

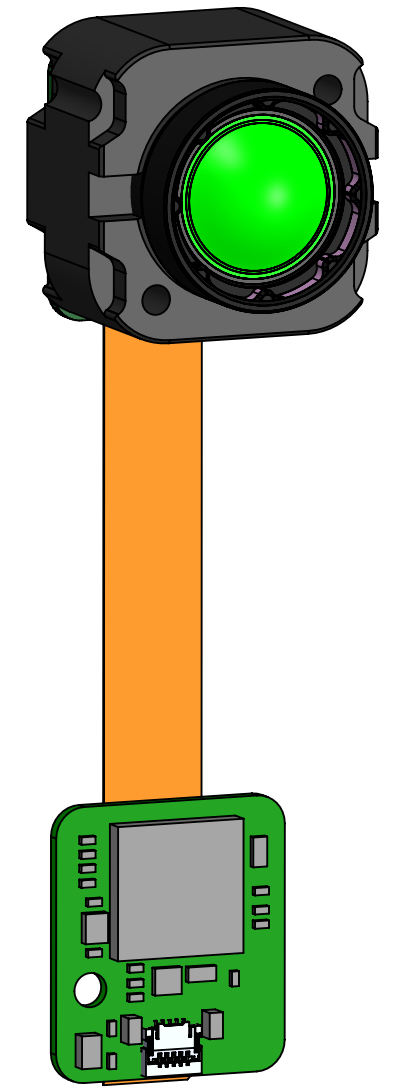
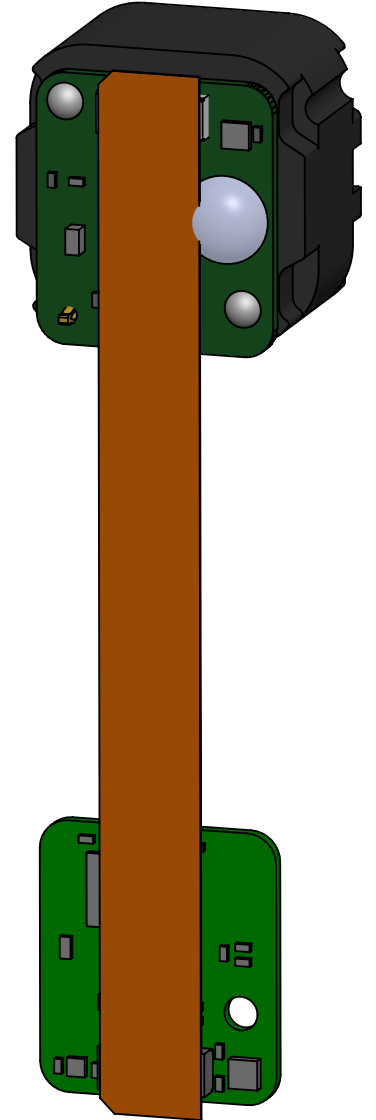
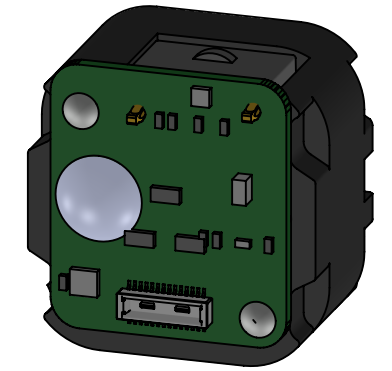
Mosaic Core Specification

Core Number: C319SPX		Starter Kit Number: S319SPX		Rev. 3		11/05/2021	
Product 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				Fast Frame - up to <32Hz			
Non-Uniformity Correction (NUC)				Automatic NUC (with shutter)			
Video Output Interfaces				USB			
Power:							
Power Requirement				3.3-5.0V, <50mW (Core only), 300mW (Core + Coprocessor Board)			
Optical & Mechanical:							
Focal Length				9.1mm EFL			
F-number (Focal Length/aperture)				f/1.00			
Spatial Resolution (IFOV, center)				1.32			
Field of View (FOV)				24° Horizontal x 18° Vertical			
Detection Range				758m (based on Johnson Criteria)			
Recognition Range				190m (based on Johnson Criteria)			
Identification Range				108m (based on Johnson Criteria)			
Distance to Spot Ratio				126:1			
Core Size/ Core Weight				20mm x 20mm x 21mm		Core Weight: 12 g	
Seek Software Development Kit:							
Supported Platforms				USB: Seek Linux, Windows, & Android SDK			
Output Formates (User selectable)		Linux / Windows SDK			Android SDK		
		16-bit filtered pre AGC			16-bit filtered pre AGC		
		32-bit ARGB post colorization.			32-bit ARGB post colorization in the bitmap image.		
		32-bit floating point or 16-bit fixed point			32-bit floating point or 16-bit fixed point thermography		
Imaging Specifications:				Calibrated Output in °C, °F, K			
Imaging Range				-40°C to +330°C at ambient operating temprature			
Thermography Accuracy				Center spot temperature greater of ±5°C or 5% between 5°C to 140°C			
				Center spot temperature greater of ±10°C or 10% (typical) above 140°C			
				All measured at 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.			
Sensor Sensitivity				65 mK (typical), <100 mK (max) @ 25°C			
Emmissivity				Factory default emissivity is set to 0.97. Emissivity is adjustable using the SDK.			
Environmental Conditions:							
Operating Temperature Range				-10°C to +60°C (-14°F to 140°F)			
Storage Temperature Range				-40°C to +80°C (-40°F to 176°F)			
Solar Protection				Yes			
Humidity				10%~95%RH, non-condensing			
Regulatory				ROHS, WEEE, REACH			
Accessories:							
Cushion		Yes		<p style="text-align: center;">THERMAL CORE</p> <p style="text-align: center;">COPROCESSOR BOARD AND INTERFACE KIT Provided by seek or receive design files for integration into other electronics</p>			
Bracket		Yes					
Sensor Flex		Yes					
Coprocessor Board		Yes					
USB Flex		Yes					
Customer Responsibilities:							
IP Rating				IP67			
Shock/Vibe				Customer responsibility with proper integration into final product housing			

