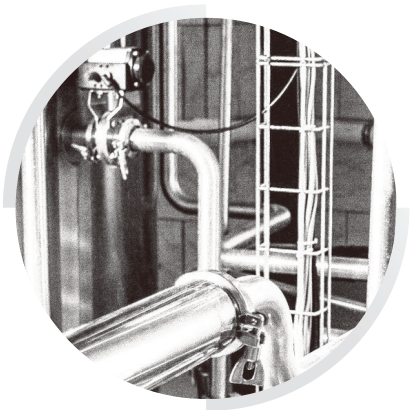
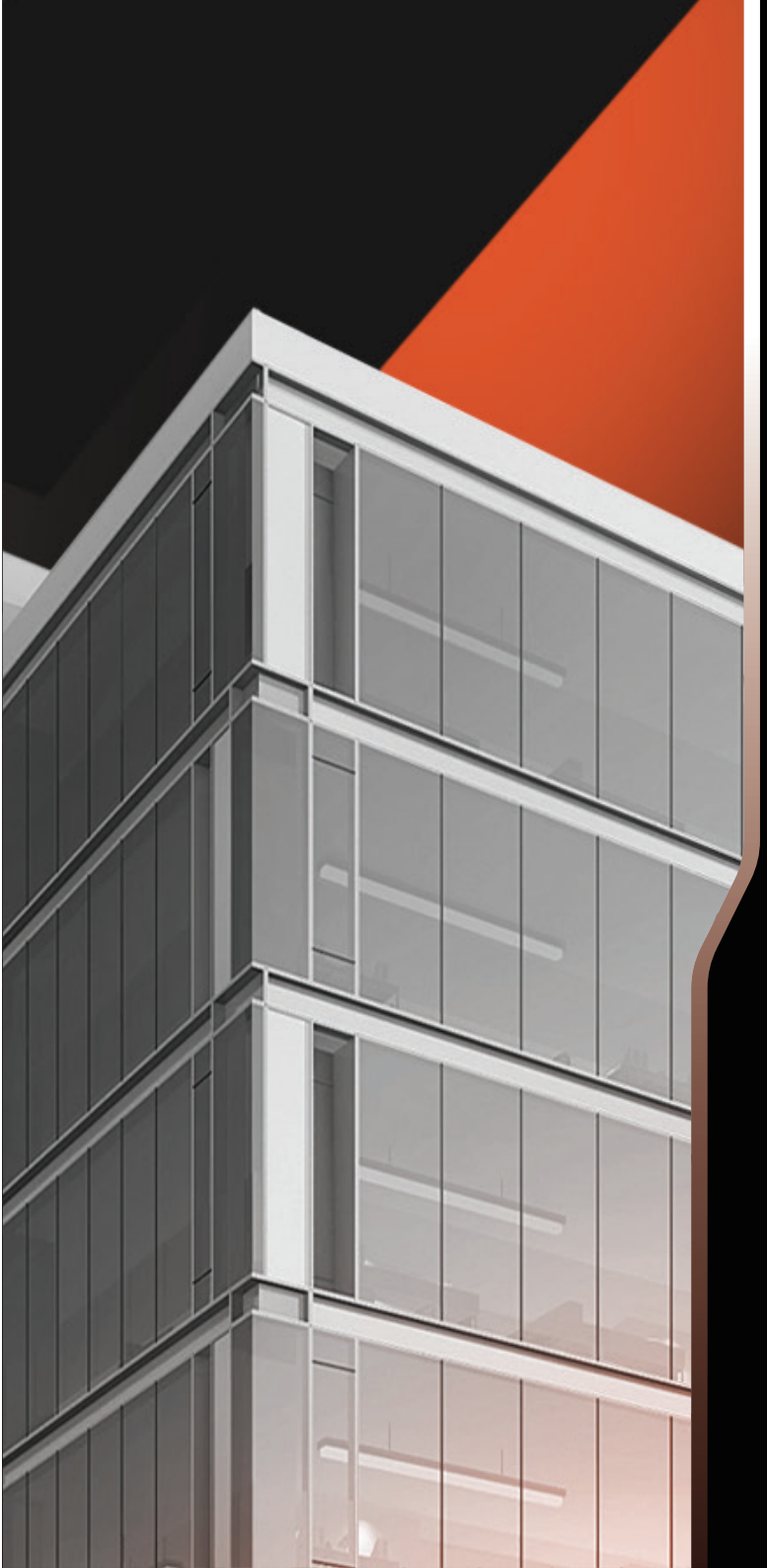
ThermTec

