

TECHSPEC[®] f/2.0, Visible, 2.2mm HEO Series M12 Lens



Stock **#58-840** 20+ In Stock

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+

S\$209^{.00}

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Volume Pricing	
Qty 1-49	S\$209.00 each
Qty 50+	S\$164.00 each
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General

HEO Series	Series:
M12 Imaging Lens	Type:
No	IR Cut Filter:
Meets IEC IPX7 and IPX9K	Imaging Lens Type:

Physical & Mechanical Properties

Fixed	Iris Option:
16.40	Length (mm):
21	Maximum Diameter (mm):
21	Outer Diameter (mm):
4	Weight (g):

Optical Properties	
Horizontal Field of View @ Max Sensor Format: 1685.1mm - 128.9°	
Field of View at Max Sensor Format: Horizontal: 1683.4mm - 128.8° Vertical: 905.7mm - 96.5° Diagonal: 5360.6mm - 162.9°	
Horizontal Field of View, 1/3" Sensor: 1,685.1mm - 128.9°	
Horizontal Field of View, 1/4" Sensor: 905.3mm - 96.6°	
Maximum Image Circle (mm): 6.00	
Numerical Aperture NA, Object Side: 0.0013	
Resolution, On-Axis: 100 lp/mm @ 20% Contrast	
Number of Elements (Groups): 7(6)	
Wavelength Range (nm): 425 - 675	
Focal Length FL (mm): 2.20	
Working Distance (mm): 400 - ∞	
Aperture (f/#): f/2	
Distortion (%): -79.53 @ Full Field	
Back Focal Length BFL (mm): 2.23 - 2.22	
Coating Specification: 425 - 625nm BBAR	
Entrance Pupil Position (mm): 4.56	
Object Space Principal Plane (mm): 6.28	
Image Space Principal Plane (mm): 1.15	
Maximum Distortion (%): -79.53	
Exit Pupil Position (mm): -7.52	
Lens Wavelength Range: VIS	

Sensor	
Maximum Sensor Format: 1/3"	
Pixel Size (µm): 5.00	

Threading & Mounting	
Filter Thread: N/A	
Mount: S-Mbunt (M12 x 0.5)	

Environmental & Durability Factors	
Environmental Rating: IPX7 and IPX9K	
Type of Ruggedization: Waterproof (IPX7 and IPX9K)	

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Product Details

- Up to ½", S-Mount Lens
- Up to 1.2 MegaPixels, 5µm Pixel Size Sensors
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- 2.2mm to 8mm Focal Length

TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water spray downs. Threaded for M12 x0.5, these lenses are optimized for 1/3" and ½" sensor formats. Each HEO Series Lens is waterproof, dustproof, and fog proof with the ability to be hermetically sealed to a camera. TECHSPEC® HEO Series M12 Lenses are ideal for harsh environment applications, such as automotive. Prescription data is available by submitting a [Request for Prescription Form](#)

Note: Compatible [TECHSPEC® M12 Imaging Lens Accessories](#) available.

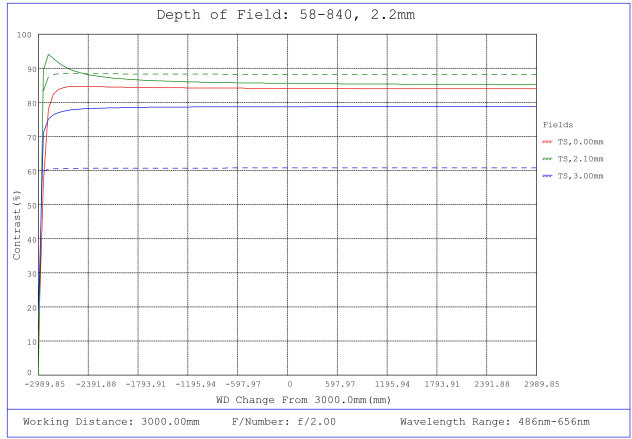
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application needs.

- **Blue Series M12 Lenses:** High resolution finite conjugate designs optimized for machine vision working distances.
- **Rugged Blue Series M12 Lenses:** **Stabilized ruggedization** versions of our Blue Series M12 Lenses, utilizing the same optics.
- **Green Series M12 Lenses:** Finite conjugate designs optimized for machine vision working distances.
- **Red Series M12 Lenses:** Infinite conjugate designs optimized for high resolution performance out to infinity.
- HEO Series M12 Lenses: Harsh Environment Optics (HEO) sealed versions of our Red Series M12 Lenses.
- **Liquid Lens M12 Lenses:** Integrated liquid lens for fast electronic focus.

