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



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

- 1 + £128.⁰⁰

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Volume Pricing

Qty 1-49	£128.00 each
Qty 50+	£100.00 each
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i 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:
16.40	Length (mm):
21	Maximum Diameter (mm):
21	Outer Diameter (mm):
4	Weight (g):

Optical Properties

Horizontal Field of View @ Max Sensor Format:
1685.1mm - 128.9°

Field of View at Max Sensor Format:
Horizontal: 1660.9mm - 128.3°
Vertical: 989.2mm - 98.1°
Diagonal: 5138.4mm - 162.3°

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):
600 - 1050

Focal Length FL (mm):
2.20

Working Distance (mm):
400 - ∞

Aperture (f/#):
f/2

Distortion (%):
-78.87 @ Full Field

Back Focal Length BFL (mm):
2.24 - 2.23

Coating Specification:
600 - 1050nm BBAR

Entrance Pupil Position (mm):
4.59

Object Space Principal Plane (mm):
6.32

Image Space Principal Plane (mm):
1.16

Maximum Distortion (%):
-78.87

Exit Pupil Position (mm):
-7.61

Lens Wavelength Range:
NIR

Sensor

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

Threading & Mounting

N/A	Filter Thread:
S-Mount (M12 x0.5)	Mount:

Environmental & Durability Factors

Environmental Rating:
IPX7 and IPX9K

Type of Ruggedization:
Waterproof (IPX7 and IPX9K)

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

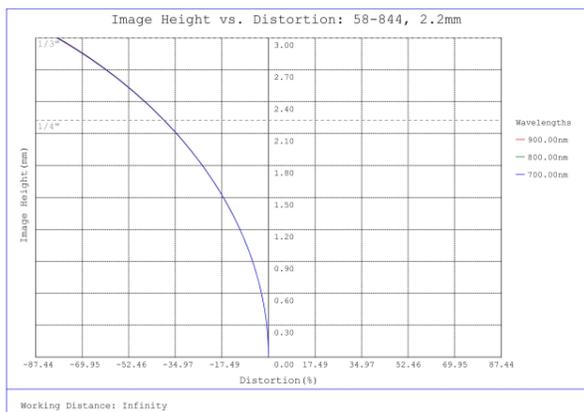
TECHSPEC® HEO Series M12 Lenses integrate high performance optics into a sealed, ruggedized enclosure. Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high-pressure, high-temperature water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

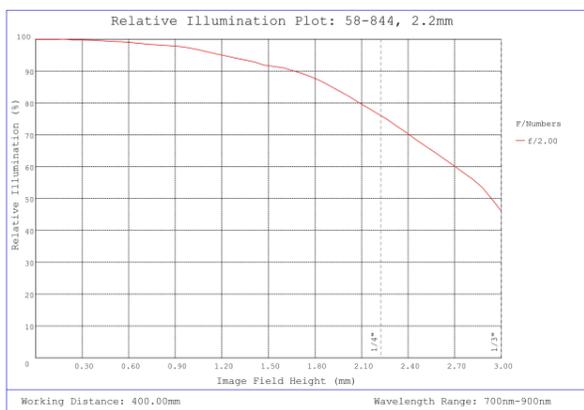
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

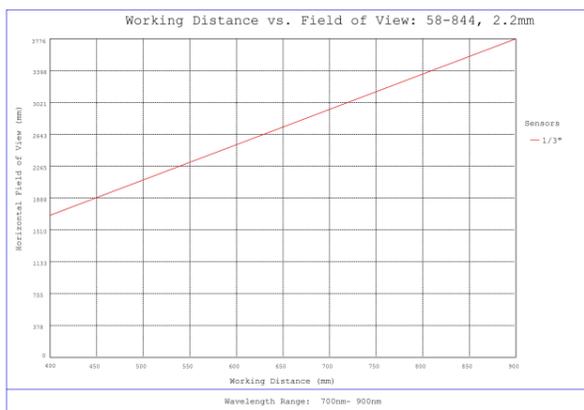
Technical Information



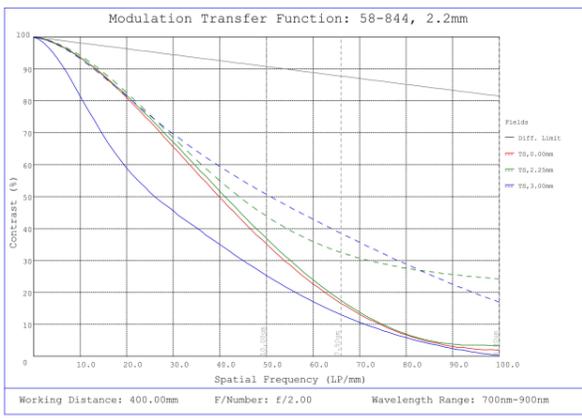
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Distortion Plot



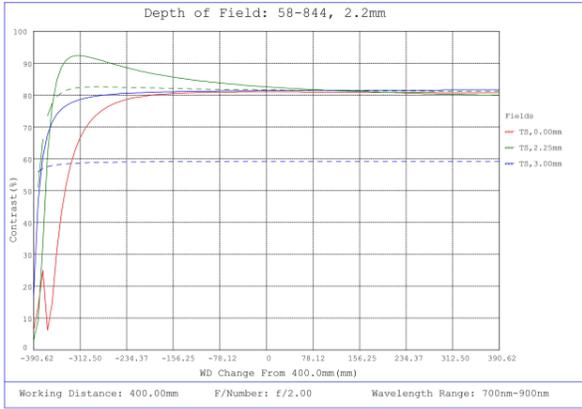
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Relative Illumination Plot



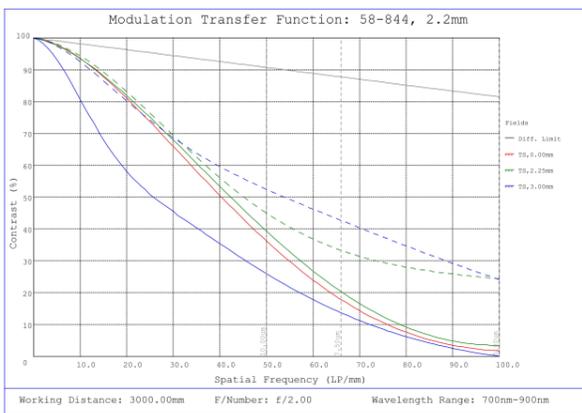
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Working Distance versus Field of View Plot



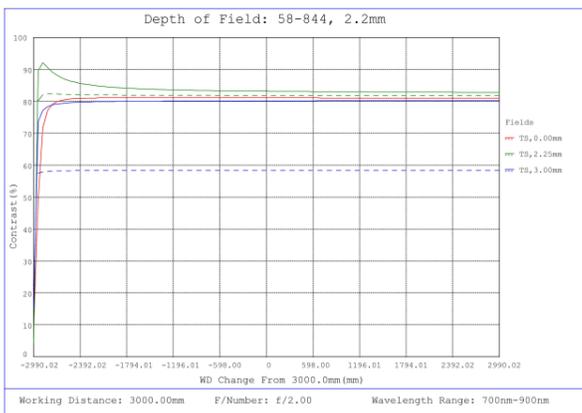
#58-844, f/2.0, NIR, 2.2mm HEO Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2



#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



