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TECHSPEC® 5mm FL f/8, Blue Series M12 Lens



5mm FL Blue Series M12 Lens



Stock #83-949 **13 In Stock**

⊖ 1 ⊕ €81⁰⁰

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| Volume Pricing | |
|----------------|-------------------------------|
| Qty 1-49 | €81,00 each |
| Qty 50+ | €64,00 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

Fixed **Iris Option:**

14.60 **Length (mm):**

14 **Maximum Diameter (mm):**

14 **Outer Diameter (mm):**

4 **Weight (g):**

Optical Properties

Horizontal Field of View @ Max Sensor Format:
57.3°

Field of View at Max Sensor Format:
Horizontal: 165.7mm - 57.3°
Vertical: 117.5mm - 42.3°
Diagonal: 225.4mm - 73.4°

Horizontal Field of View, 1/3" Sensor:
165.5mm - 57.3°

Horizontal Field of View, 1/4" Sensor:
117.5mm - 42.3°

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

0.0020 **Numerical Aperture NA, Object Side:**

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

400 - 700 **Wavelength Range (nm):**

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

150 - ∞ **Working Distance (mm):**

f/8 **Aperture (f/#):**

-18.88 @ Full Field **Distortion (%):**

4.0 - 3.9 **Back Focal Length BFL (mm):**

M4 MgF₂ @ 550nm **Coating Specification:**

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

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

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

-18.88 **Maximum Distortion (%):**

-6.51 **Exit Pupil Position (mm):**

VIS **Lens Wavelength Range:**

Sensor

1/3" **Maximum Sensor Format:**

1.40 **Pixel Size (µm):**

Threading & Mounting

N/A **Filter Thread:**

S-Mount (M12 x 0.5) **Mount:**

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

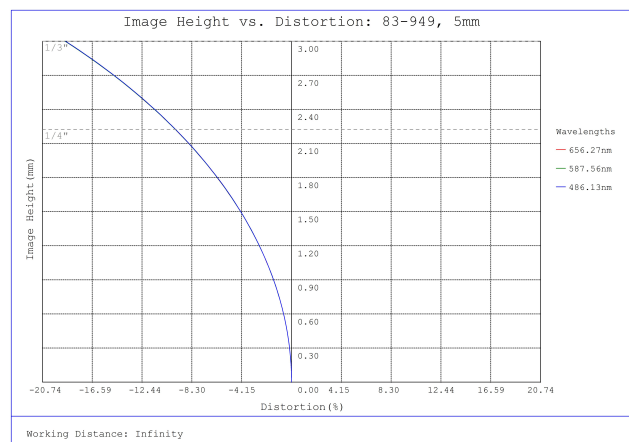
TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great versatility of our **TECHSPEC® Green Series M12 Lenses**. Each lens consists of several precision glass elements mounted in a compact, aluminum housing. These lenses can connect to C-Mount cameras using the 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.

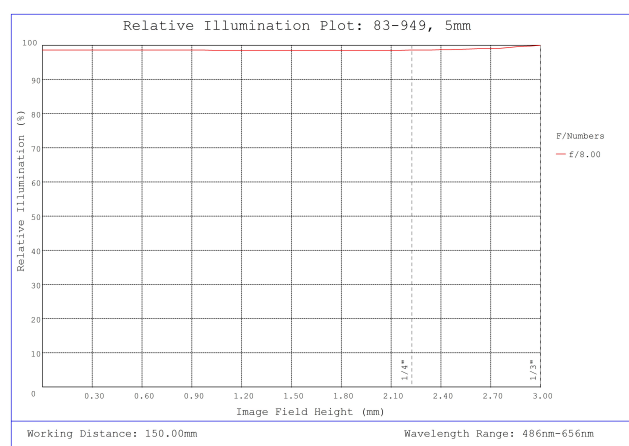
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