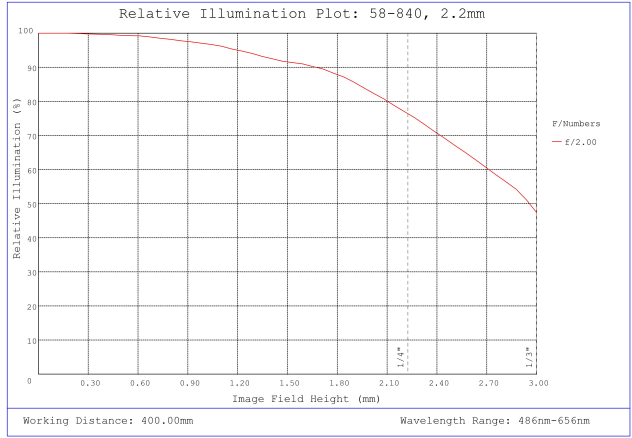
Technical Information



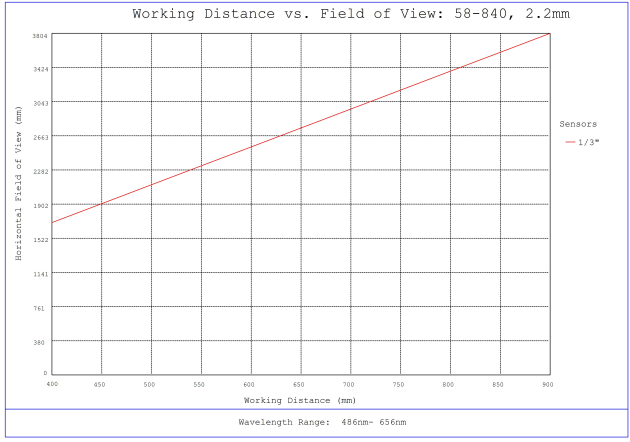
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Distortion Plot



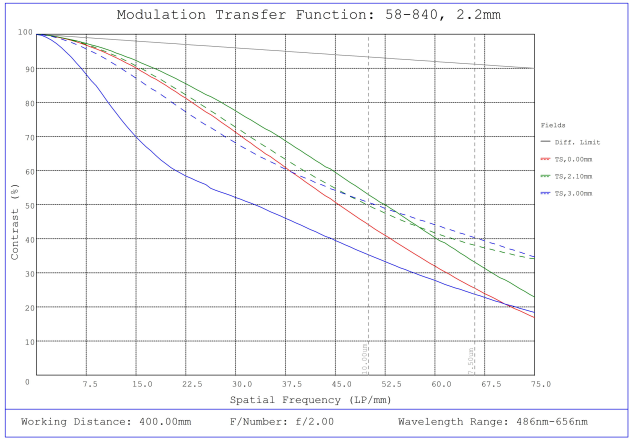
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Depth of Field Plot, 3000mm Working Distance, f2



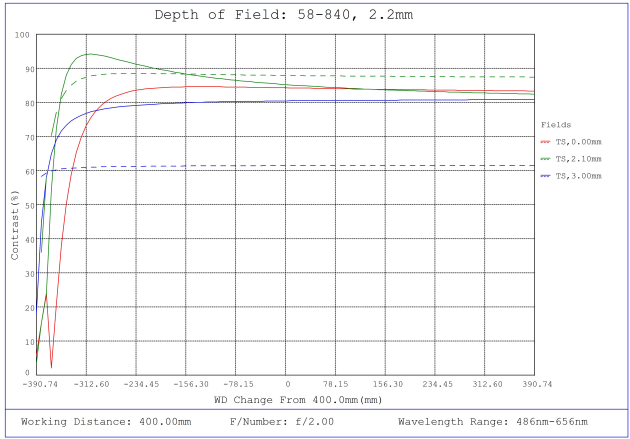
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Relative Illumination Plot



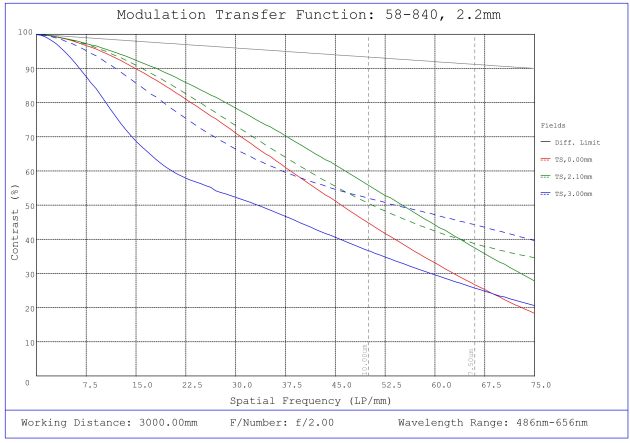
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Working Distance versus Field of View Plot



#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2



#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Depth of Field Plot, 400mm Working Distance, f2



#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 3000mm Working Distance, f2

Focal Length	A	B	C	D
2.2mm	21.0mm	16.4mm	2.2mm	5.4mm
3.6mm	14.0mm	14.1mm	4.5mm	4.5mm
8.0mm	14.0mm	15.0mm	8.7mm	4.0mm

M12 x 0.5 Mounting Thread

A

B

C

D

Image Plane

