

MWIR Continuous zoom – commercial off the shelf lens

MIRACLE

MWIR 15 - 300mm 30 - 600mm F/4 Continuous zoom Folded Lenses



FEATURES / APPLICATIONS / CAPABILITIES

- The ultimate solution for various applications such as stabilized small payloads
- Focus is maintained through the entire zoom range providing extremely fast zoom and focus response
- Low boresight error

PARAMETER		MIRACLE300	MIRACLE600
Main	Sub		
OPTICAL			
Focal Length / F#		15 - 300 mm F/4 (to within $\pm 5\%$)	30 - 600 mm F/4 (to within $\pm 5\%$)
Detector (FPA) type / size		For 9.6 mm x 7.68 mm F/4 cooled detectors with 19 - 22 mm cold shield	
Working Spectral Range		3 - 5 μ	
FOV (degrees)		Wide FOV: 35.5°(H) x 28.7° (V) Narrow FOV: 1.8°(H) x 1.5°(V)	Wide FOV: 18°(H) x 14.5° (V) Narrow FOV: 0.92°(H) x 0.73°(V)
Optical Coatings			
	All internal surfaces	High efficiency AR coating Average transmission: 90%	
	Front surface	High durability AR coating DLC is available upon request	
Optical Back Focal Length		34 mm	
MECHANICAL			
Mechanical Back Focal Length		24.7 mm Nominal	
Zoom mechanism		Motorized with 2 motors	
Thru zoom boresight		$\leq 0.03\text{mm}$ radius at the focal plane	
NFOV boresight retention		$\leq 0.015\text{mm}$ radius at the focal plane	
Focus Range		10m - Infinity (wide)	30m - Infinity (Narrow)
Total Weight		1.05 kg	2.27 kg
External Dimensions (LxWxH)		144x99x135 (Please refer to MICD)	219x165x169 (Please refer to MICD)
ELECTRICAL			
Power Input		12VDC, 1.0A Nominal	
Communication Protocol		RS-422/232 Full Duplex Baud rate 19,200, n, 8, 1	
ENVIRONMENTAL			
Operating/Storage Temperature		-25°C to +55°C / -40°C to +70°C	
Shock and Vibrations		Per applicable standard	
Front lens sealing		IP67 By request	