


MWIR Continuous zoom – commercial off the shelf lens

DIAMOND+ Beam Expander

 + Beam Expander*

MWIR 36 - 860mm, 45 – 1075mm, 60 - 1415mm
F/5.5 Continuous zoom Lens with DSP controller



FEATURES / APPLICATIONS / CAPABILITIES

- Ultra long focal length zoom lens with highest zoom ratio
- Outstanding performance over entire zoom range
- Rugged design to comply with various applications
- Focus is maintained through the entire zoom range providing Fast zoom and focus response

PARAMETER		VALUE	NOTES
Main	Sub		

OPTICAL			
Focal Length / F#	36-860, 45-1075, 60-1415 mm		Nominal. F/5.5 const. over zoom range
Detector (FPA) type / size	For 9.6 mm x 7.68 mm F/5.5 Cooled detectors with 19 - 22 mm cold shield		
Working Spectral Range	3 – 5 μ		
FOV (degrees) of the DIAM860 (DIAMOND + X2 BE)	Wide FOV: 15.2° (H) x 12.2° (V) Narrow FOV: 0.64° (H) x 0.5° (V)	For detector size of 9.6 x 7.68 mm All values are nominal: to within +/- 5%	
FOV (degrees) of the DIAM1075 (DIAMOND + X2.5 BE)	Wide FOV: 12.2° (H) x 9.75° (V) Narrow FOV: 0.5° (H) x 0.4° (V)		
FOV (degrees) of the DIAM1415 (DIAMOND + X3.3 BE)	Wide FOV: 9.15° (H) x 7.32° (V) Narrow FOV: 0.4° (H) x 0.31° (V)		
Optical Coatings			
	All internal surfaces	High efficiency AR coating	Average transmission: 88% for base lens
	Front surface	High durability AR coating	DLC is available upon request
LENS	DIAM860	DIAM1075	DIAM1415
Transmission with HDAR/ DLC	82% / 77%	82% / 77%	80% / 75%
Optical Total lens track	~260mm	~305mm	~365mm
Optical Back Focal Length	24.7 mm Nominal		
MECHANICAL			
Mechanical Back Focal Length	~ 15mm Nominal for standard MICD. (Customized lengths are available)		
Zoom mechanism	Motorized		
Focus Range	60m – Infinity	100m - Infinity	100m – Infinity
Total Weight (Nominal)	~3,000 gr.	~3,600 gr.	~4,200 gr.
Ext. Dimensions (DiamxLength)	206mm X 250mm	230mm X 260mm	320mm X 337mm
ELECTRICAL			
Power Input	12VDC, 1.0 A	Nominal	
Communication Protocol	RS-422/232 Full Duplex	Baud rate 19,200, n, 8, 1	
ENVIRONMENTAL			
Operating/Storage Temperature	-30°C to +50°C / -40°C to +70°C		
Shock and Vibrations	Per applicable standard		
Front lens sealing	IP67		

