

**TECHSPEC® f/2.5, NIR, 8.0mm HEO Series M12 Lens**



8.0mm Focal Length

Stock **#63-761** **20+ In Stock**

⊖ 1 ⊕ C\$256<sup>00</sup>

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Qty 1-49	C\$256.20 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	<b>Iris Option:</b>
15.00	<b>Length (mm):</b>
14	<b>Maximum Diameter (mm):</b>
14	<b>Outer Diameter (mm):</b>
4	<b>Weight (g):</b>

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
341.7mm - 46.1°

**Field of View at Max Sensor Format:**  
Horizontal: 340.1mm - 45.9°  
Vertical: 248.5mm - 34.4°  
Diagonal: 440.5mm - 57.6°

**Horizontal Field of View, 1/2" Sensor:**  
341.7mm - 46.1°

**Horizontal Field of View, 1/2.5" Sensor:**  
306.3mm - 41.8°

**Horizontal Field of View, 1/3" Sensor:**  
249.6mm - 34.5°

**Horizontal Field of View, 1/4" Sensor:**  
184.6mm - 25.9°

**Maximum Image Circle (mm):**  
10.00

**Numerical Aperture NA, Object Side:**  
0.0040

**Resolution, On-Axis:**  
145 lp/mm @20% Contrast

**Number of Elements (Groups):**  
6 (5)

**Wavelength Range (nm):**  
600 - 1050

**Focal Length FL (mm):**  
8.00

**Working Distance (mm):**  
400 - ∞

**Aperture (f/#):**  
f/2.5

**Distortion (%):**  
-9.12 @ Full Field

**Back Focal Length BFL (mm):**  
8.72 - 8.57

**Coating Specification:**  
600 - 1050nm BBAR

**Entrance Pupil Position (mm):**  
3.70

**Object Space Principal Plane (mm):**  
7.86

**Image Space Principal Plane (mm):**  
0.98

**Maximum Distortion (%):**  
-9.12

**Exit Pupil Position (mm):**  
-7.66

**Lens Wavelength Range:**  
NIR

## Sensor

**Maximum Sensor Format:**  
1/2"

**Pixel Size (µm):**  
5.00

## Threading & Mounting

**Filter Thread:**  
N/A

**Mount:**  
S-Mount (M12 x0.5)

## Environmental & Durability Factors

**Environmental Rating:**  
IPX7 and IPX9K

**Type of Ruggedization:**  
Waterproof (IPX7 and IPX9K)

## Regulatory Compliance

**RoHS 2015:**  
[Compliant](#)

**Certificate of Conformance:**  
[View](#)

**Reach 240:**  
[Compliant](#)

## 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

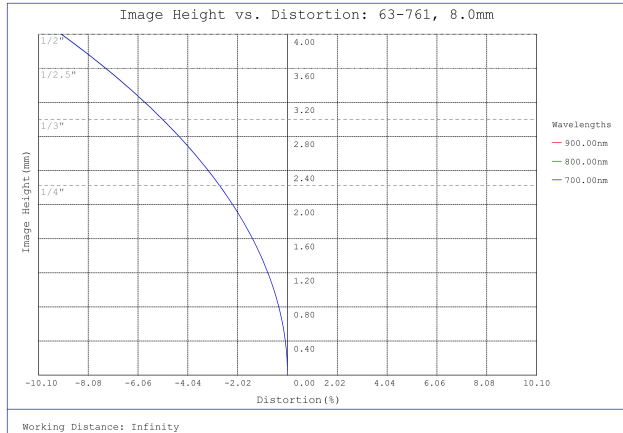
TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water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

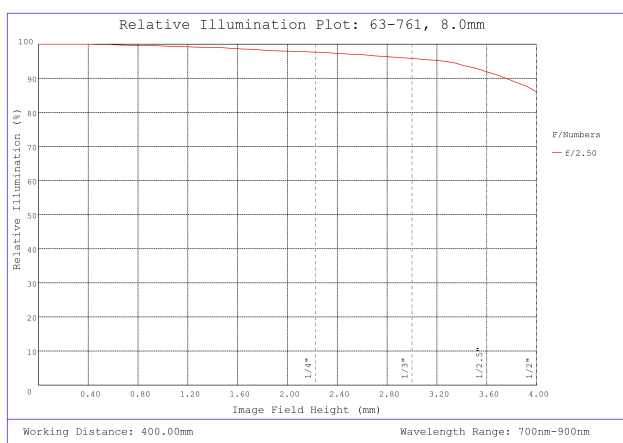
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

