

TECHNICAL SUMMARY

320 x 240 RESOLUTION

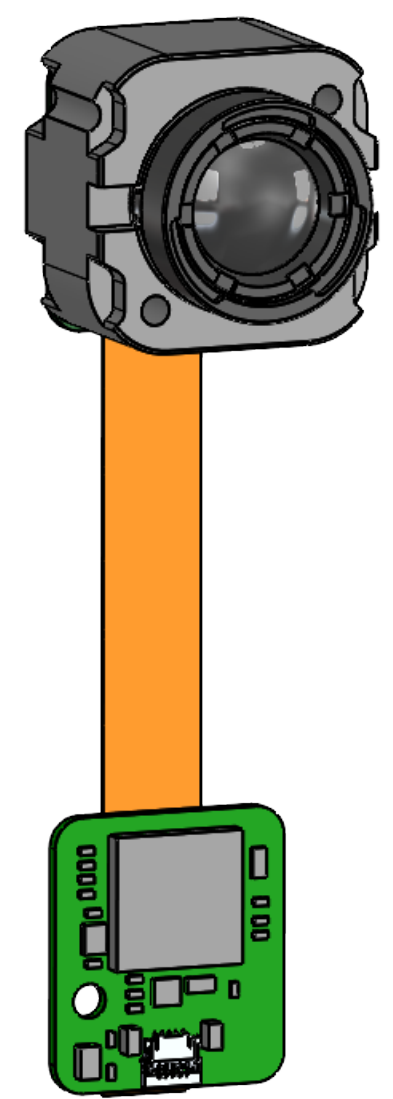
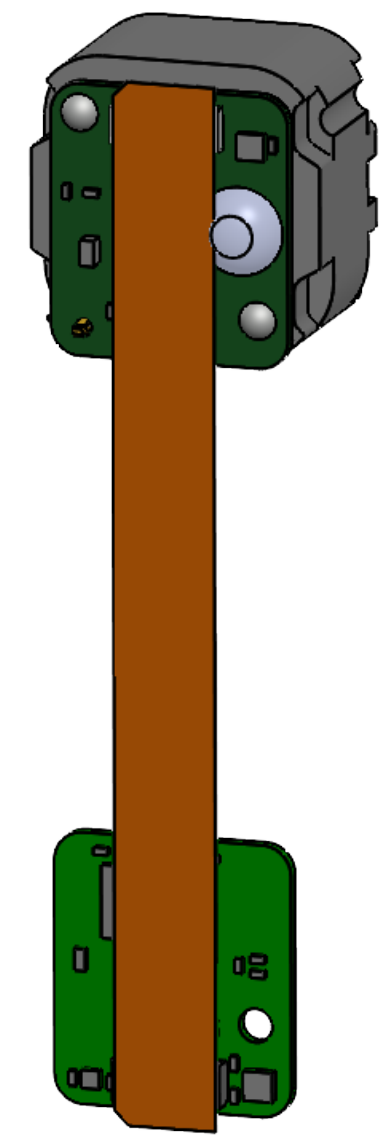
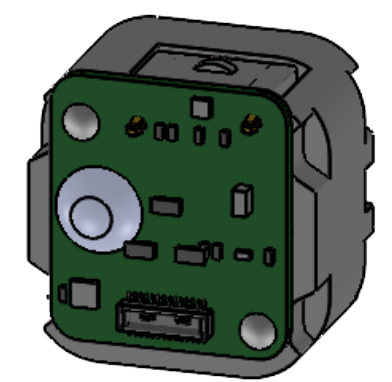
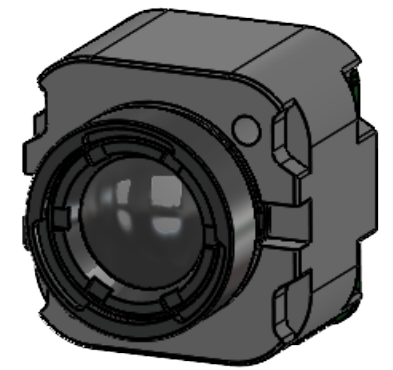
Specifications		Description
Microbolometer	Uncooled Vanadium Oxide	
Pixel Pitch	12 Microns	
Spectral Response	7.8 - 14 Microns	
Sensor Resolution (Array Format)	320 (h) x 240 (v); 76,800 pixels	
Frame Rate	Up to 27 Hz	
Imaging Range ¹	-40°C to 330°C	
Sensor Sensitivity	65 mK (typical), <100 mK (max) @ 25°C	
Non-Uniformity Correction (NUC)	Automatic NUC (with shutter)	
Video Output Interfaces	USB	
Supply Voltage	3.3V to 5.0V	
Power: Core Only	<50mW	
Power: Core + Interface Board	300mW	
Output Frame Formats		
Supported OS	Linux / Windows SDK	Android SDK
Partially Processed	16-bit corrected or pre AGC	16-bit filtered pre AGC
Colorized Display	ARGB888, RGB565, AYUV, or YUY2	32-bit ARGB post colorization in the Bitmap image
B/W Display	8-bit Greyscale	NA
Temperature	32-bit floating point or 16-bit fixed point thermography	16-bit fixed point thermography
Optics & Mechanical		
Focal Length	9.1mm	
F-number (focal length/aperture)	f/1.0	
Spatial Resolution (IFOV, center)	1.3	
HFOV ⁴	24°	
VFOV ⁴	18°	
Detection Range ²	758m	
Recognition Range ²	190m	
Identification Range ²	108m	
Distance to Spot Ratio	126:1	
Ingress Protection	IP67	
Core Dimensions (L x W x H)	20 x 20 x 21mm	
Core Weight	12 g	
Focus	Fixed	
Lens Material	Chalcogenide	
Thermography		
Temperature Calibration	Calibrated Output in °C, °F, K	
Temperature Accuracy ^{1,3}	The greater of ±5°C or 5% between 5°C to 140°C scene temperatures Typical performance of ±10% between 140°C to 330°C scene temperatures Contact your sales rep for higher temperature accuracy up to 330°C and beyond	
Environmental		
Operating Temperature Range	-10°C to 60°C Contact your sales rep for higher operating temperature ranges	
Storage Temperature Range	-40°C to 80°C	
Solar Protection	Yes	
Humidity	10%~95%RH, non-condensing	
Regulatory	ROHS, WEEE, REACH	

