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TECHSPEC® 2mm FL f/4, Blue Series M12 Lens



2mm FL Blue Series M12 Imaging Lens



Stock #89-337 **20+ In Stock**

⊖ 1 ⊕ £76.⁰⁰

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| Volume Pricing | |
|----------------|-------------------------------|
| Qty 1-49 | £76.00 each |
| Qty 50+ | £60.00 each |
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! Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Blue Series **Product Family:**

M12 Imaging Lens **Type:**

IR Cut Filter:

No

Imaging Lens Type:

High Performance M12 Lens

Physical & Mechanical Properties

Iris Option:

Fixed

Length (mm):

21.74

Maximum Diameter (mm):

18

Outer Diameter (mm):

18

Weight (g):

9

Optical Properties

Horizontal Field of View @ Max Sensor Format:

133.1°

Field of View at Max Sensor Format:

Horizontal: 477.2mm - 133.1°

Vertical: 249.3mm - 100.2°

Diagonal: 1590.3mm - 165.3°

Horizontal Field of View, 1/3" Sensor:

464.4mm - 131.5°

Horizontal Field of View, 1/4" Sensor:

243.3mm - 98.6°

Maximum Image Circle (mm):

6.00

Numerical Aperture NA, Object Side:

0.0024

Number of Elements (Groups):

6(5)

Wavelength Range (nm):

400 - 700

Focal Length FL (mm):

2.00

Working Distance (mm):

100 - ∞

Aperture (f/#):

f/4

Distortion (%):

-81.065 @ Full Field

Back Focal Length BFL (mm):

2.26

Coating Specification:

M4 MgF₂ @ 550nm

Entrance Pupil Position (mm):

4.51

Object Space Principal Plane (mm):

6.31

Image Space Principal Plane (mm):

0.96

Maximum Distortion (%):

-81.065

Exit Pupil Position (mm):

-13.41

Lens Wavelength Range:

VIS

Sensor

Maximum Sensor Format:

1/3"

Pixel Size (µm):

1.40

Threading & Mounting

Filter Thread:

N/A

Mount:

S-Mount (M12 x 0.5)

Regulatory Compliance

RoHS 2015:

Compliant

Product Details

- Up to 1/2", S-Mount Lens
- Up to 5 MegaPixels, 1.4µm Pixel Size Sensors
- High Resolution Board Camera Lens Optimized for Close WD
- 2mm to 35mm Focal Length
- **Ruggedized Designs** Also Available

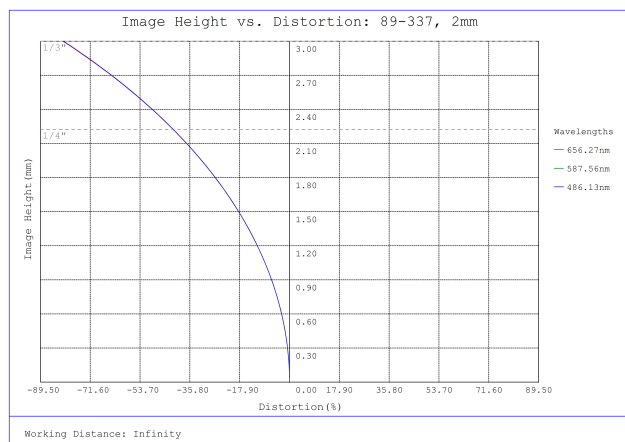
TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great versatility of our **TECHSPEC® Green Series M12 Lenses**. Each lens consists of several precision glass elements mounted in a compact, aluminum housing. These lenses can connect to C-Mount cameras using the M12 x 0.5 Adapter for C-Mount Cameras (**#53-675**) or the M12 x 0.5 C-Mount Adapter with Rubber O-Ring (**#59-241**) for vibration-sensitive environments. TECHSPEC® Blue Series M12 Lenses are ideal for automotive, industrial, and medical imaging application. Prescription data is available by submitting a **Request for Prescription Form**.

