

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

Stock #58-840 20+ In Stock

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Qty 1-49	A\$231.00 each
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SPECIFICATIONS**General**

Series:

HEO Series

Type:

M12 Imaging Lens

IR Cut Filter:

No

Imaging Lens Type:

Meets IEC IPX7 and IPX9K

Physical & Mechanical Properties

Iris Option:

Fixed

Length (mm):

16.40

Maximum Diameter (mm):

21

Outer Diameter (mm):

21

Weight (g):

4

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-Mount (M12 x 0.5)

Environmental & Durability Factors

Environmental Rating:
IPX7 and IPX9K

Type of Ruggedization:
Waterproof (IPX7 and IPX9K)

Regulatory Compliance

Certificate of Conformance:

[View](#)

PRODUCT DETAILS

- Up to $\frac{1}{2}$ ", S-Mount Lens
- Up to 1.2 MegaPixels, 5 μ m Pixel Size Sensors
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- 2.2mm to 8mm Focal Length

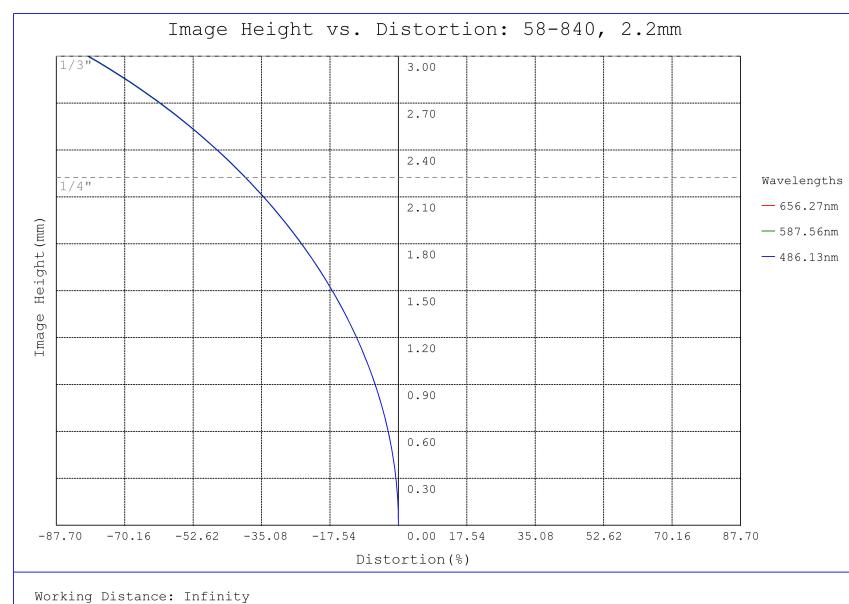
TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water spray downs. Threaded for M12 x 0.5, these lenses are optimized for $\frac{1}{3}$ " and $\frac{1}{2}$ " 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.

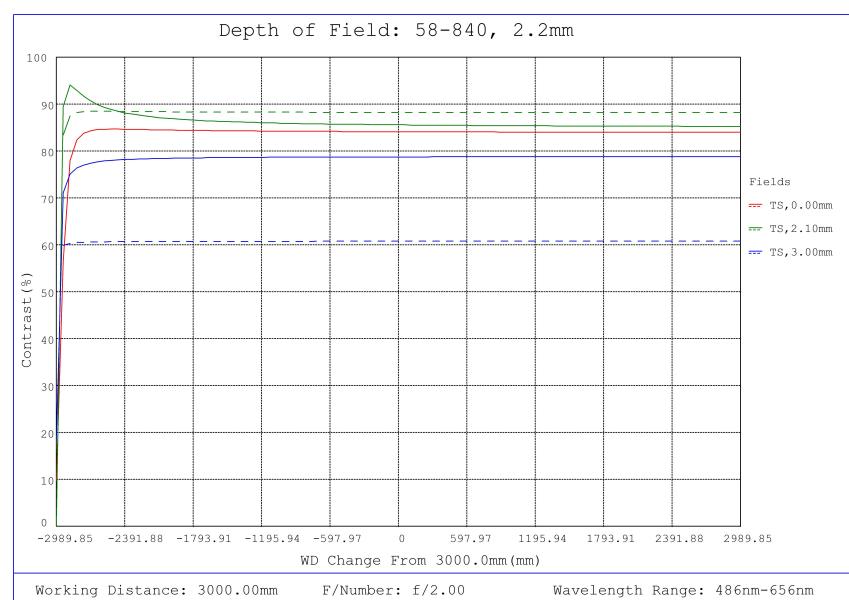
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