Thermal Imaging Cores

Customized Thermal Solutions

Contents





About Us

ThermTec Technology Co., Ltd. is a global leader in the manufacturing of thermal products related to infrared thermal imaging technologies. We provide the latest and most advanced thermal technologies and solutions that enhance the way people perceive the world, contributing to safer and more efficient living and working conditions for humanity. Our professional team of hardware and software engineers, along with dedicated technical support, ensures deep integration and secondary development. We also offer after-sales service teams located in various regions worldwide.

iThermal-T

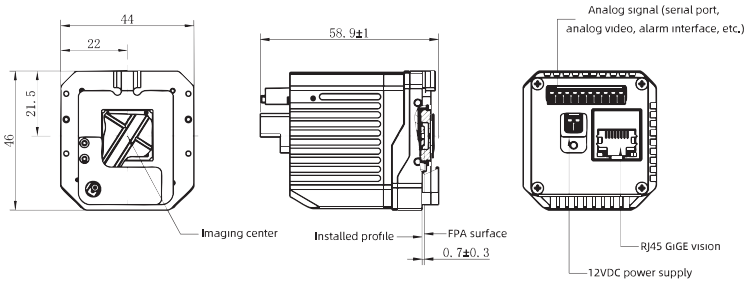
A-Si Thermal Module

Product Features

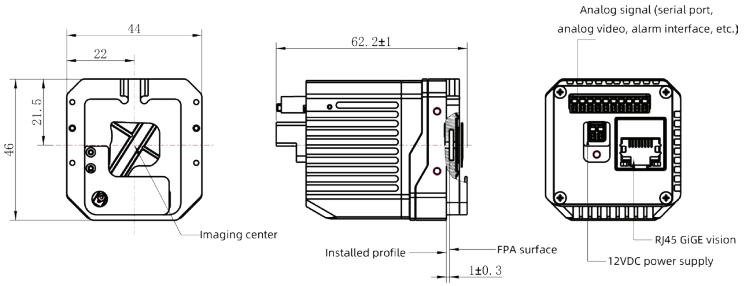
- Full screen measurement function;
- Support event analysis of temperature image;
- Compact module design, convenient integration;
- Powerful image process: AGC, 3DNR, IDE;
- Abundant software function.

Dimension

T3



T6



Specifications

Model	iThermal-T3	iThermal-T6
Detector Type	Uncooled infrared microbolometer FPA	
Resolution	384×288	640×480
Pixel pitch	17μm	
NETD	≤50mk@300K, F#=1.0	
Spectral Range	8~14μm	

Optical Performance

Focal Length	6.6mm (iThermal-T3), 9.6mm, 15mm, 19mm, 25mm, etc.; Motorized: 25mm, 35mm, 50mm, etc.
Focus Method	Manual/Motorized

Image Processing

Image Denoise	3D DNR
Thermal View	HDR, linear
Image Enhancement	IDE
Color Palette	11 options: White hot/Black hot/Ironbow/Rainbow etc,. Support customization

Network

Protocols	IPv4, IPv6, HTTP, HTTPS, FTP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, ONVIF (Profile S)
Video Compression	H.264
User Management	Up to 10 users, 3 levels: Administrator, Operator, General
Security	Support password protection, bonding MAC ID, IP filtration, https encryption
Local Storage	Micro-SD (FT) up to 64GB

Temperature Measurement

Object temperature range	-20℃~+550℃ (800℃, max. 2000℃)
Temperature Accuracy	±5%
Measurement Method	Point/Line/Frame, etc.
Measurement Metadata	Yes

Intelligence

Intelligent Analysis	Motion detection, cross line, intrusion, area entry and exit
Human & Vehicle Detection	Automatic detection for human, vehicle and vessel

Interface

Network Port	RJ45 10 M/100 M self-adaptive Ethernet port
Video Interface	CVBS (75Ω) PAL
Communication Port	1. RJ45 10 M/100 M self-adaptive Ethernet interface; 2. 1ch RS-485 & 1ch RS-232
Alarm	1x Input, 1x output
Memory Interface	Micro-SD (FT)

