Network   Bullet

TNO-L4040TR
VGA Thermal Camera

FC | UL us LISTED | CE | EAC | NDAA

Key Features

- Max. 640x480 resolution support
- Built-in 19mm fixed focal lens
- H.265, H.264, MJPEG codec
- Max. 8fps@all resolutions (H.265, H.264, MJPEG)
- Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
- Micro SD / SDHC / SDXC memory 1-slot (Max. 256GB)
- Hallway View, WiseStreamII support
- Temperature Detect Range '-20℃~130℃(-4°F~266°F)
- Additional Hybrid palettes, Spot temperature reading
- PoE, 24VAC, 12VDC / IP66, IK10, NEMA4X

Design and specifications are subject to change without notice. The latest product information / specification can be found at HanwhaVision.com.
Hanwha Vision is formerly known as Hanwha Techwin.

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VGA Thermal Camera

Specifications

Video

Imaging Device	Uncooled micro bolometer
Resolution	640x480, 640x360, 320x240
Max. Framerate	H.265/H.264/MJPEG: Max. 8fps
NETD	＜50mK
Pixel size	17μm
Video Out	CVBS: 1.0 Vp-p / 75Ω composite, 720x480(N), 720x576(P) for installation USB: Micro USB Type B, 1280x720 for installation

Lens

Focal Length (Zoom Ratio)	19mm fixed focal
Max. Aperture Ratio	F1.0
Angular Field of View	H: 32° / V: 24.3° / D: 39.2°
Min. Object Distance	11m(36.09ft)
Focus Control	Fixed

Operational

Camera Title	Displayed up to 85 characters
Digital Image Stabilization	Support(built-in gyro sensor)
Motion Detection	8ea, 8point polygonal zones
Privacy Masking	24ea, polygonal zones - Color: Grey/Green/Red/Blue/Black/White - Mosaic
Video Rotation	Flip, Mirror, Hallway view(90-/270-)
Analytics	Directional detection, Motion detection, Appear/Disappear, Enter/Exit, Loitering, Tampering, Virtual line, Audio detection, Temperature detection, Sound classification, Shock detection
Alarm I/O	Input 1ea / Output 2ea
Alarm Triggers	Analytics, Network disconnect, Alarm input, MQTT subscription
Alarm Events	When alarm trigger occurred - File upload(image): e-mail/FTP - Notification: e-mail - Recording: SD/SDHC/SDXC or NAS recording at event triggers - Alarm output - Handover: PTZ preset - MQTT: publication
Audio In	Selectable(mic in/line in) Supply voltage: 2.5VDC(4mA), Input impedance: 2K Ohm
Audio Out	Line out, Max.output level: 1Vrms
Color Palettes	Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom

Radiometry

Temperature Detect Range	-20°C~130°C(-4°F~266°F)
Temperature Accuracy	±5°C(≤100°C), ±20%(>100°C)

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| Temperature Detection | 6 Quadrangle ROI zones, whole FoV area |
| Additional | Hybrid palettes, Spot temperature reading |

Network

Ethernet	RJ-45(10/100BASE-T)
Video Compression	H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression	G.711 u-law / G.726 Selectable G.726(ADPCM) 8KHz, G.711 8KHz G.726: 16Kbps, 24Kbps, 32Kbps, 40Kbps AAC-LC: 48Kbps at 16KHz
Smart Codec	Manual(5ea area), WiseStream II
Bitrate Control	H.264/H.265: CBR or VBR MJPEG: VBR
Streaming	Unicast(20 users) / Multicast Multiple streaming(Up to 10 profiles)
Protocol	IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP,RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour, LLDP, SRTP, MQTT
Application Programming Interface	ONVIF Profile S/G/T SUNAPI(HTTP API) Wisenet open platform