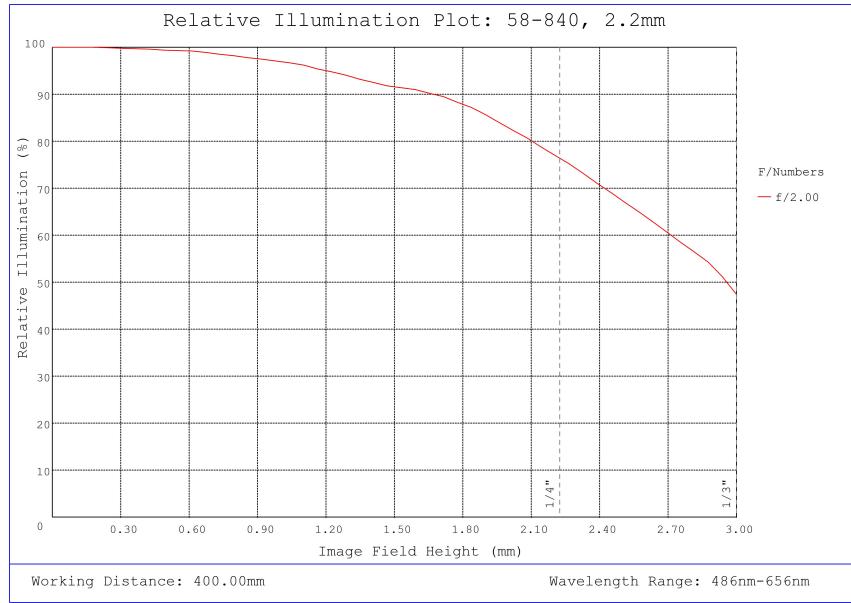
TECHNICAL INFORMATION



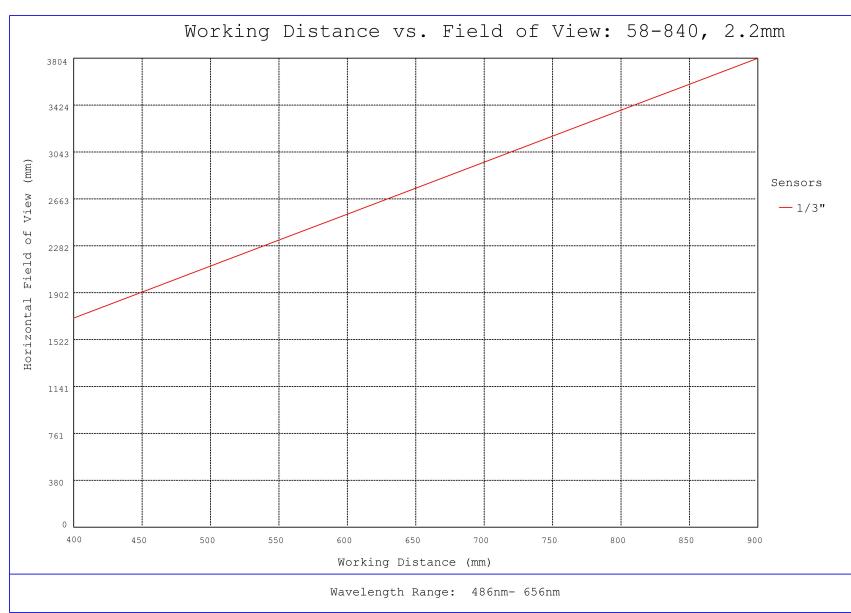
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Distortion Plot