General

Work Temperature	-20℃ ~ +60℃
Work Humidity	<90%RH
Storage Temperature Range	-45℃ ~ +65℃
Power Supply	DC12V
Power Consumption	<3W
Dimension	38mm×44 mm×45mm
Weight	<100g (w/o lens)

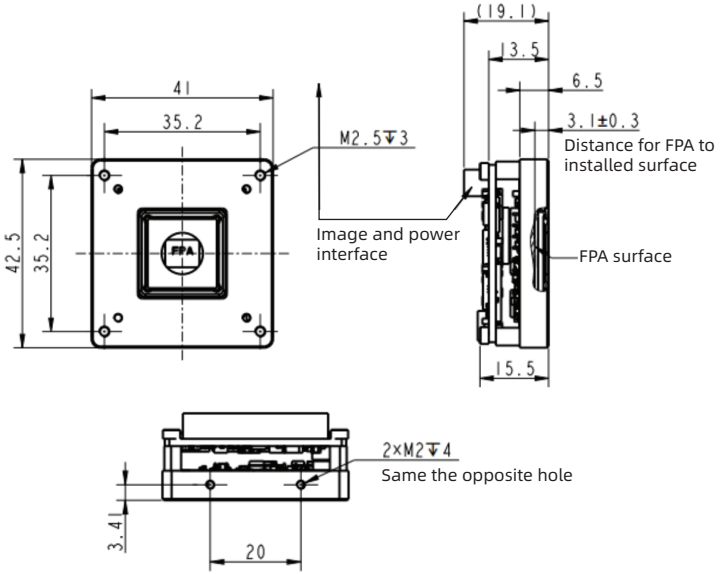
M507C

NST thermal imaging analog core

Product Features

- Shutterless technology enables stable real-time image output without interruptions;
- Boots in less than 5 seconds and just 3 seconds for quick deployment;
- Imaging output response for less than 6ms for immediate visualization;
- NETD ≤ 35mK @ F1.0, 300K enhances target distinction in extreme weather;
- Supports both digital (BT656) and analog synchronous output options;
- Functions within -20°C to +60°C with 5% to 95% RH humidity;
- Operates at just 1.3W for energy efficient extended use.

Dimension



Specifications

Model	M507C
Detector	Uncooled VOX FPA
Resolution/Pixel pitch	640×510/12μm
NETD	≤35mk@F1.0,300K
Spectral range	8~14μm
Focus Method	Fixed lens
Focal length	9/15/19/25/40/50mm etc

Image Effect

Image adjustment	Auto adjustment for contrast ratio & brightness & acutance
Uniformity calibration	None shutter technology(NST)
Zoom	2x,4x
Noise reduction	Digital filter
Polarity	9 Pseudo color palettes changeable
Resolution	768*576
Image mirroring	Horizontal & vertical
Polarity inversion	Black hot & white hot

Interface

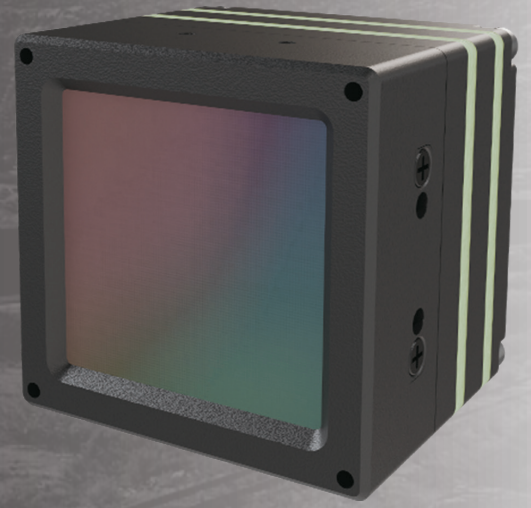
Power interface	DC:+2.5V ~ 5.5V
Analogue video	Double channels
Series port	RS232
Digital video	8 Bit/14Bit(50Hz)
Keyboard	4 buttons keyboard

General

Working temperature/ humidity	-20℃ ~ +60℃,5% ~ 95%RH
Storage temperature	-40℃ ~ +60℃
Power Consumption	1.3w
Reverse polarity protection	Yes
Starting time	Customized with 3s only
Size	42.5mm*41mm*19.3mm
Weight	<35g(w/o lens)