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

NO COPROCESSOR BOARD

"P" OPTION WITH COPROCESSOR BOARD



NOTES:

- 1. SEE 3D CAD FILE FOR FULL GEOMETRY.
- 2. THIS DESIGN IS CAPABLE OF BEING IP67 WHEN USED WITH APPROPRIATE SEALING DESIGN. SEE MOSAIC DATASHEET.
- 3. COPROCESSOR BOARD AND FLEX INCLUDED WITH "P" OPTION CORES.

- 2. KEEP-OUT FOR SHUTTER CLEARANCE.
- 3. LENS ADHESIVE DOES NOT EXTEND ABOVE FRONT FACE.
- 5. ADHESIVE BUMP PRESENT ON <9Hz CORES.

MATERIAL	SEE NOTES	DRAWN	DLM	27MAR2019
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°		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	3

SCALE: 2:1 SHEET 1 OF 2

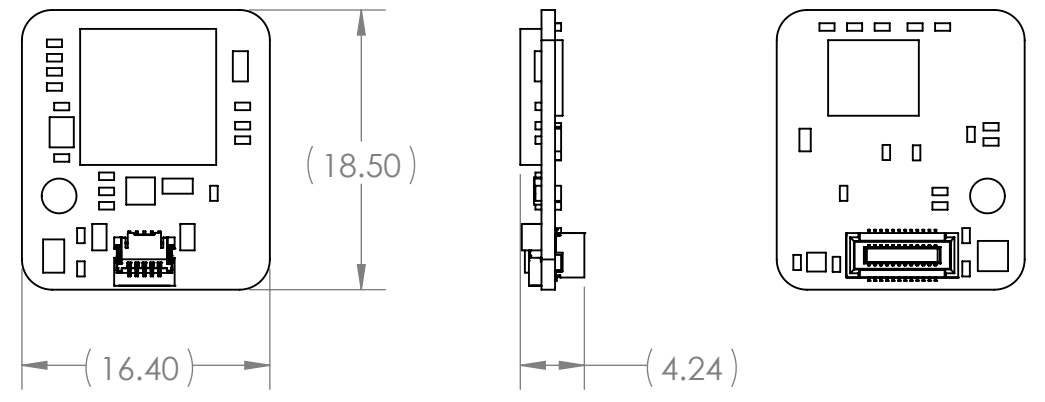
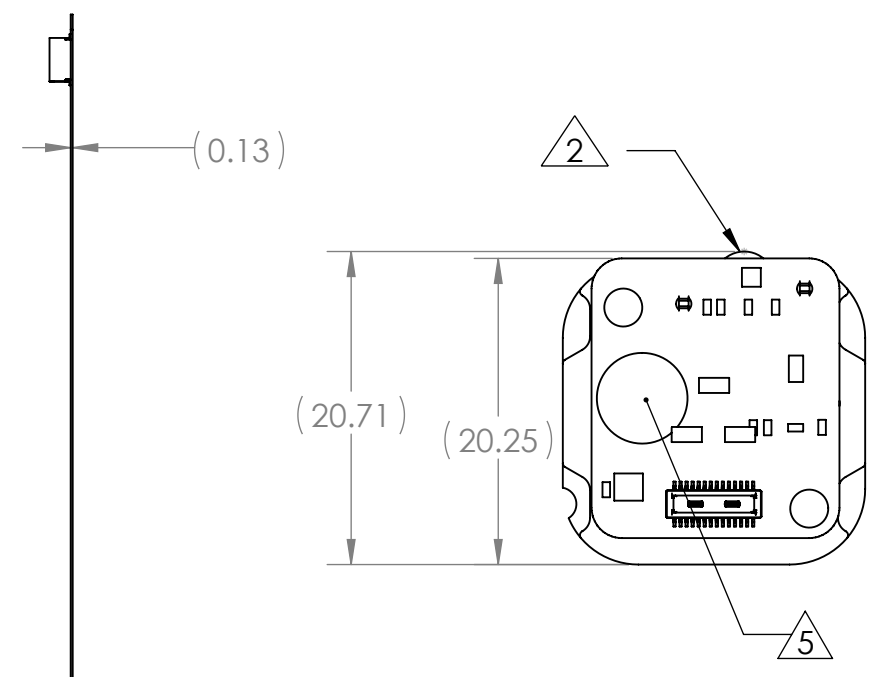
8 7 6 5 4 3 2 1

