

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



8.0mm Focal Length

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

⊖ 1 ⊕ £128<sup>00</sup>

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Volume Pricing	
Qty 1-49	£128.00 each
Qty 50+	£100.00 each
Need More?	<a href="#">Request Quote</a>

ⓘ Prices shown are exclusive of VAT/local taxes

### Product Downloads

#### 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:
15.00	Length (mm):
14	Maximum Diameter (mm):
14	Outer Diameter (mm):
4	Weight (g):

## 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 x 0.5)

## 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

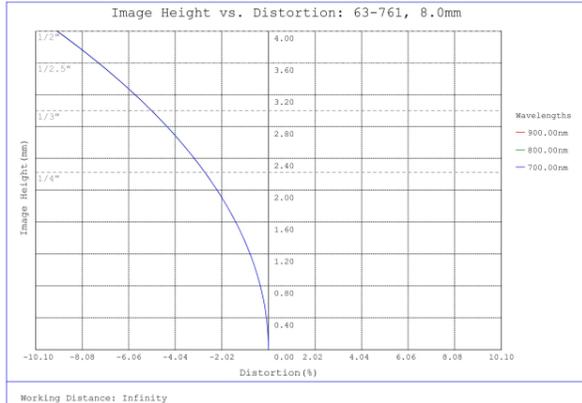
TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water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

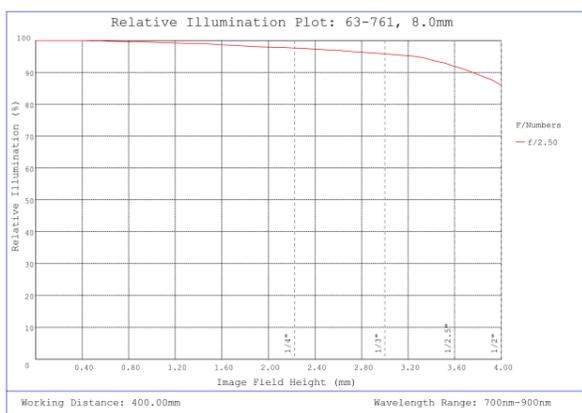
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

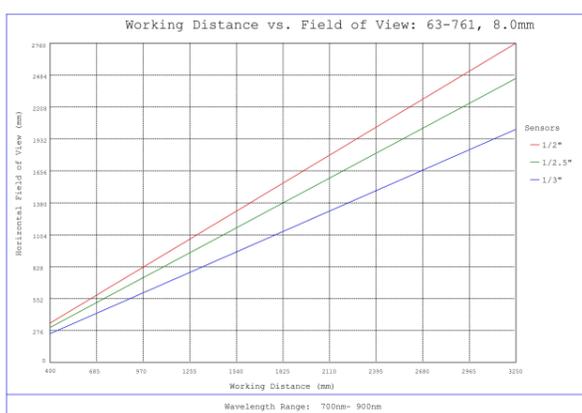
## Technical Information



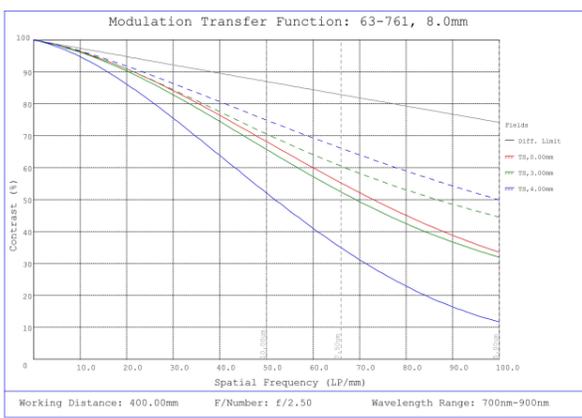
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Distortion Plot



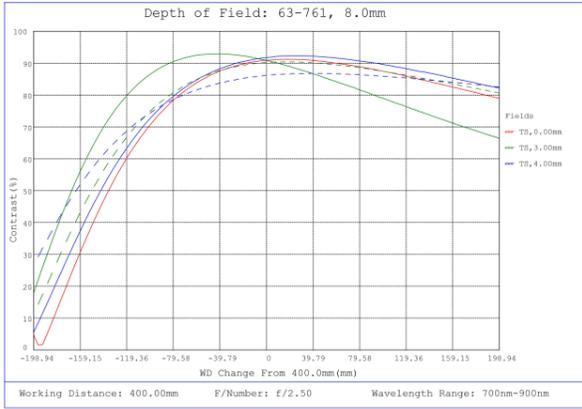
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Relative Illumination Plot



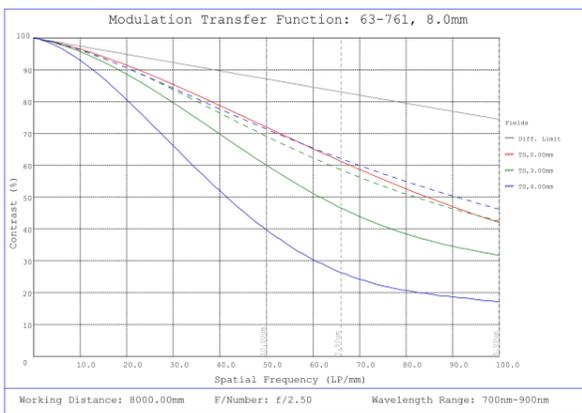
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Working Distance versus Field of View Plot



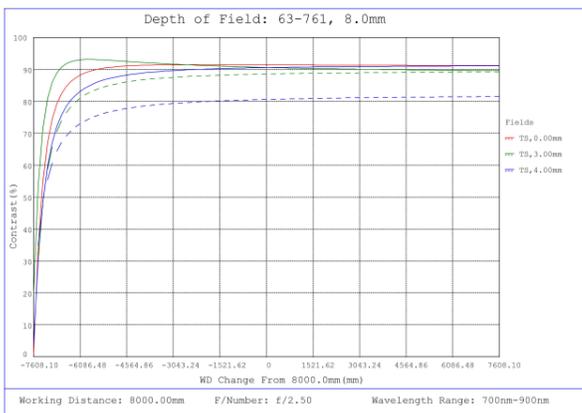
#63-761, f/2.5, NIR, 8.0mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2.5



#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

