

MWIR Continuous zoom – commercial off the shelf lens

# DIAMOND

MWIR 18 - 430 mm F/5.5 Continuous zoom  
Lens with DSP controller



## FEATURES / APPLICATIONS / CAPABILITIES

- The Highest zoom ratio available!
- The ultimate solution for various applications such as stabilized small payloads
- Front focal length extenders are available, to achieve more than 1400 mm FL
- Focus is maintained through the entire zoom range providing extremely fast zoom and focus response

PARAMETER		VALUE	NOTES
Main	Sub		
<b>OPTICAL</b>			
<b>Focal Length / F#</b>		18 - 430 mm / F 5.5	Nominal values. F# constant over zoom range
<b>Detector (FPA) type / size</b>		For 9.6 mm x 7.68 mm F/5.5 cooled detectors with 19 – 22 mm cold shield	
<b>Working Spectral Range</b>		3 – 5 $\mu$	
<b>FOV (degrees)</b>		Wide FOV: 29.8°(H) x 24.1° (V) Narrow FOV: 1.28°(H) x 1.02°(V)	For detector size of 7.68 x 9.6 mm All values to within $\pm 5\%$
<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>		130 mm	Nominal
<b>Optical Back Focal Length</b>		24.7 mm	Nominal
<b>MECHANICAL</b>			
<b>Mechanical Back Focal Length</b>		22 mm	Nominal
<b>Zoom mechanism</b>		Motorized	With 2 motors
<b>Focus Range</b>		5m – Infinity	
<b>Total Weight</b>		930 grams	Nominal
<b>External Dimensions</b>		Max Diameter: 96 mm; Length: 125.05 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>		-30°C to +50°C / -40°C to +70°C	
<b>Shock and Vibrations</b>		Per applicable standard	
<b>Front lens sealing</b>		IP67	By request

