

NightCrawlIR™ HD MWIR

F/4 - CZ - 16.4 mm HD Format

PRODUCT DATASHEET

The StingRay NightCrawlIR™ series represents a revolution in cost and performance in the HD MWIR lens market.

Building on decades of heritage in the midwave infrared market, G&H Keene presents a no-compromise approach to conquering today's demanding thermal imaging requirements.

Purpose-built from the ground up for the demands of high resolution applications, our NightCrawlIR™ series utilizes unique aperture-specific foreoptics and a modular base to maximize performance without breaking the budget.

Each lens in the series is ruggedized for tactical application with a sealed front lens flange interface and additional features for convenient payload, enclosure, and dewar installation.

All lenses ship standard with our StingWare™ Controller featuring:

- metric zoom and focus mechanisms offering
 - positioning precision and repeatability
 - temperature adjusted focal length and object distance queries
- active athermalization functionalities

The controller leverages integrated hardware on the lens cells to minimize system hysteresis to accurately and repeatedly report back exact focal length and object distances. This means never losing steps, no drift over temperature. Absolute position - always.



Key Features

- Aperture specific configurations - no extenders
- Ruggedized for tactical application
 - IP67 at front lens
 - Optional DLC coating
- 19-22 mm cold shield heights supported
- Supports up to 16.4 mm HD image formats

Key Benefits

- StingWare™ Controller included on all lenses
 - Metric zoom and focus mechanisms
 - Athermal compensation
- Fully configurable controller interface
 - Multiple communication protocols
 - Adaptable for power supplies from 12-24 V

Applications

- Border surveillance and security
 - Pan/tilt zoom payloads
 - Mast-mounted installations
- Land vehicles
 - Fire control systems
 - Missile and munitions trackers
 - Trailer mounted installations
- Fixed wing/rotary aircraft
 - Loiter/track systems
 - Fire control
 - Large class gimbal payloads

StingRay NightCrawlIR™ HD MWIR CZ

NightCrawlIR HD MWIR Zoom Series

Part number	SR3823-A01	SR3822-A01	SR3821-A01	SR3820-A01
Focal length	42-850 mm	33-660 mm	21-420 mm	16.5-330 mm
OPTICAL SPECIFICATION				
F#	4.0			
Waveband	3.4-5.0 μm			
Image format	Up to 16.4 mm diagonal			
Cold stop height	Suitable for 19-22 mm CSH			
NFOV (horizontal)	0.86° (1280, 10 μm pixel) 0.65° (640, 15 μm pixel)	1.11° (1280, 10 μm pixel) 0.83° (640, 15 μm pixel)	1.75° (1280, 10 μm pixel) 1.31° (640, 15 μm pixel)	2.22° (1280, 10 μm pixel) 1.67° (640, 15 μm pixel)
WFOV (horizontal)	17.3° (1280, 10 μm pixel) 13.0° (640, 15 μm pixel)	22.0° (1280, 10 μm pixel) 16.6° (640, 15 μm pixel)	33.9° (1280, 10 μm pixel) 25.8° (640, 15 μm pixel)	42.4° (1280, 10 μm pixel) 32.4° (640, 15 μm pixel)
Average transmission %	82%			
BWD (in air)	27.12 mm			
MECHANICAL SPECIFICATION				
Interface	Sealed to front flange interface, bolt circle at rear flange			
Mass	< 8900 grams	< 4600 grams	< 1560 grams	< 1170 grams
Volume	265 mm x 279 mm	204 mm x 232 mm	132 mm x 175 mm	100 mm x 159 mm
ELECTRICAL SPECIFICATION				
Power supply	Configurable to 12-24 V			
Communication	Configurable to RS232 or RS422			
ENVIRONMENTAL SPECIFICATION				
Operating	-25°C to + 80 °C			
Storage	-54°C to + 85°C			
Shock/vibration	Per applicable spec			
AR coatings	High-durability per MIL-PRF-13830			
Sealing	Front lens - IP67			
FEATURES				
Metric zoom and focus	Via precision linear encoders on both stages			
Active athermal	Compensation via Stingware™ Controller			
Parfocality	Through zoom for objects at infinity			
DLC coating	Per request (lower T5)			

For further information

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