

VIS-SWIR zoom – Commercial off the shelf lens

TETRA

Ultra-Compact SWIR-VIS Dual Channel lens

SWIR channel: Dual FOV 400 / 900mm HD Resolution

VISIBLE Channel: Monoscope 800mm Dual 4K Resolution

FEATURES / APPLICATIONS / CAPABILITIES

- HD and 4K resolution optimized for small payloads installation
- A size of a palm with approx. 1.3Kg weight
- Ruggedized for demanding environmental conditions
- Can be offered as: SWIR ONLY, VIS ONLY or VIS-SWIR full configuration.



PARAMETER		VALUE		
Main	Sub	VIS	SWIR SD / HD	
OPTICAL		VIS CHANNEL	w/ SD detector	w/ HD detector
Focal Length / F#		Mono Focal 800mm F/10	Dual FOV 400 F/5 and 900 F/11	
Working spectral band		0.4 – 0.7 μ	0.7 – 1.7 μ m	
Maximum det size supported		Up to 14.2 x 7.6 mm	9.6 x 7.2 mm	12.8 x 7.2 mm
Resolution supported		For pixel size of 3.45 μ m or bigger	640 x 480 x 15 μ pixel	1,280 x 720 x 10 μ pixel
FOV (degrees)		0.95° Hor x 0.54° Ver (when used with detector of 4,096 x 2,180 x 3.45 μ)	Narrow: 0.22°x 0.17° Wide :1.37° x 1.03°	Narrow: 0.29° x 0.17° Wide: 1.83° x 1.03°
Instantaneous FOV		4.31 μ Rad	Narrow: 16.6uRad Wide : 37.5uRad	Narrow: 11.1uRad Wide: 25 uRad
Optical Average transmission		>55%	>50%	
Optical filters		NA	Up to 4: RG 650, RG 850, & 2 Narrow band filter	
MECHANICAL				
Mechanical Back Focal Length		Please refer to MICD		
Focus / Zoom mechanism		Motorized Focus	Motorized Zoom / Focus / Filter wheel	
LOS shift during Zooming		NA	Better than 0.5 milli Rad	
Focus / Zoom pos. indication		Included	Included	
Thru zoom boresight		NA	Better than 0.5 milli Rad	
NFOV boresight retention		NA	Better than 0.05 milli Rad	
Total Lens Weight		1.25Kg (For VIS / SWIR configuration) - Lens only		
Structure		Closed structure, not sealed, Cassegrain		
Ext. Dimensions		180mm Length x 90mm Diameter – Please refer to MICD		
ELECTRICAL				
Power Input		12VDC, 1.0A	12VDC, 1.0A	
Communication Protocol		RS-422/232 Full Duplex Baud rate 19,200, n, 8, 1	RS-422/232 Full Duplex Baud rate 19,200, n, 8, 1	
Number of control busses		2 Separate control busses: 1 for VIS channel and 1 for SWIR channel		
Lens mounting		Via 4 dedicated threads and 2 locating pins – please refer to MICD		
ENVIRONMENTAL				
Operating/ Storage Temperature		-25°C to +60°C / -30°C to +70°C		
Shock and Vibrations		Per applicable standard		