

TECHSPEC<sup>®</sup> 8mm FL f/5.6, Blue Series M12 Lens



8mm Blue Series M12 Lens



Stock **#83-940** 20+ In Stock

-

1

+

C\$161<sup>00</sup>

ADD TO CART

| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-49       | C\$161.00 each                |
| Qty 50+        | C\$127.40 each                |
| Need More?     | <a href="#">Request Quote</a> |

Product Downloads

| General          |                |
|------------------|----------------|
| Blue Series      | Series:        |
| M12 Imaging Lens | Type:          |
| No               | IR Cut Filter: |

|                                               |                        |
|-----------------------------------------------|------------------------|
| Imaging Lens Type:                            |                        |
| High Performance M12 Lens                     |                        |
| Physical & Mechanical Properties              |                        |
| Fixed                                         | Iris Option:           |
|                                               |                        |
| 12.30                                         | Length (mm):           |
|                                               |                        |
| 14                                            | Maximum Diameter (mm): |
|                                               |                        |
| 14                                            | Outer Diameter (mm):   |
|                                               |                        |
| 3                                             | Weight (g):            |
|                                               |                        |
| Optical Properties                            |                        |
| Horizontal Field of View @ Max Sensor Format: |                        |
| 34.2°                                         |                        |
| Field of View at Max Sensor Format:           |                        |
| Horizontal: 92.8mm - 34.2°                    |                        |
| Vertical: 68.9mm - 25.7°                      |                        |
| Diagonal: 117.5mm - 42.6°                     |                        |
| Horizontal Field of View, 1/3" Sensor:        |                        |
| 94.0mm - 34.2°                                |                        |
| Horizontal Field of View, 1/4" Sensor:        |                        |
| 69.8mm - 25.7°                                |                        |
| Maximum Image Circle (mm):                    |                        |
| 6.00                                          |                        |
| Numerical Aperture NA, Object Side:           |                        |
| 0.0046                                        |                        |
| Number of Elements (Groups):                  |                        |
| 5(5)                                          |                        |
| Wavelength Range (nm):                        |                        |
| 400 - 700                                     |                        |
| Focal Length FL (mm):                         |                        |
| 8.00                                          |                        |
| Working Distance (mm):                        |                        |
| 150 - ∞                                       |                        |
| Aperture (f/#):                               |                        |
| f/5.6                                         |                        |
| Distortion (%):                               |                        |
| -3.63 @Full Field                             |                        |
| Back Focal Length BFL (mm):                   |                        |
| 8.8 - 8.6                                     |                        |
| Coating Specification:                        |                        |
| λ/4 MgF <sub>2</sub> @ 550nm                  |                        |
| Entrance Pupil Position (mm):                 |                        |
| 5.04                                          |                        |
| Object Space Principal Plane (mm):            |                        |
| 8.13                                          |                        |
| Image Space Principal Plane (mm):             |                        |
| 0.94                                          |                        |
| Maximum Distortion (%):                       |                        |
| -3.63                                         |                        |
| Exit Pupil Position (mm):                     |                        |
| -4.09                                         |                        |
| 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 x0.5)                            |                        |
| Regulatory Compliance                         |                        |
| RoHS 2015:                                    |                        |
| Compliant                                     |                        |

## Product Details

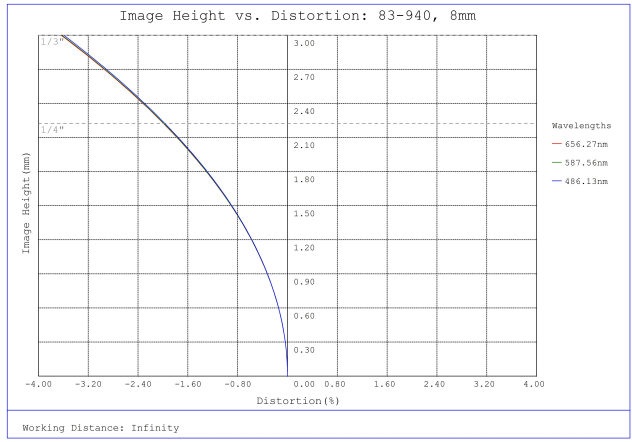
- Up to 1/2", S-Mount Lens
  - Up to 5 MegaPixels, 1.4µm Pixel Size Sensors
  - High Resolution Board Camera Lens Optimized for Close WD
  - 2mm to 35mm Focal Length
  - **Ruggedized Designs** Also Available
- TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great 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 x0.5 Adapter for C-Mount Cameras (**#53-675**) or the M12 x0.5 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.