ATOM505C

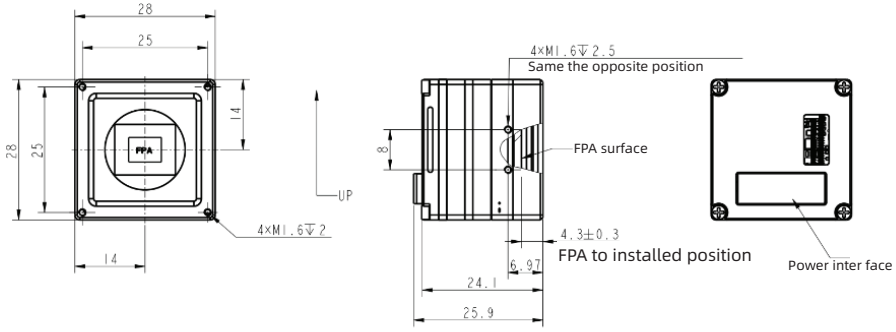
NST Thermal Imaging Core



Product Features

- NNST Thermal Imaging Core excels in heavy weather;
- Anti-shock capability up to 100g/6ms for special application scenarios;
- Weighs under 33g and measures 25.9 x 28 x 28 (mm) for integration into UAVs and beyond;
- Shutterless technology ensures real-time image output without pauses;
- Supports both digital (BT656) and analog signals for synchronous video output;
- A resolution of 640x510 pixels with a 12μm pixel pitch;
- Improved sensitivity with NETD of 35mK @ F1.0 at 300K;
- 9 changeable pseudo color palettes;
- Broad operational range from -20℃ to +45℃ with 5% to 95% RH humidity.

Dimension



Specifications

Model	ATOM505C
Detector	Uncooled VOX FPA
Resolution/Pixel pitch	640×510/12μm
NETD	≤35mk@F1.0,300K
Spectral range	8~14μm
Focus Method	Fixed lens
Focal length	9/15/19/25/40/50mm etc

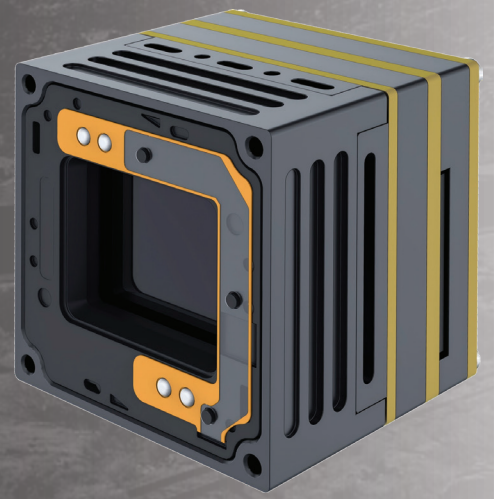
Image Effect		
Image adjustment	Auto adjustment for contrast ratio & brightness & acutance	
Uniformity calibration	None shutter technology(NST)	
Zoom	2x,4x	
Noise reduction	Digital filter	
Polarity	9 Pseudo color palettes changeable	
Resolution	768*576	640*480

Interface	
Power interface	DC:+2.5V ~ 5.5V
Analogue video	Double channels
Series port	RS232
Digital video	BT656(768*576) or Digital parallel
Keyboard	4 buttons keyboard

General	
Working temperature/ humidity	-20℃ ~ +60℃,5% ~ 95%RH
Storage temperature	-45℃ ~ +65℃
Power Consumption	1.2w
Shock resistance	100g/6ms
Size	25.9mm*28mm*28mm
Weight	<33g