- 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.
- Based on Johnson Criteria.
- Factory default emissivity is set to 0.97. Emissivity is adjustable using the SDK. See data sheet for more information.

THIS DRAWING COVERS
THE FOLLOWING SKUS:
C2*9*
C3*9*
S2*9*
S3*9*

NO INTERFACE BOARD

"P" OPTION WITH INTERFACE BOARD



NOTES:

- 1. SEE 3D CAD FILE FOR FULL GEOMETRY.
- 2. KEEPOUT FOR SHUTTER CLEARANCE.
- 3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
- 4. THIS DESIGN IS CAPABLE OF BEING IP67 WHEN USED WITH APPROPRIATE SEALING DESIGN. SEE MOSAIC DATASHEET.
- 5. ADHESIVE BUMP PRESENT ON <9Hz CORES.
- 6. PROCESSOR BOARD AND FLEX INCLUDED WITH "P" OPTION CORES.

MATERIAL	SEE NOTES	DRAWN	JW	7/18/23
FINISH	SEE NOTES	APPR.		
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MM (IN) IN ACCORDANCE WITH ASME Y14.5-2009		THIRD ANGLE PROJECTION		
GENERAL TOLERANCES 0.5 TO 6 ±0.1 [.004] > 6 TO 30 ±0.2 [.008] > 30 TO 120 ±0.2 [.008] > 120 TO 400 ±0.3 [.012] ANGLES ±1°		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SEEK THERMAL. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT WRITTEN PERMISSION IS PROHIBITED.		

