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



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

⊖ 1 ⊕ **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 **Product Family:**

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

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

Sensor

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

Threading & Mounting

N/A	Filter Thread:
S-Mount (M12 x 0.5)	Mount:

Environmental & Durability Factors

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

Product Details

- Up to 1/2", 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

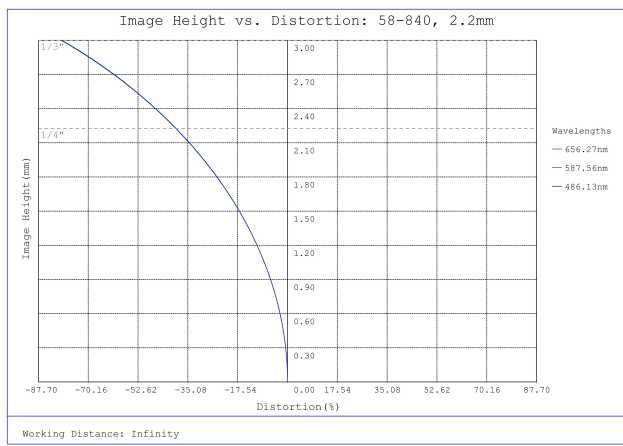
TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water spray downs. Threaded for M12 x0.5, these lenses are optimized for 1/3" and 1/2" 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.

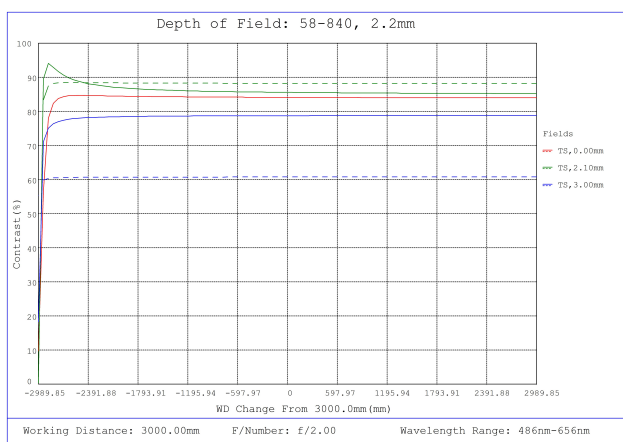
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

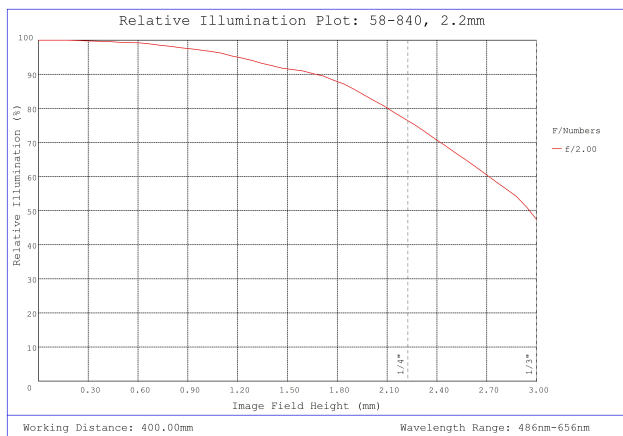
Technical Information



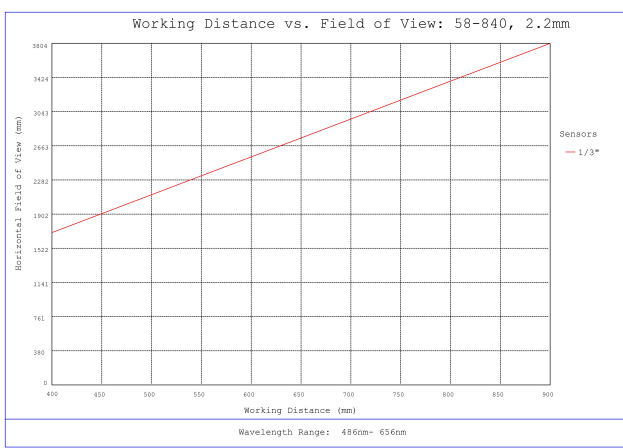
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Distortion Plot



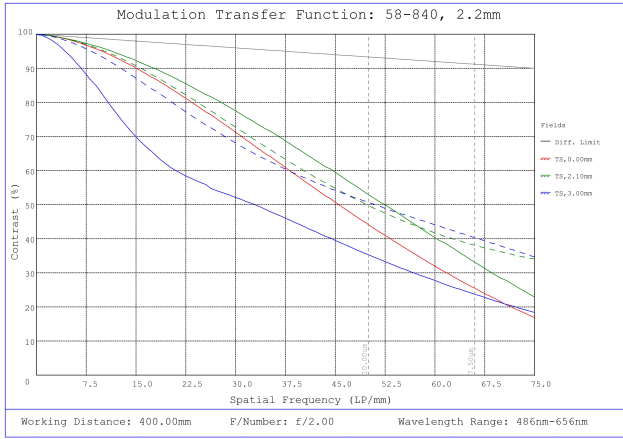
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Depth of Field Plot, 3000mm Working Distance, f2



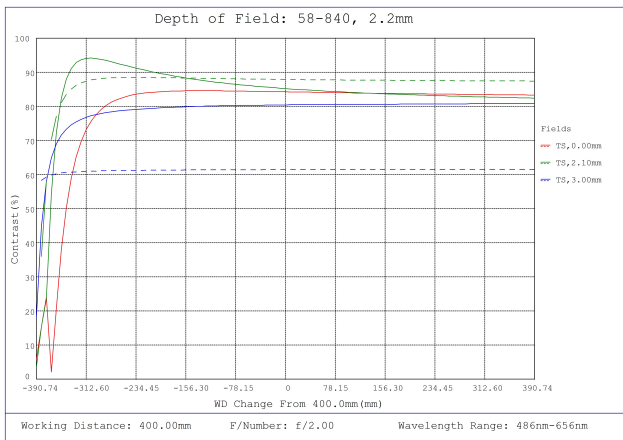
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Relative Illumination Plot



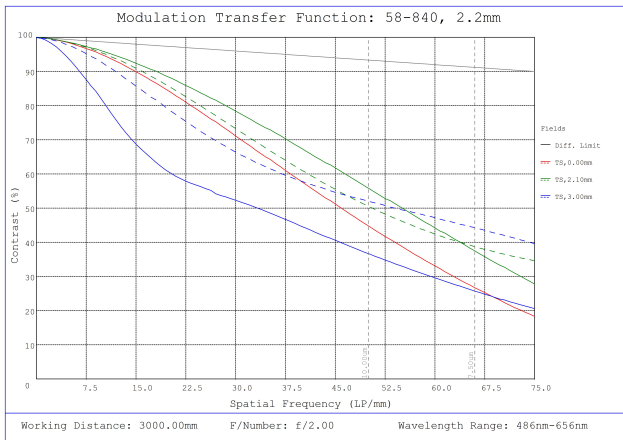
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Working Distance versus Field of View Plot



#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

