

TECHNICAL SUMMARY

640 x 480 RESOLUTION

Specifications		Description
Microbolometer	Uncooled Vanadium Oxide	
Pixel Pitch	12 Micron	
Spectral Response	7.8 - 14 Micron	
Sensor Resolution (Array Format)	640 (h) x 480 (v); 307,200 pixels	
Frame Rate	<9Hz, 30Hz, 60 Hz	
Imaging Range ¹	-20°C to 550°C	
Sensor Sensitivity	25mK	
Non-Uniformity Correction (NUC)	Automatic NUC (with shutter)	
Video Output Interfaces	MIPI CSI-2	
Supply Voltage	3.3VDC up to 50mA steady state, 300mA during shutter	
Power ⁴	<1W	
Control Interface	I2C	
Output Frame Formats		
Supported OS	Linux / Windows SDK	
Partially Processed	16-bit corrected or pre AGC	
Colorized Display	ARGB888, RGB565, AYUV, or YUY2	
B/W Display	8-bit Greyscale	
Temperature	32-bit floating point or 16-bit fixed point thermography	
Optics & Mechanical		
Focal Length	7.9mm	18.0mm
F-number (focal length/aperture)	f/1.0	f/1.0
Spatial Resolution (IFOV, center)	1.64	0.65
HFOV	60°	24°
VFOV	45°	18°
Detection Range ²	611m	1528m
Recognition Range ²	153m	382m
Identification Range ²	87m	218m
Distance to Spot Ratio	102:1	255:1
Ingress Protection	IP67 Sealable	IP67 Sealable
Core Dimensions (L x W x H)	35 x 25 x 25mm	35 x 25 x 25mm
Core Weight	20g	26g
Focus	Fixed	Fixed
Lens Material	Chalcogenide	Chalcogenide
Thermography		
Temperature Calibration	Calibrated Output in °C, °F, K	
Temperature Accuracy ^{1,3,4}	The greater of ±3°C or 3% between 0°C to 550°C scene temperatures	
Environmental		
Operating Temperature Range	-10°C to 60°C	
Storage Temperature Range	-40°C to 80°C	
Solar Protection	Yes	
Humidity	10%~95%RH, non-condensing	
Regulatory	ROHS, WEEE, REACH	

◆ For custom Imaging Ranges, Operating Temperatures, Temperature Accuracy, Interfaces contact Seek Sales
<https://www.thermal.com/oem-lead-form.html>

1. Specified at nominal 25°C ambient operating temperature and nominal measurement distance of 12 inches. Temperature reported is Center Spot temperature, which is an average of the center 36 pixels.
Contact Seek Thermal for performance at other nominal operating temperatures and measurement distances.
2. Based on Johnson Criteria.
3. Factory default emissivity is set to 0.97. Emissivity is adjustable using the SDK. See data sheet for more information.
4. Typical performance.

Specifications and undocumented specifications are subject to change without notice. For the most up-to-date specifications, visit thermal.com/oem