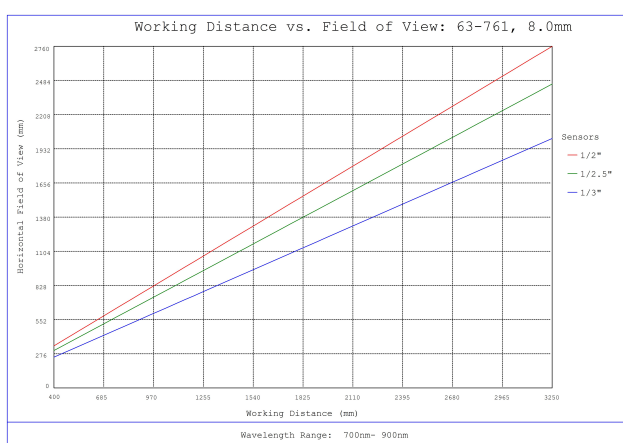
## Technical Information



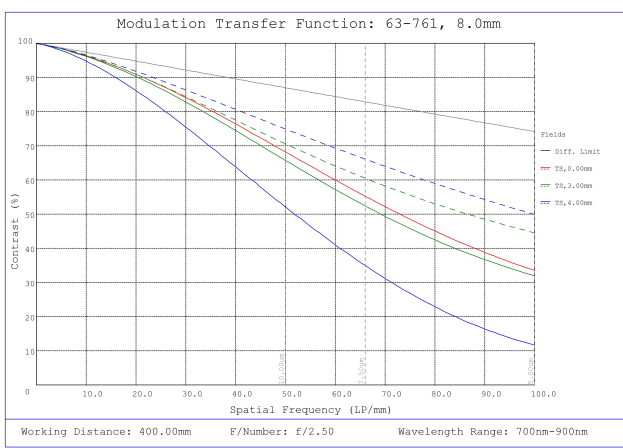
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Distortion Plot



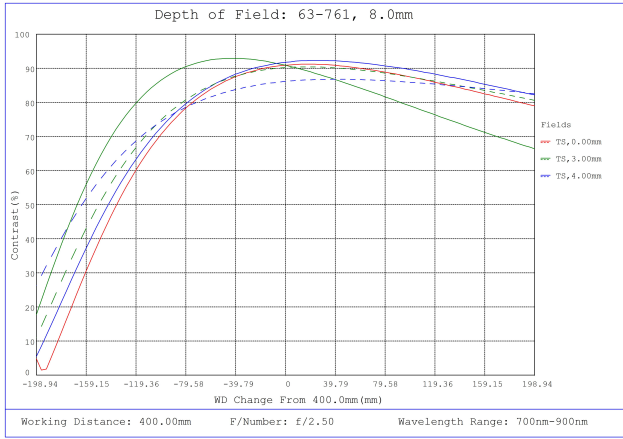
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Relative Illumination Plot



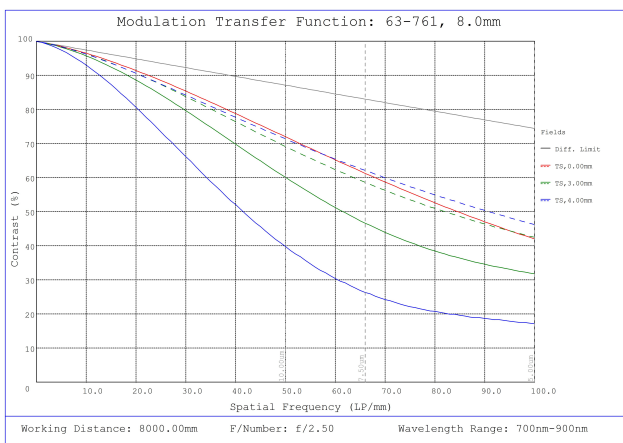
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Working Distance versus Field of View Plot



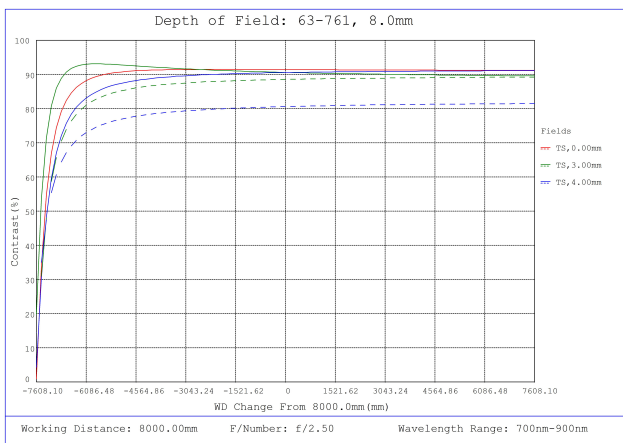
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2.5



#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Depth of Field Plot, 400mm Working Distance, f2.5



#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 8000mm Working Distance, f2.5



#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Depth of Field Plot, 8000mm Working Distance, f2.5

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