Note: Compatible **TECHSPEC® M12 Imaging Lens Accessories** available.

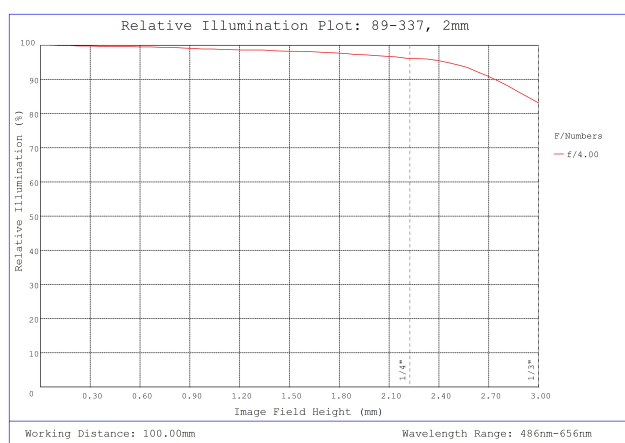
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

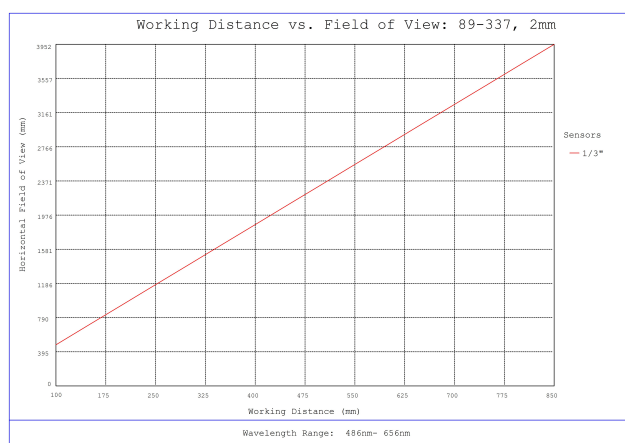
Technical Information



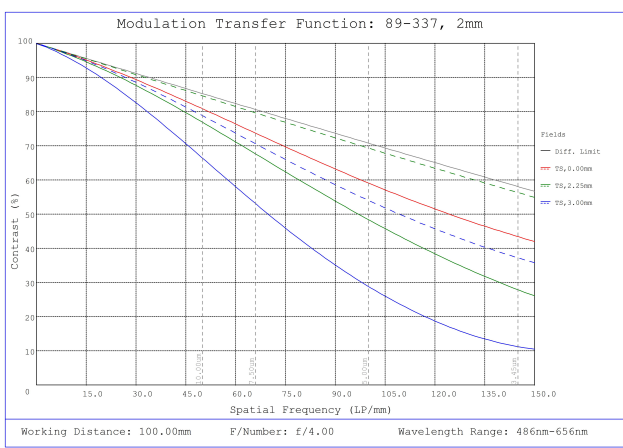
#89-337, 2mm FL f/4, Blue Series M12 Lens, Distortion Plot



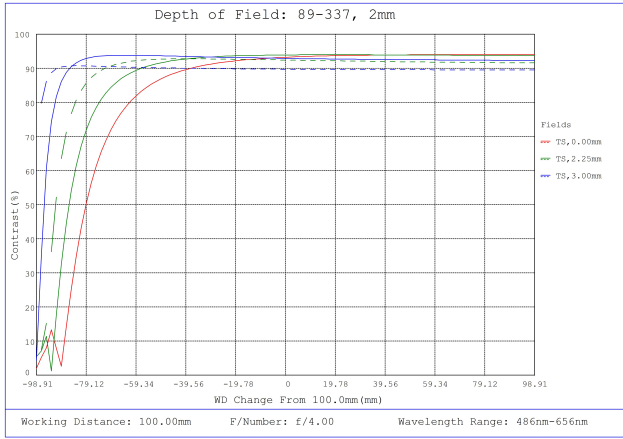
#89-337, 2mm FL f/4, Blue Series M12 Lens, Relative Illumination Plot