TopX3/6 Series

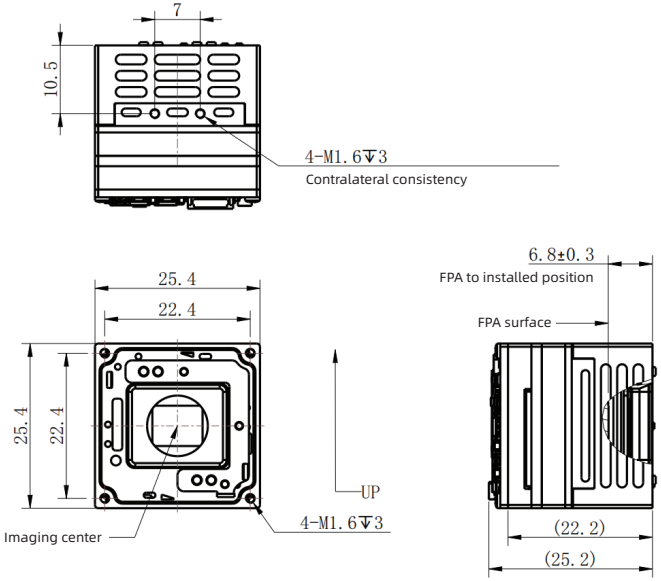
Mini Thermal Imaging Core



Product Features

- Ceramic packaging for ultra-clarity and environmental adaptability;
- Detailed thermal images at 640×512 pixels, 12μm pixel pitch;
- Multiple AI algorithms (NUC, 3DNR, DNS, DDE) empowered target detection and tracking;
- Intuitive UI design with a crosshair function;
- Supports USB 2.0, MIPI, and BT656 outputs;
- 50Hz frame rate for smooth playback and real-time imaging;
- Operates on DC 3.9V to 5.5V with ≤1.2W power consumption;
- Shorter lead times and comprehensive after-sales support.

Dimension



Specifications

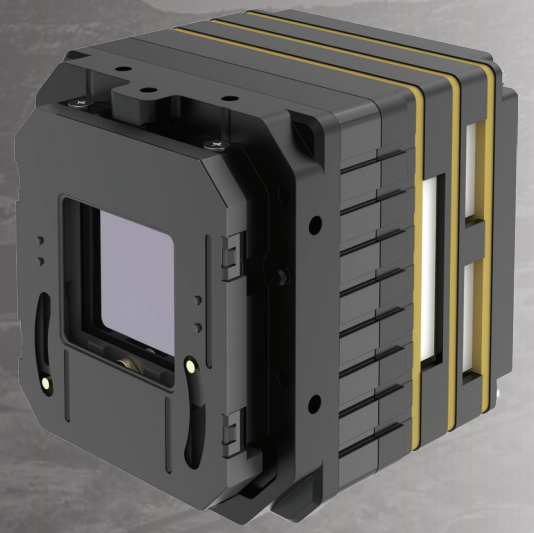
Model	TopX3-00	TopX3-01	TopX3-02	TopX6-00	TopX6-01	TopX6-02
Resolution	384×288			640×512		
Pixel pitch	12μm					
Spectral range	8μm~14μm					
NETD	≤30mK@25℃					
Optical lens						
Focus mode	Athermalized lens					
Focal length	9.1mm, F1.0	13mm, F1.0		19mm, F1.0	25mm, F1.0	35mm, F1.0
FOV TopX3	28.4°×21.5°	20.1°×15.1°		13.8°×10.3°	10.5°×7.9°	7.5°×5.6°
FOV TopX6	45.7°×35.3°	32.9°×26.5°		22.8°×18.3°	17.4°×14°	12.5°×10°
Image Effect						
Frame rate	50Hz	50Hz	25Hz	50Hz	50Hz	25Hz
Starting time	≤12s					
Image interface	DVP&USB	MIPI-CSI&USB	CVBS&USB	DVP&USB	MIPI-CSI&USB	CVBS&USB

Palette	13 types option (white & black heat, red iron, lava, light green etc.)
Image algorithm	NUC/3DNR/DNS/DDE

General	
Communication mode	USB2.0/UART
Power supply	DC5V±0.5V
Mini power consumption	≤1.2W
Size（mm)	25.4×25.4×25.8（w/o lens）
Weight	27±1g(w/o lens)
Working temperature	-40℃-+60℃
Storage temperature	-45℃~+65℃
Antivibration	Random vibration:5.35grms, 3 axis
Shock resistance	Half sinusoid:40g/11ms, 3axis

