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



Stock #58-844 [CONTACT US](#)

⊖ 1 ⊕ **S\$209<sup>00</sup>**

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Volume Pricing	
Qty 1-49	<b>S\$209.00</b> each
Qty 50+	<b>S\$164.00</b> 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	<b>Iris Option:</b>
16.40	<b>Length (mm):</b>
21	<b>Maximum Diameter (mm):</b>
21	<b>Outer Diameter (mm):</b>
4	<b>Weight (g):</b>

## Optical Properties

1685.1mm - 128.9°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 1660.9mm - 128.3° Vertical: 989.2mm - 98.1° Diagonal: 5138.4mm - 162.3°	<b>Field of View at Max Sensor Format:</b>
1,685.1mm - 128.9°	<b>Horizontal Field of View, 1/3" Sensor:</b>
905.3mm - 96.6°	<b>Horizontal Field of View, 1/4" Sensor:</b>
6.00	<b>Maximum Image Circle (mm):</b>
0.0013	<b>Numerical Aperture NA, Object Side:</b>
100 lp/mm @ 20% Contrast	<b>Resolution, On-Axis:</b>
7(6)	<b>Number of Elements (Groups):</b>
600 - 1050	<b>Wavelength Range (nm):</b>
2.20	<b>Focal Length FL (mm):</b>
400 - ∞	<b>Working Distance (mm):</b>
f/2	<b>Aperture (f/#):</b>
-78.87 @ Full Field	<b>Distortion (%):</b>
2.24 - 2.23	<b>Back Focal Length BFL (mm):</b>
600 - 1050nm BBAR	<b>Coating Specification:</b>
4.59	<b>Entrance Pupil Position (mm):</b>
6.32	<b>Object Space Principal Plane (mm):</b>
1.16	<b>Image Space Principal Plane (mm):</b>
-78.87	<b>Maximum Distortion (%):</b>
-7.61	<b>Exit Pupil Position (mm):</b>
NIR	<b>Lens Wavelength Range:</b>

## Sensor

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

## Threading & Mounting

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

## Environmental & Durability Factors

IPX7 and IPX9K	<b>Environmental Rating:</b>
Waterproof (IPX7 and IPX9K)	<b>Type of Ruggedization:</b>

## 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.

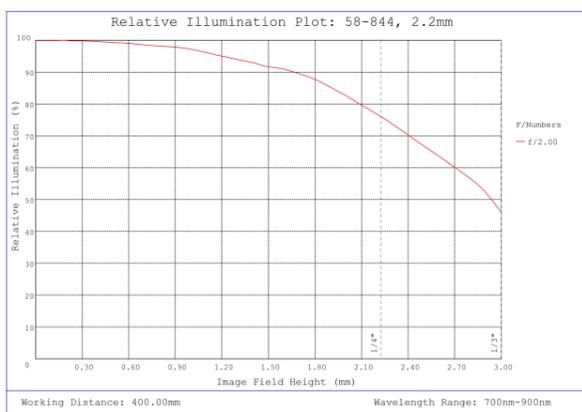
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

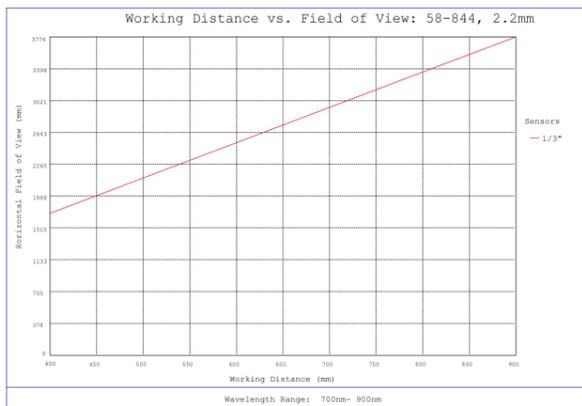
## Technical Information



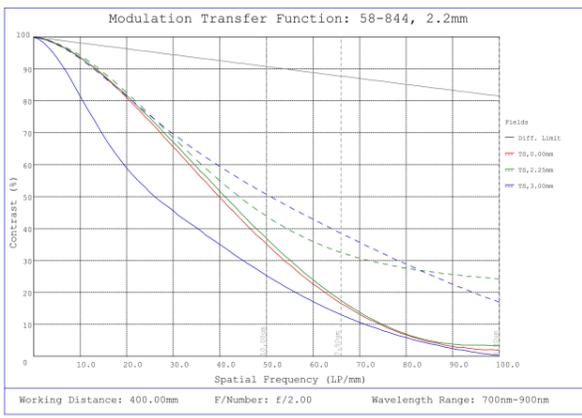
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Distortion Plot



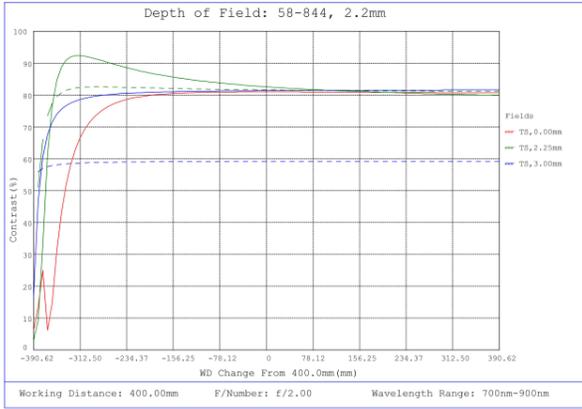
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Relative Illumination Plot



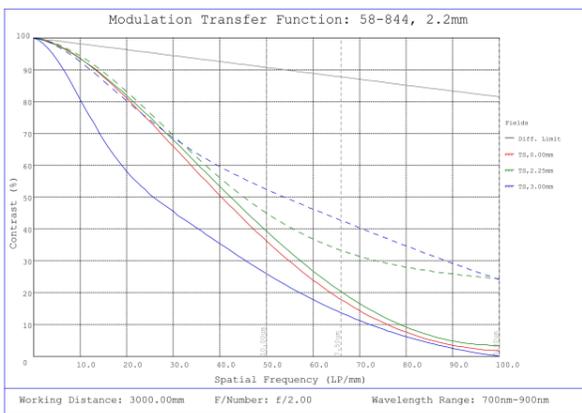
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Working Distance versus Field of View Plot



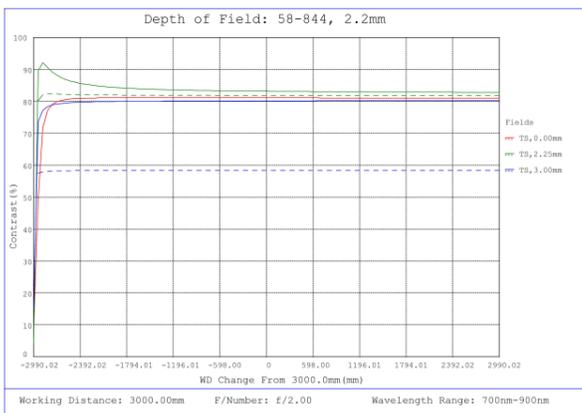
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2



#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Depth of Field Plot, 400mm Working Distance, f2



#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 3000mm Working Distance, f2



#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Depth of Field 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