Security

OS / Firmware Protect	Firmware encryption
User authentication	Digest Authentication, Prevent brute-force attack
Network authentication	802.1X Authentication(EAP-TLS, EAP-LEAP, EAP-PEAP MSCHAPv2)
Secure Communication	HTTPS, SRTP, WSS(Websocket secure)
Access Control	Access control based on IP address
Data Protect	Authentication information encryption, ZIP compression encryption
Audit	User Access/System/Event log management
Device ID	Device Certificate(Hanwha Private Root CA)

General

Webpage Language	English, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungarian, Greek
Edge Storage	Micro SD/SDHC/SDXC 1slot 256GB
Memory	1024MB RAM, 256MB Flash

Environmental & Electrical

Operating Temperature / Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Certification	IP66, IK10, NEMA4X
Input Voltage	PoE(IEEE802.3af, Class3), 24VAC, 12VDC
Power Consumption	PoE: Max. 10W, typical 8.6W 12VDC: Max. 9W, typical 7.5W 24VAC: Max. 10.5W, typical 8.9W

Mechanical

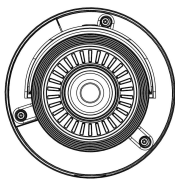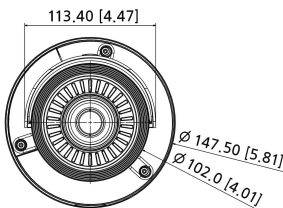| Color / Material | White / Aluminum |
| RAL Code | RAL9003 |
| Product Dimensions / Weight | ø101.97x401.8mm(4.01x15.82") / 3,124g(6.89lb) |

Hanwha Vision

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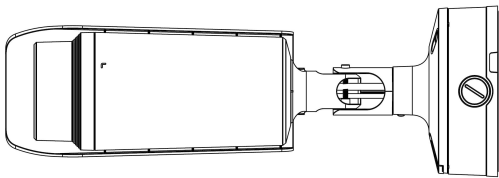
CAD

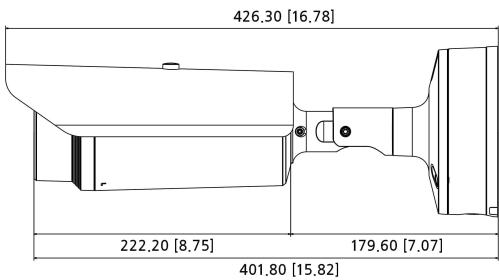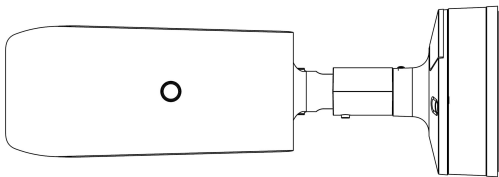Unit:mm [inch]

TNO-L4040T/L4040TR/L4050T VGA Thermal Camera

Reference image

TNO-4030T, 4030TR
TNO-L4030T, L4030TR

113.40 [4.47]

Ø 147.50 [5.81]
Ø 102.0 [4.01]

TNO-4040T, 4040TR
TNO-L4040T, L4040TR

426.30 [16.78]

222.20 [8.75]   179.60 [7.07]
401.80 [15.82]

3.0 [0.12]
3.5 [0.14]
5.0 [0.20]

80.0 [3.15]

46.0 [1.81]
85.0 [3.35]

82.0 [3.23]

TNO-4050T, L4050T
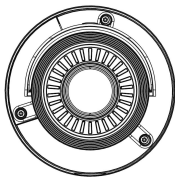
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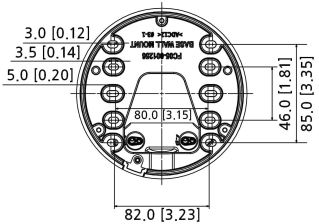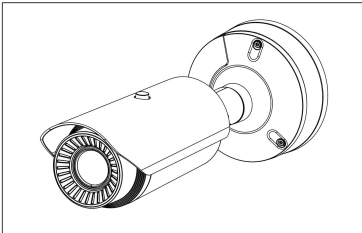
Revision	V1.0
Revision Date	24/12/10
Paper Size	A0
Unit	mm [inch]
Scale	1 : 1