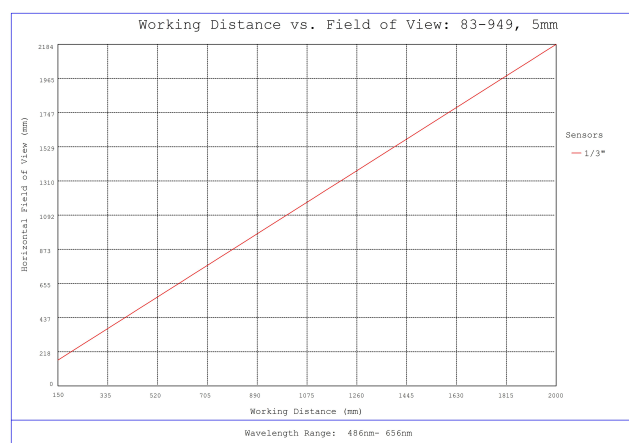
Technical Information



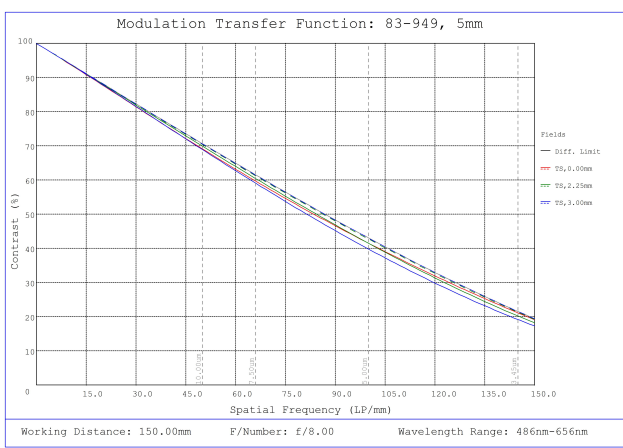
#83-949, 5mm FL f/8, Blue Series M12 Lens, Distortion Plot



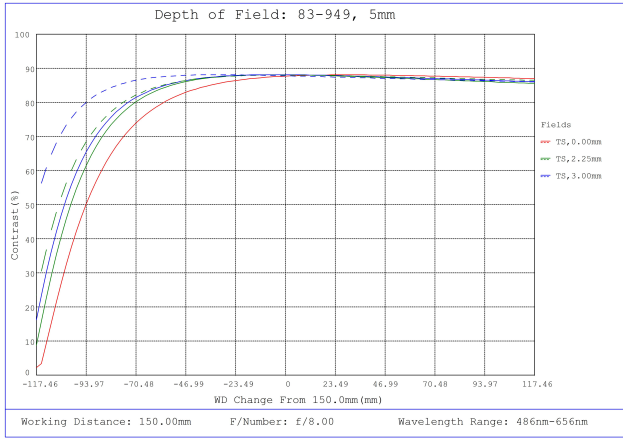
#83-949, 5mm FL f/8, Blue Series M12 Lens, Relative Illumination Plot



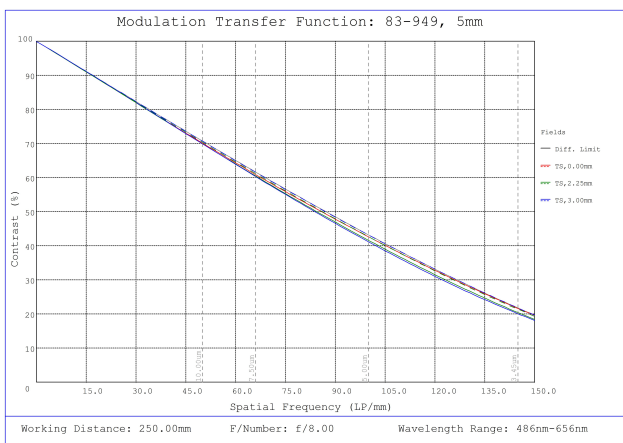
#83-949, 5mm FL f/8, Blue Series M12 Lens, Working Distance versus Field of View Plot



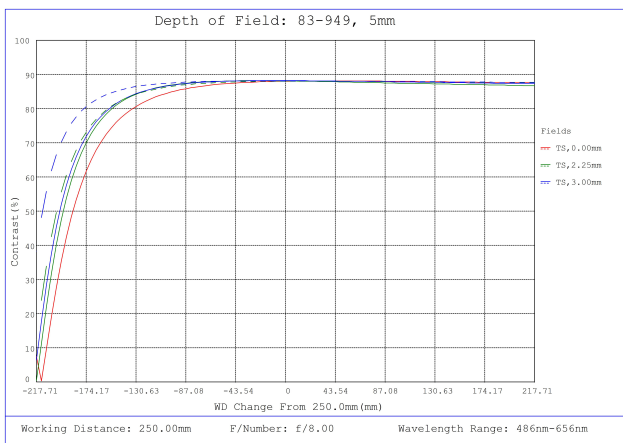
#83-949, 5mm FL f/8, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f8



#83-949, 5mm FL f/8, Blue Series M12 Lens, Depth of Field Plot, 150mm Working Distance, f8



#83-949, 5mm FL f/8, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f8



#83-949, 5mm FL f/8, Blue Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f8

| 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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