seek
thermal

TITLE: DOC, INTERFACE CONTROL DRAWING, MECH, 9.1MM MOSAIC

SIZE	DWG. NO.	REV
B	DOC_247	4
SCALE: 2:1		SHEET 1 OF 2

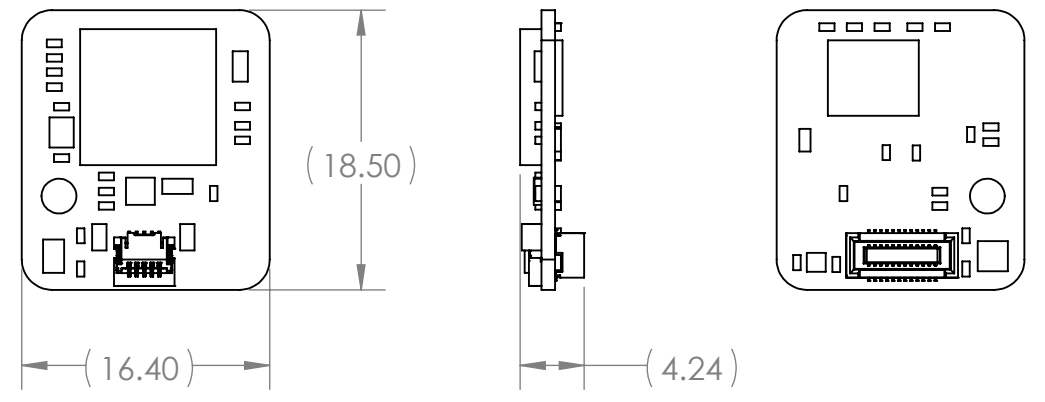
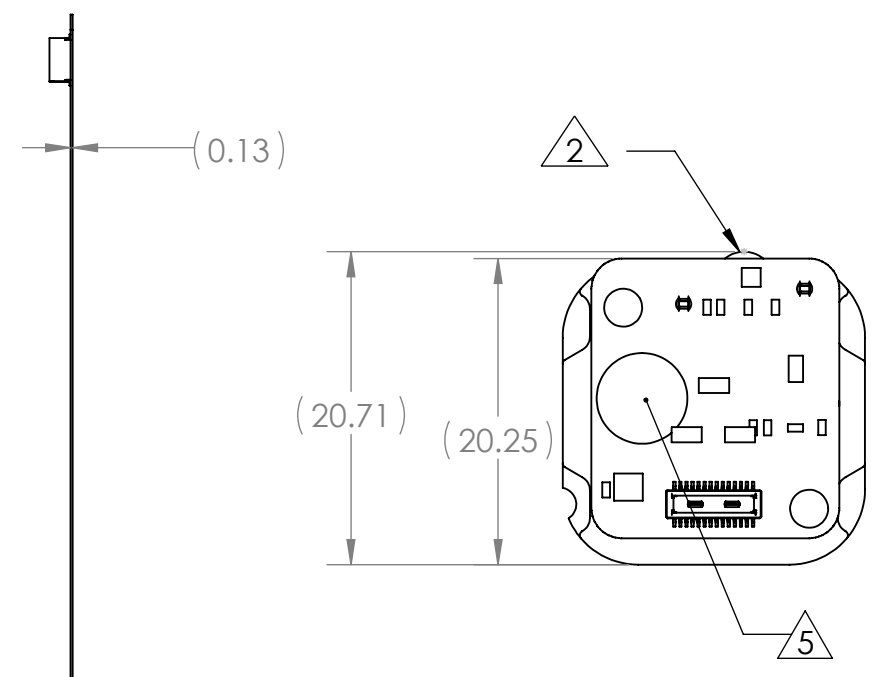
8 7 6 5 4 3 2 1

