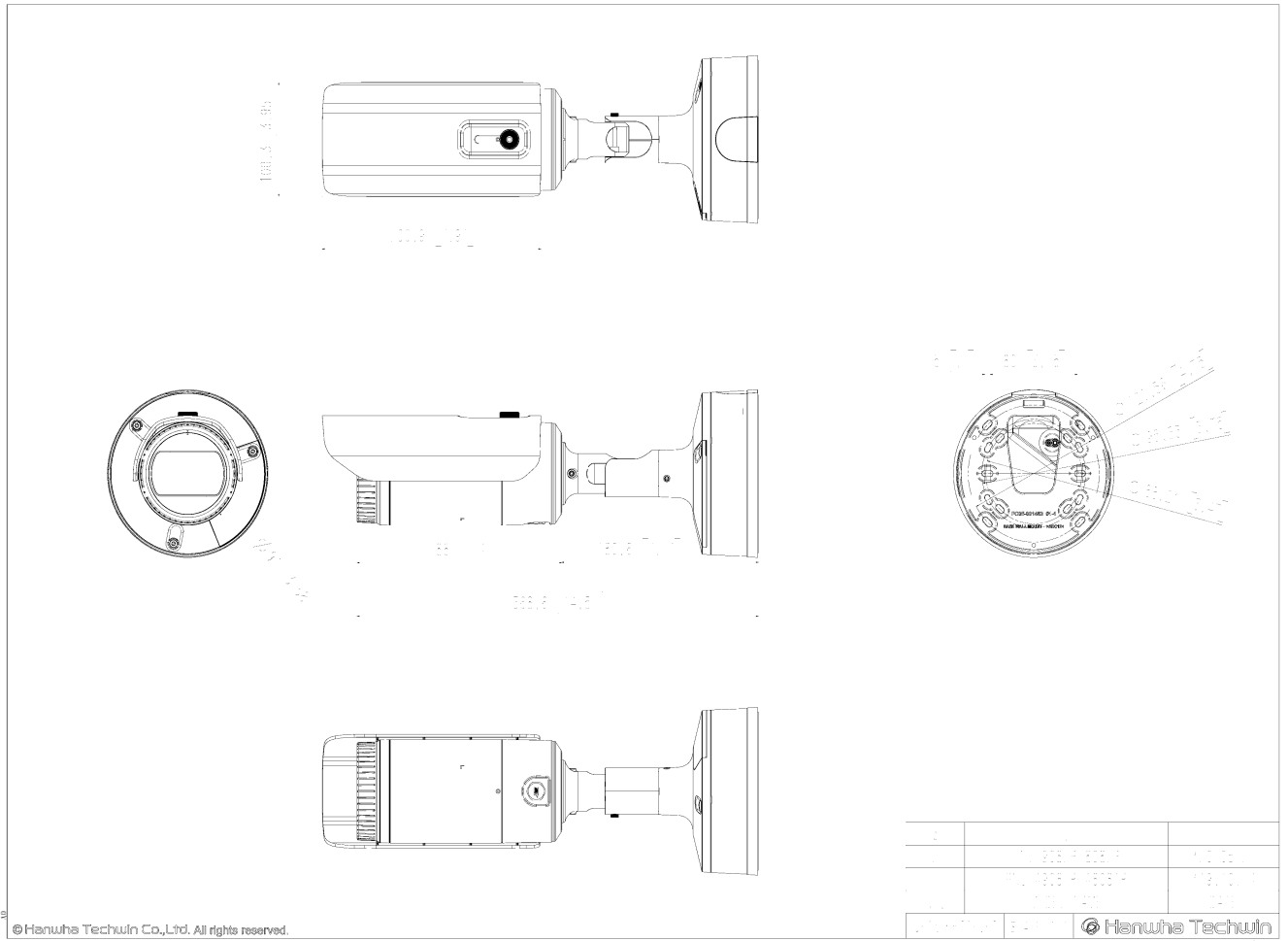
NETWORK CAMERA
 MODEL: XNO-8082R
 AC 24V ~ 50/60Hz 1.1A/DC 12V 1.1A/
 PoE(48V) 0.27A

M/C: XNO-8082R/KAN Fac. ID: D



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





Project No. 4789446212 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 | | | 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. 4789446212 File E158873 Page 2
 Compliance Review Conducted by: _____ Date _____
 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 |

Test Record No. 1

1. Test result relate only to the items tested.
2. The manufacturer submitted representative production samples of NETWORK CAMERA, XNO-9082R.
3. Only the test listed were considered necessary.
4. Unless otherwise noted in the above list of tests, all tests were conducted by CTK CO LTD, (Unhak-Dong) 142, Dongbu-ro, Cheoin-gu Yongin-si, Gyeonggi-do 17141 Republic of Korea and witnessed by a member of the UL Staff under WTDP.

The following tests were conducted:

| Tests performed (name of test and test clause): | Testing location: |
|---|------------------------------|
| | None |
| 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) | |
| Abnormal Operation (5.3.1 - 5.3.9) | |
| 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 |