D
C
B
A

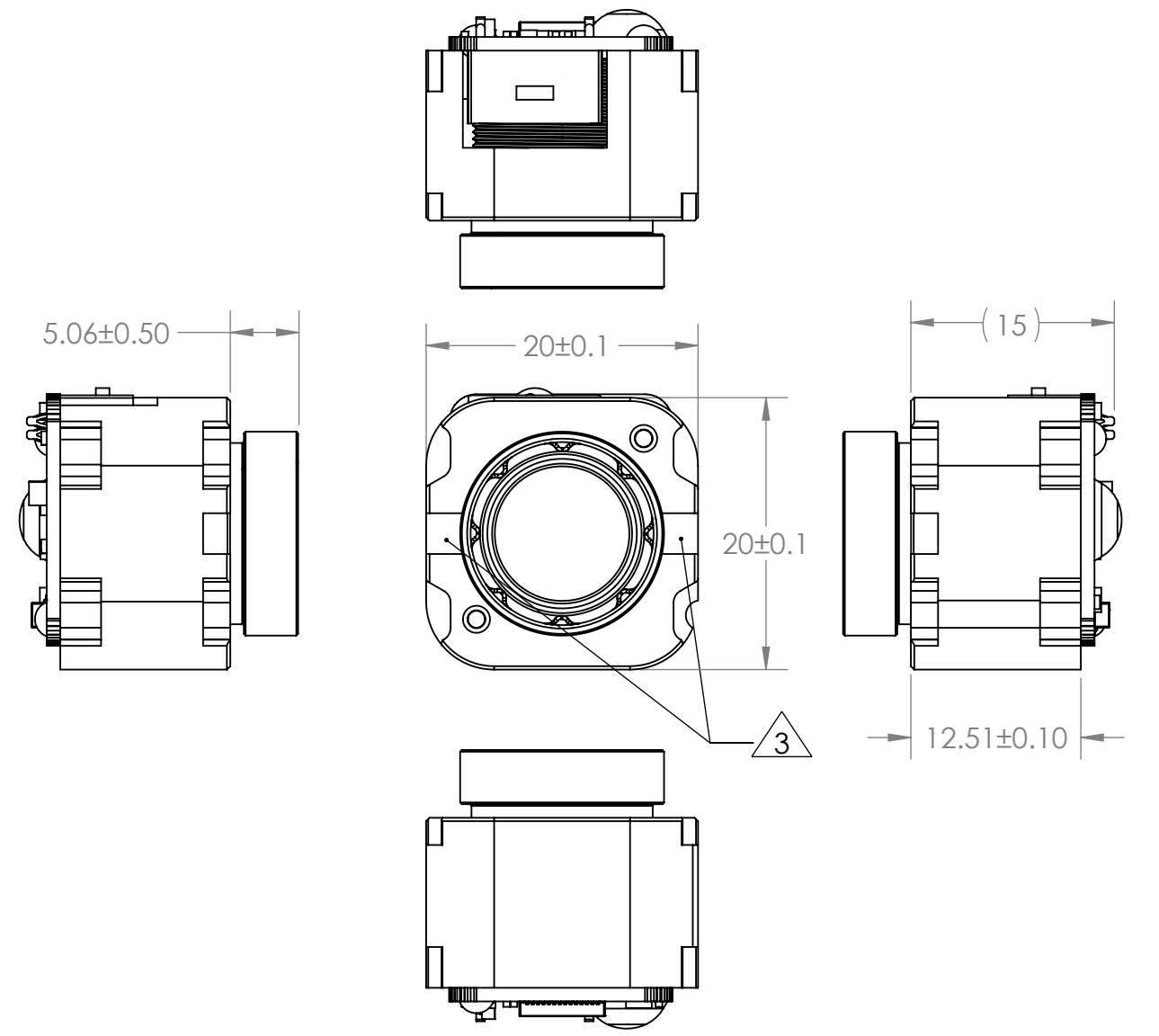
D
C
B
A



FLEX CABLE



COPROCESSOR BOARD



THERMAL IMAGING CORE

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	3
SCALE: 2:1		SHEET 2 OF 2

8 7 6 5 4 3 2 1