D
C
B
A

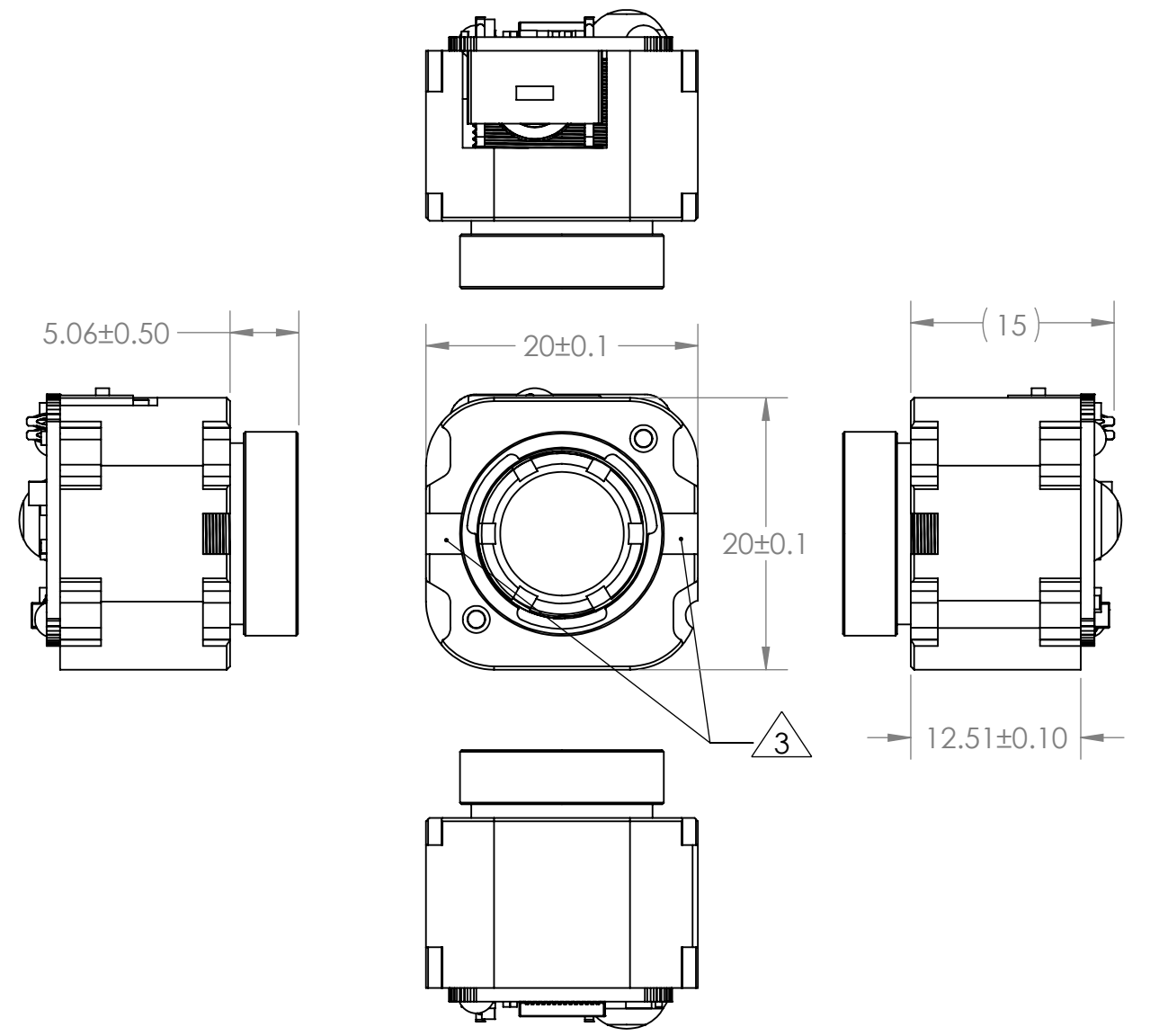
D
C
B
A



FLEX CABLE



INTERFACE BOARD



THERMAL IMAGING CORE

PROPRIETARY AND CONFIDENTIAL
 THE INFORMATION CONTAINED
 IN THIS DRAWING IS THE SOLE
 PROPERTY OF SEEK THERMAL.
 ANY REPRODUCTION IN PART OR
 AS A WHOLE WITHOUT WRITTEN
 PERMISSION IS PROHIBITED.

Seek
thermal

TITLE: DOC, INTERFACE CONTROL
DRAWING, MECH, 9.1MM MOSAIC

SIZE	DWG. NO.	REV
B	DOC_247	4
SCALE: 2:1		SHEET 2 OF 2

8 7 6 5 4 3 2 1