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



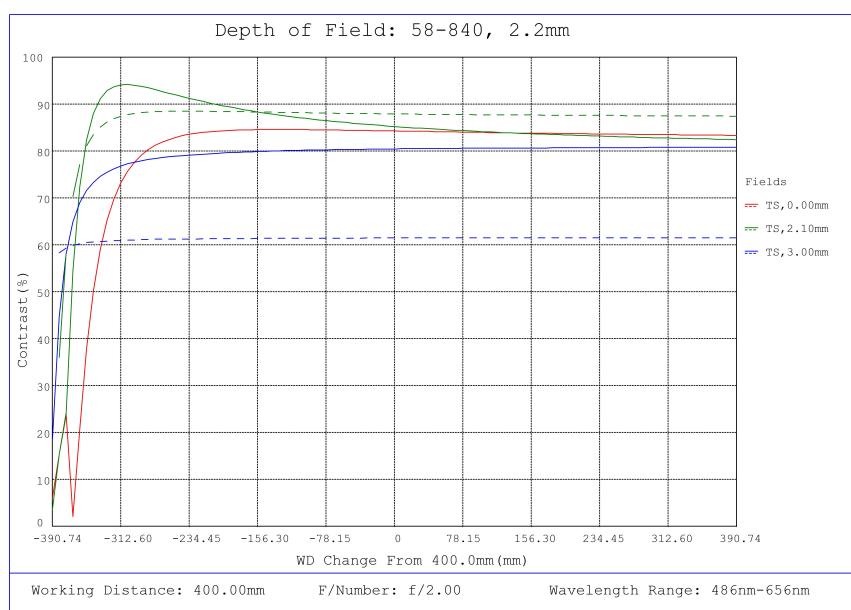
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Relative Illumination Plot



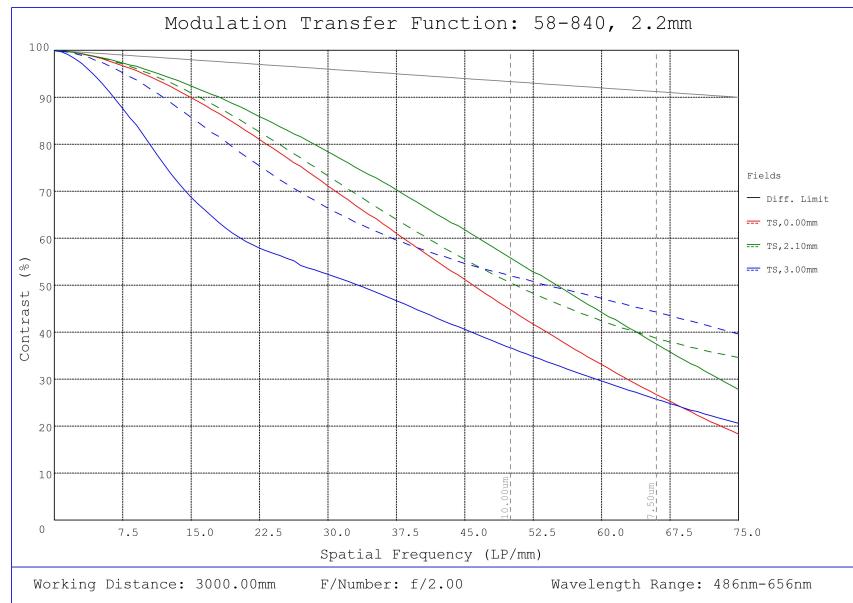
#58-840, f/2.0, Visible, 2.2mm HEO Series M12 Lens, Working Distance versus Field of View Plot



#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	21.00mm	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 Image Plane

D

B