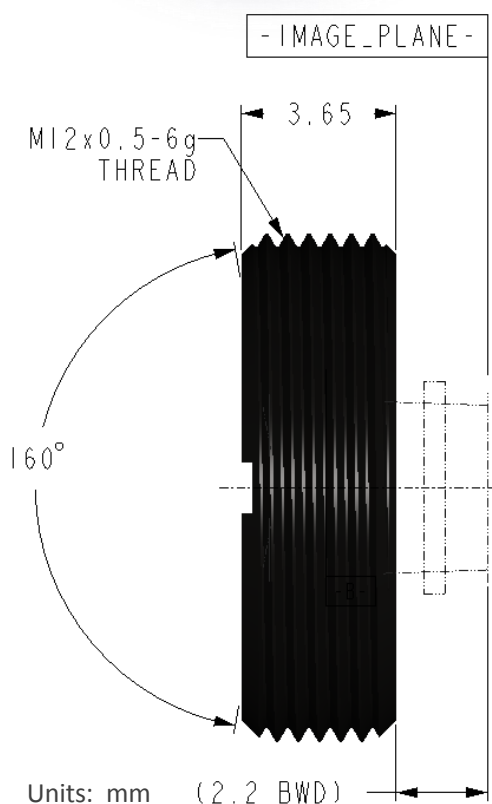


NEW! BD6™ Material Enabling Optical Athermalization²



LightPath®
TECHNOLOGIES

KEY FEATURES

Optical:

- 1.9mm EFL, f/1.3 Lens
- 90deg HFOV on 80x80/34μm detector¹
- Low-cost singlet design
- Utilizes aspheric performance
- High efficiency AR coating for LWIR (8-12μm)
- **Optically Athermalized² using BD6™ material**

Mechanical:

- Small size and weight
- Precision molded chalcogenide lens material
- Black anodized aluminum housing
- Threaded interface for adjustable focus
- Internally sealed to IP67 standard³

Horizontal FOV for Various Detector Sizes

Resolution → Pixel Size ↓	80x80	160x120	320x240	384x288	640x480
34μm	90° <i>Optimal</i> ¹	N/A	N/A	N/A	N/A
25μm	64°	N/A	N/A	N/A	N/A
17μm	43°	90°	N/A	N/A	N/A
12μm	30°	61°	148°	N/A	N/A
10μm	25°	50°	110°	148°	N/A

¹Lens optimized for this format. Data for other formats available upon request.

²See optical performance table on page 2 for athermal temperature range

³Outer threads must also be sealed at installation

Optical Performance for 80x80 / 34μm Detector ¹

Parameter	Notes	Design Value	Unit
MTF – Min Sag/Tan at Nyquist (15cyc/mm)	Diffraction Limited MTF (<i>Ref. Only</i>)	73	%
	On-axis	72	%
	VFOV / HFOV	68	%
	Corner	47	%
EFL	Magnification-based	1.9	mm
F/#	Aperture-based	1.3	
Field of View	Vertical / Horizontal	90	Deg
	Diagonal (corner)	149	Deg
Relative Illumination	At HFOV	94	%
	At Corner Field	92	%
Distortion	At HFOV	-6	%
	At Corner Field	-9	%
Fixed Focus Range <i>(Range if used without manual focus, allowing ~10% MTF drop at Nyquist)</i>	Depth of Field	0.1 – <i>Infinity</i>	m
	Athermal Temperature Range ²	-40 to +85	°C
Operational Waveband	LWIR thermal waveband	8 – 14	μm
Transmission	HEAR coated witness samples (8-12μm)	>95	%

Mechanical Parameters

Parameter	Notes	Design Value	Unit
Height	Front to back of lens assembly	3.65	mm
Thread Interface	Lens assembly outer thread (ASME)	M10/M12 x 0.5-6g	
Working Distance to Image Plane (FPA)	Assumes 0.7mm Si window, nominal focus at infinity	2.2	mm
Max Exposure Temp	Storage / post-processing	140	°C
Internal Seal	Threads must also be sealed at installation	IP67	