Alter-HY

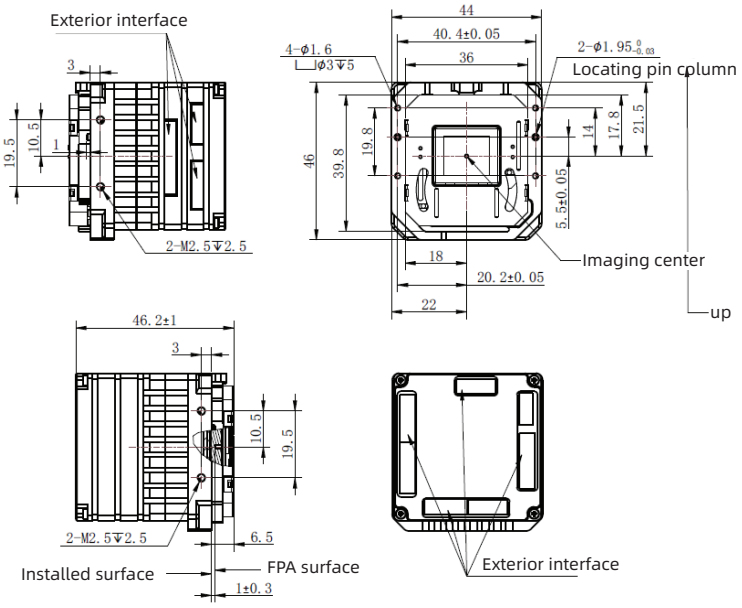
IP Thermal Imaging Core



Product Features

- Features dual resolutions of 640x512 and 384x288 pixels for crystal-clear thermal imaging;
- Operates effectively within an 8-14μm spectral range, suitable for various environmental conditions;
- Offers a selection of fixed focal lengths (25mm, 35mm, 50mm) and motorized options up to 75mm;
- Compatible with multiple network protocols (H.265/H.264, ONVIF, GB28181-2016);
- Integrates advanced image algorithms (AGC, IDE, 3D DNR) for consistently clear images;
- NETD under 35mK @ F1.0, 300K for detecting subtle temperature differences;
- Weighs only 121g with dimensions of 56.8 x 43 x 43 mm, easy to integrate and deploy in various applications.

Dimension



Specifications

Model	Alter-HY
Detector	Uncooled VOX FPA
Resolution/Pixel pitch	640×512/384×288, 12μm
Spectral range	8~14μ
NETD	≤35 mK @F1.0, 300K
Focal Length	Fixed: 25mm, 35mm, 50mm; Motorized: 25mm, 35mm, 50mm, 75mm Zoom: 25-75mm, 30-150mm etc.

Network

Protocol	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, RTP, RTSP, RTCP, NTP, SMTP, SNMP, IPv6
Video compression	H.265 / H.264
API	ONVIF(PROFILE S,PROFILE G) , GB28181-2016, SDK

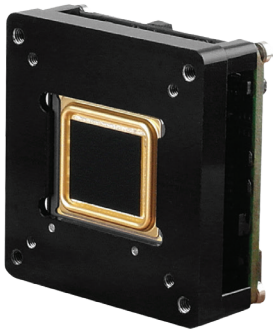
Image Effect

Image adjusting	Contrast & brightness & acutance
Palette	Optional 11 kinds pseudo color
Image enhancement	Yes
Image correction	Yes
3D DNR	Yes
Mirror image	Yes

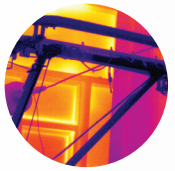
General

Ethernet port	RJ45 10 M/100 M self-adaptive Ethernet
Analog output	CVBS
Serial port	1x ch RS232, 1xch RS485
Other port	1x ch Alarm input/output, 1x ch Audio input/output, 1x ch USB
Storage	MicroSD/SDHC/SDXC(256G)offlineforlocal storage,NAS (NFS,SMB/CIFS)
Working temperature &humidity	-30℃~60℃, < 90%
Power adapter	DC12V±10%
Power consumption	DC12V±10%
Power consumption	3.5W
Size	56.8*43*43 (w/o lens)
Weight	121g (w/o lens)

Applications



Fire Prevention



Intelligent Transportation

Security Monitoring

Smart Grid

Industrial Inspection

Maritime Search and Rescue

Lens Indexes

Lens	Human（1.8m*0.5m）（5.91 ft x 1.64 ft）			Vehicle（1.4m*4m）（4.59 ft x 13.12 ft）			Drone（0.5m*0.5m）（ 1.64 ft x 1.64 ft）		
	D	R	I	D	R	I	D	R	I
9.1mm	379m	95m	47m	1062m	265m	133m	379m	95m	47m
13mm	542m	135m	68m	1517m	379m	190m	542m	135m	68m
19mm	792m	198m	99m	2217m	554m	277m	792m	198m	99m
25mm	1042m	260m	130m	2917m	729m	365m	1042m	260m	130m
35mm	1458m	365m	182m	4083m	1021m	510m	1458m	365m	182m

※Note: In the domestic DRI calculation method, D is calculated based on one pixel, R is calculated based on four pixels, and I is calculated based on eight pixels.

ThermTec

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