

### Introduction

Beck Optronics Solutions offers a range of high-performance ruggedised zoom lenses based on a common chassis and sharing the same control electronics. Applications include, but are not limited to, long range surveillance, border security and remote weapon stations.

These lenses are designed to operate over the 700-1700 nm SWIR waveband of the latest InGaAs detectors, using aspheric lens design and special materials optimised for this spectrum. The systems are fully automated for remote control, are built to full Mil-SPEC and can be customised to meet specific requirements.



### Specifications

Focal Length	20 mm to 200 mm	26.5 mm to 265 mm	33 mm to 330 mm	53 mm to 530 mm
F/#	F/4 to F/30	F/5.3to F40	F/6.6 to F50	F10.6 to F/80
Image size	12.4 mm diagonal	16.4 mm diagonal	20.5 mm diagonal	33 mm diagonal
Spectral correction	700 nm to 1700 nm			
Field of view (horizontal)				
320 x 256 x 30µm detector	27.0° to 2.8°	20.5° to 2.1°	16.6° to 1.7°	10.3° to 1.0°
640 x 512 x 15µm detector	27.0° to 2.8°	20.5° to 2.1°	16.6° to 1.7°	10.3° to 1.0°
640 x 512 x 25µm detector	Not applicable	Not applicable	27.0° to 2.8°	16.8° to 1.7°
1280 x 1024 x 10µm detector	Not applicable	27.0° to 2.8°	22.0° to 2.2°	13.5° to 1.4°
1280 x 1024 x 12.5µm detector	Not applicable	Not applicable	27.0° to 2.8°	16.8° to 1.7°
Focus range	10 m to infinity			
Zoom speed	≤5s 20 to 200 mm Increased at -15°C	≤5 s 26.5 to 265 mm Increased at -15°C	≤5 s 33 to 330 mm Increased at -15°C	≤5 s 53 to 530 mm Increased at -15°C
Boresight retention	≤+/-0.1 mrad			
Operating temperature range	-15°C to +70°C			
Mass	1.9 kg			
Working voltage	12 V DC nominal (7 V to 15 V)			
Power requirements	0.5 A maximum			
Vibration	Tracked vehicle, MIL-STD-810G, method 514.6			
Shock	Transportation: 3 shocks in each direction, 25 g@6 ms			
Dimensions	213 x 98.5 x 85 mm	245 x 98.5 x 85 mm	263 x 98.5 x 85 mm	285 x 98.5 x 85 mm
Lens mount	C mount with adjustment to centre sensor			
Control interface	RS-422/USB or UART TTL (customer to specify)			

### About Beck Optronics Solutions

Beck has a reputation for excellence in design and manufacture of precision optics that can be traced back over 175 years. Based near London, UK, Beck delivers complex, integrated electro-optic systems for defence and commercial use across the electromagnetic spectrum from UV to LWIR. **For pricing or further information please contact us at:**

**t:** +44 (0) 1442 255755 | **e:** [info@beckoptronic.com](mailto:info@beckoptronic.com) | **w:** [beckoptronic.com](http://beckoptronic.com)

Beck Optronics Solutions Limited | Registered in England No 09072729 | VAT No GB 196 4396 58  
 Registered office: Focus 31 – West Wing, Mark Road, Hemel Hempstead, Hertfordshire HP2 7BW United Kingdom

