

SirZ

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## SirZ 153 SWIR 150-500mm Continuous Zoom Lens

SirZ Series, Suitable for 0.9 – 1.7 $\mu$ m Detectors (SWIR)



### Key Features:

- Extended range SWIR band allows for imagery in degraded visual environments
- 500 mm Telephoto narrow FOV for more pixels on target
- Motorized Continuous Zoom allows you to zoom while keeping the imagery sharp
- The lens controller auto compensates thermal deviations and keeps the imagery crisp within a wide temperature range
- Athena™ programmable DSP controller gives you the freedom to set targets and to calibrate the lens for different field conditions
- Operate and calibrate the lens with our simple and friendly GUI, or through common communication protocols

## SirZ 150-500 Specifications:

Optical Specifications (nominal values)	WFOV	NFOV
<b>Focal Length</b>	150mm	500mm
<b>F/#</b>	f/3.0	f/5.0
<b>Spectral Range</b>	0.83 – 1.7 $\mu$ m	
<b>Image Format</b>	640 x 512 pixels, 25 micron pixel size	
<b>Image Diagonal</b>	20.5mm	
<b>Back Focal Length</b>	15.8mm	25.2mm
<b>Cold Stop to FPA Distance</b>	N/A	
<b>Average Transmission (All elements AR coated)</b>	$\geq 3\%$	
<b>Horizontal FOV</b>	6°	1.8°
<b>Distortion</b>	< 0.75%	< 0.45%
<b>On-Axis MTF</b>	$\geq 42\%$ at 20 lp/mm theo. $\geq 68\%$ at 20 lp/mm theo.	
<b>MOD</b>	75 meters	500 meters
Mechanical Specifications		
<b>Max Dimensions</b>	Length = 440mm, Front OD = 150mm	
<b>Focus/Zoom Mechanisms</b>	Continuous - Motorized & Synchronized	
<b>Zoom Time (WFOV to NFOV)</b>	< 5 sec. @ 25°C	
<b>Through-Zoom Boresight</b>	$\leq 10$ pixel deviation	
<b>Weight</b>	20 lbs.	
<b>Mount</b>	Customized to Specification	
<b>Operating Temperature</b>	- 30°C to + 65°C	
<b>Storage Temperature</b>	- 40°C to + 80°C	
Electronic and Communications		
<b>Lens Control</b>	Athena™ Programmable DSP Controller	
<b>Drive Voltage &amp; Current Consumption</b>	12VDC, 1.5A Peak / 0.3A Average / 0.1A Idle	
<b>Communication Interface</b>	RS422/232	
<b>Communication Protocol</b>	Athena™ GUI & Protocol	

## SirZ 150-500 Field Of View Data:

WFOV (150mm)				NFOV (500mm)			
HFOV	320x240	480x384	640x512	HFOV	320x240	480x384	640x512
<b>30 microns</b>	3.66			<b>30 microns</b>	1.1		
<b>25 microns</b>	3.05	4.57	6.09	<b>25 microns</b>	0.92	1.37	1.83
<b>15 microns</b>	1.88	2.75	3.66	<b>15 microns</b>	0.55	0.82	1.1