

**TECHSPEC® 10mm FL f/5.6, Blue Series M12 Lens**



10mm FL Blue Series M12 Lens



Stock #83-941 **13 In Stock**

⊖ 1 ⊕ £63<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-49       | £63.00 each                   |
| Qty 50+        | £50.00 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:**

17.00 **Length (mm):**

14 **Maximum Diameter (mm):**

14 **Outer Diameter (mm):**

5 **Weight (g):**

### Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
27.1°

**Field of View at Max Sensor Format:**  
Horizontal: 71.8mm - 27.1°  
Vertical: 53.8mm - 20.5°  
Diagonal: 89.9mm - 33.6°

**Horizontal Field of View, 1/3" Sensor:**  
71.8mm - 27.1°

**Horizontal Field of View, 1/4" Sensor:**  
53.8mm - 20.5°

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

0.0056 **Numerical Aperture NA, Object Side:**

5(4) **Number of Elements (Groups):**

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

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

150 - ∞ **Working Distance (mm):**

f/5.6 **Aperture (f/#):**

-0.25 @ Full Field **Distortion (%):**

6.6 - 6.3 **Back Focal Length BFL (mm):**

M4 MgF<sub>2</sub> @ 550nm **Coating Specification:**

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

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

-3.29 **Image Space Principal Plane (mm):**

-0.25 **Maximum Distortion (%):**

-3.08 **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

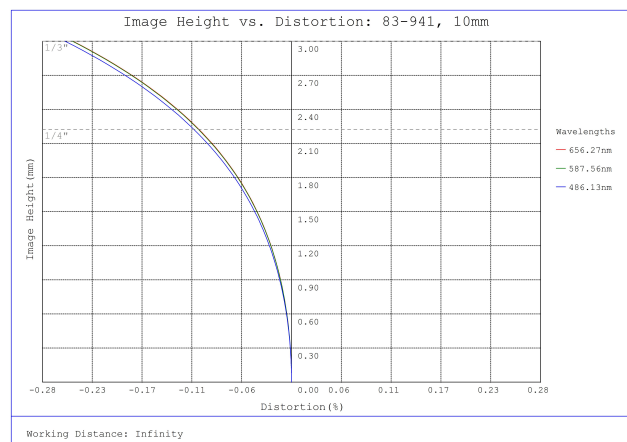
TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great versatility of our [TECHSPEC® Green Series M12 Lenses](#). Each lens consists of several precision glass elements mounted in a compact, aluminum housing. These lenses can connect to C-Mount cameras using the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

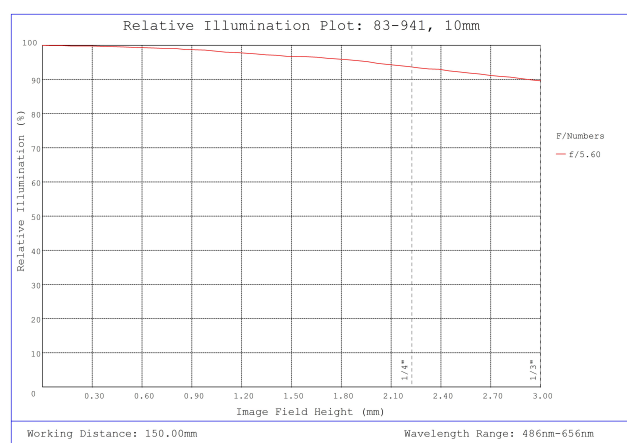
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

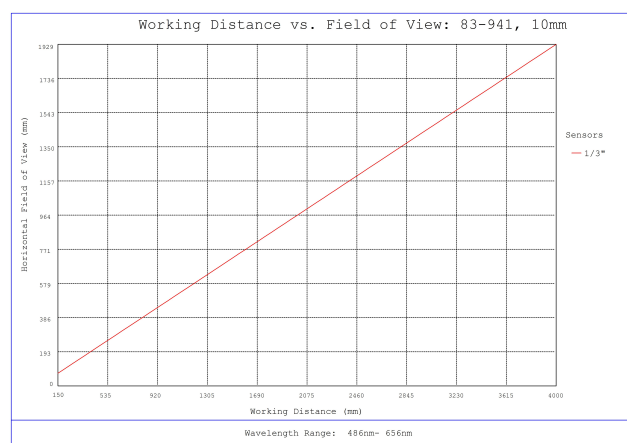
## Technical Information



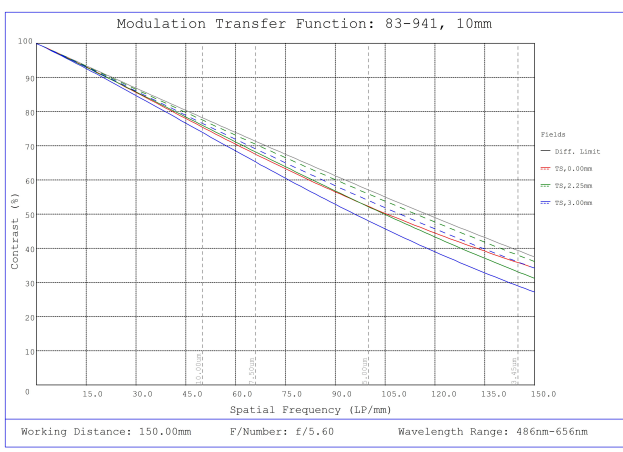
#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Distortion Plot



#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Relative Illumination Plot



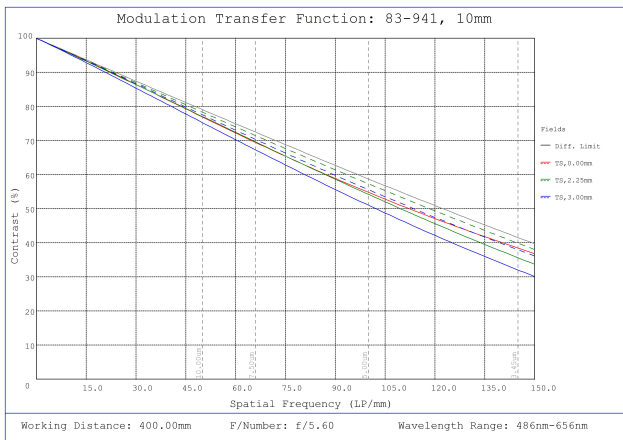
#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Working Distance versus Field of View Plot



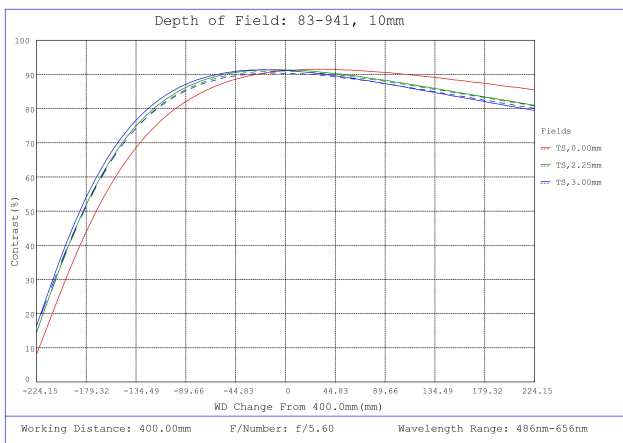
#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f5.6



#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Depth of Field Plot, 150mm Working Distance, f5.6



#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f5.6



#83-941, 10mm FL f/5.6, Blue Series M12 Lens, Depth of Field Plot, 400mm Working Distance, f5.6

| 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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