

--- MWIR Continuous zoom – commercial off the shelf lens

## IR-FLY Series

MWIR 15 - 250 mm F/4.0 Continuous zoom  
Ultra Compact Lens for cold shield detectors



### FEATURES / APPLICATIONS / CAPABILITIES

- Ultra Compact and low weight lens
- The ultimate solution for small volume applications including small gimbal payloads
- Available in several versions to support multiple applications

PARAMETER	IR-FLY	IR-FLYs	NOTES
<b>OPTICAL</b>			
<b>Focal Length</b>	20-250 mm	20-250 mm	Nominal values.
<b>F#</b>	4.0		F# constant over zoom range
<b>Cooled Detector - Size / Cold Shield Height (CSH)</b>	<b>640 x 512 x 12μ/15μ 13.5-14.5mm CSH</b>	<b>640 x 512 x 15 μ/16μ 19-21mm CSH</b>	
<b>Spectral Range</b>	3 – 5 μ		
<b>FOV (degrees)</b> Wide/ Narrow FOV: H x V	27°x21.7° 2.2°x1.75° For 640 x 512 x 15μ	27°x21.7° 2.2°x1.7° For 640 x 512 x 15μ	
	21.7°x17.4° 1.78°x1.40° For 640 x 512 x 12μ	31.7°x25.6° 2.35°x1.9° For 640 x 512 x 16μ	
<b>Optical Coatings</b>			
<b>All internal surfaces</b>	High efficiency AR coating		Average transmission: 90%
<b>Front surface</b>	High durability AR coating		DLC is available upon request.
<b>Optical Total lens track</b>	111 mm		Nominal
<b>Optical Back Focal Length</b>	18 mm		Nominal
<b>MECHANICAL</b>			
<b>Mechanical BFL</b>	6-7 mm	7 mm	Air gap between rear flange & detector
<b>Zoom mechanism</b>	Motorized		
<b>Focus Range</b>	20m / 200m – Infinity		For WOFV / NFOV accordingly
<b>Thru zoom boresight</b>	Better than 0.06 mm		4 pixels radius
<b>NFOV boresight retention</b>	Better than 0.03 mm		2 pixels radius
<b>Total Weight</b>	<b>265 grams</b>		Nominal
<b>External Dimensions</b>	Max Diameter: 78.4 mm; Length: 91.5 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</b>	-32°C to +71°C / -40°C to +85°C		
<b>Shock and Vibrations</b>	Per applicable standard		
<b>Front lens sealing</b>	IP67		