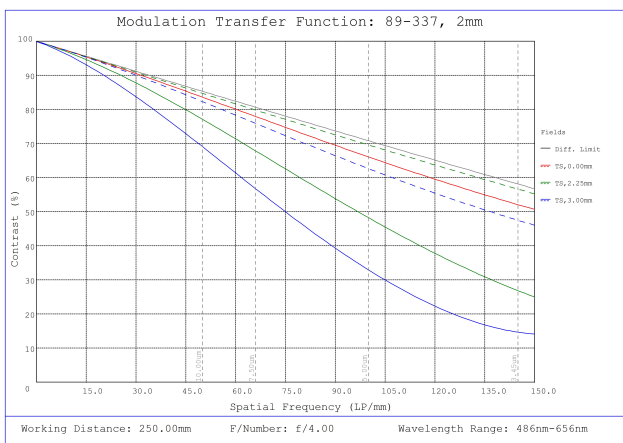
#89-337, 2mm FL f/4, Blue Series M12 Lens, Working Distance versus Field of View Plot



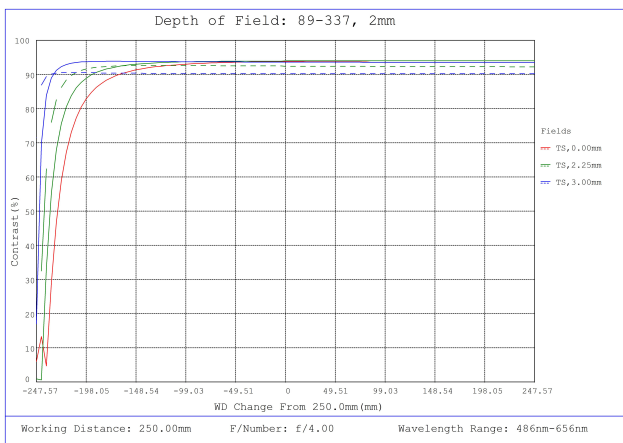
#89-337, 2mm FL f/4, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f4



#89-337, 2mm FL f/4, Blue Series M12 Lens, Depth of Field Plot, 100mm Working Distance, f4



#89-337, 2mm FL f/4, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f4



#89-337, 2mm FL f/4, Blue Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f4

| Focal Length | A | B | C* | D |
|--------------|--------|--------|-------------|--------|
| 2.0mm | 18.0mm | 21.7mm | 2.26mm | 4.75mm |
| 3.0mm | 14.0mm | 17.1mm | 4.8 - 4.7mm | 5.8mm |
| 4.0mm | 14.0mm | 19.7mm | 6.1 - 6.0mm | 4.4mm |
| 5.0mm | 14.0mm | 14.6mm | 4.0 - 3.9mm | 3.7mm |
| 6.0mm | 14.0mm | 14.1mm | 6.9 - 6.8mm | 4.5mm |
| 8.0mm | 14.0mm | 12.3mm | 8.8 - 8.6mm | 3.7mm |
| 10.0mm | 14.0mm | 17.0mm | 6.6 - 6.3mm | 3.7mm |

| | | | | |
|--------|--------|--------|----------------|--------|
| 12.5mm | 15.0mm | 22.9mm | 10.1 - 9.7mm | 4.8mm |
| 17.5mm | 14.0mm | 20.7mm | 5.8 - 4.9mm | 7.6mm |
| 25.0mm | 18.0mm | 30.0mm | 8.5 - 6.5mm | 11.5mm |
| 35.0mm | 18.0mm | 29.5mm | 18.72 - 14.0mm | 14.5mm |



*Specified for Optimized Working Distance of 150 - 250mm.

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