

SWIR continuous zoom – commercial off the shelf lens

LOTUS

SWIR 15 – 300mm Continuous zoom
Lens for 9.6 x 7.68mm detectors



FEATURES / APPLICATIONS / CAPABILITIES

- X20 zoom ratio
- High-performance zoom lens for SWIR detectors

PARAMETER		VALUE	NOTES
Main	Sub		
OPTICAL			
Focal Length / F#		15 – 300 mm F/2.8 – 4.3	Continuous zoom lens, Nominal values
Working spectral band		0.9 – 1.7 μ	
Detector (FPA) type / size		9.6 x 7.68 mm	12 μ , 15 μ or 20 μ pitch
FOV (degrees)		Narrow: 1.9°(H) x 1.5° (V) Wide: 32°(H) x 26° (V)	F/4.3 F/2.8
Optical Average transmission:		> 75%	
Optical Back Focal Length		18 mm	Nominal, to FPA
MECHANICAL			
Mechanical Back Focal Length		13	C-Mount standard
Focus / Zoom mechanism		Motorized	
IRIS		Motorized Iris diaphragm is included	
LOS shift during focusing		0.15 mm on PFA (10 pixels)	Typical value
Focus / Zoom indication position		Included	Through encoder of motor and opto-switch.
Thru zoom boresight		≤ 0.15 mm radius at the focal plane	
NFOV boresight retention		≤ 0.03 mm radius at the focal plane	
Total Weight		2 kg	
Structure		Open frame, Front element sealed to front element flange.	
Ext. Dimensions ϕ x length (mm)		120 x 300	
ELECTRICAL			
Power Input		12VDC, 1.0A	Nominal
Communication Protocol		RS-422/232 Full Duplex	Baud rate 19,200, n, 8, 1
ENVIRONMENTAL			
Operating Temperature		-20°C to +50°C	
Storage Temperature		-30°C to +70°C	
Shock and Vibrations		Per applicable standard	
Front lens sealing		IP66	IP67 By request