

MWIR HD Continuous zoom – commercial off the shelf lens

# GARNET

MWIR HD 25 - 400 mm F/3.0 - 4.0 Continuous zoom  
Lens with DSP controller for HD detectors



## FEATURES / APPLICATIONS / CAPABILITIES

- True high definition resolution
- Highest resolution performance over entire zoom range
- Rugged design to comply with different applications
- Focus is maintained throughout the entire zoom range, with fast zoom and focus response

PARAMETER		VALUE	NOTES
Main	Sub		
<b>OPTICAL</b>			
<b>Focal Length / F#</b>		25-400 mm / F# 3.0 - 4.0	Nominal values. F# 3.0 for up to 300mm and then goes down to 4.0 for zoom range 300 – 400mm monotonically.
<b>Detector (FPA) type / size</b>		Supports HD 1,280 x 1,024 x 15 μm & 1920 x 1536 x 10 μm (19.2 x 15.36 mm)	
<b>Working Spectral Range</b>		3 – 5 μ	
<b>FOV (degrees)</b>		Wide FOV: 42°(H) x 34° (V) Narrow FOV: 2.8 °(H) 2.22° (V)	For detector size of 19.2 x 15.36 mm
<b>Optical Coatings</b>			
	<b>All internal surfaces</b>	High efficiency AR coating	Average transmission: 78%
	<b>Front surface</b>	High durability AR coating	DLC is available upon request
<b>Optical Total lens track</b>		215 mm	From Lens vertex to detector cover glass
<b>Cold Stop distance</b>		28 +/- 1 mm	
<b>Optical Back Focal Length</b>		~ 36 mm	From Last lens to detector FPA
<b>MECHANICAL</b>			
<b>Zoom / Focus mechanism</b>		Motorized	
<b>Focus Range</b>		20m – Infinity/ 50m – Infinity	At WFOV and NFOV respectively
<b>Total Weight</b>		1,250 grams	Preliminary value
<b>External Dimensions</b>		Max Diameter: 120 mm; Length: 227 mm (Please refer to MICD for details)	
<b>ELECTRICAL</b>			
<b>Power Input</b>		12VDC, 1.0 A	Nominal
<b>Communication Protocol</b>		RS-422/232 Full Duplex	Baud rate 19,200, n, 8, 1
<b>ENVIRONMENTAL</b>			
<b>Operating/Storage Temperature</b>		-20°C to +55°C / -40°C to +70°C	
<b>Shock and Vibrations</b>		Per applicable standard	
<b>Front lens sealing</b>		IP67	By request