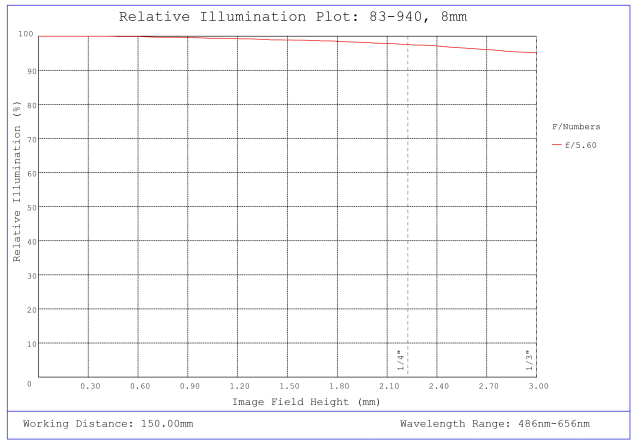
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

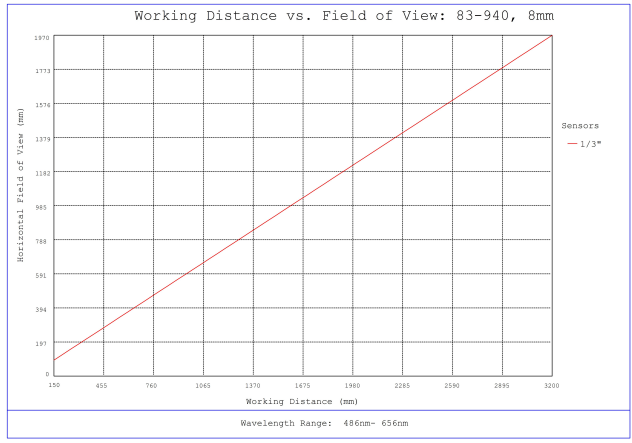
## Technical Information



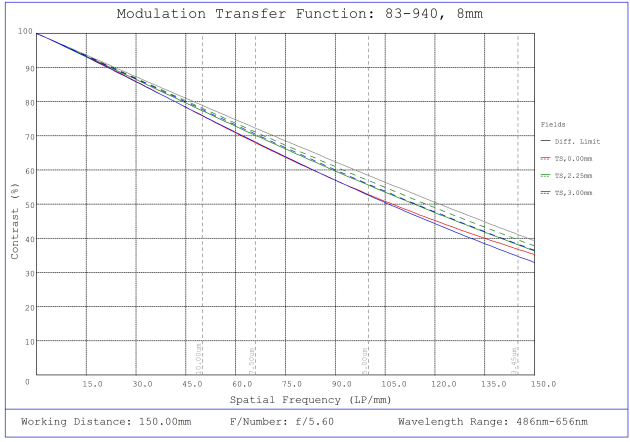
#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Distortion Plot



#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Relative Illumination Plot



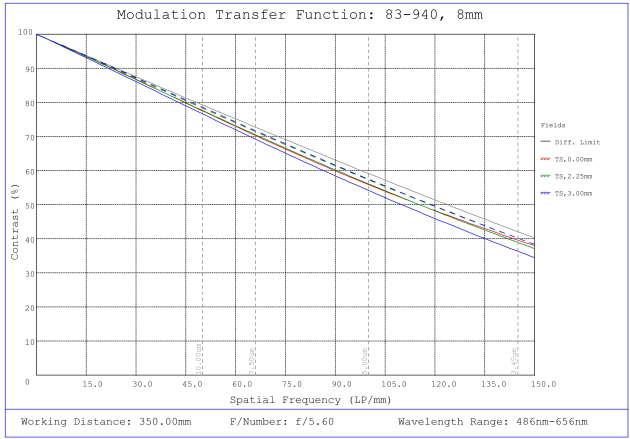
#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Working Distance versus Field of View Plot



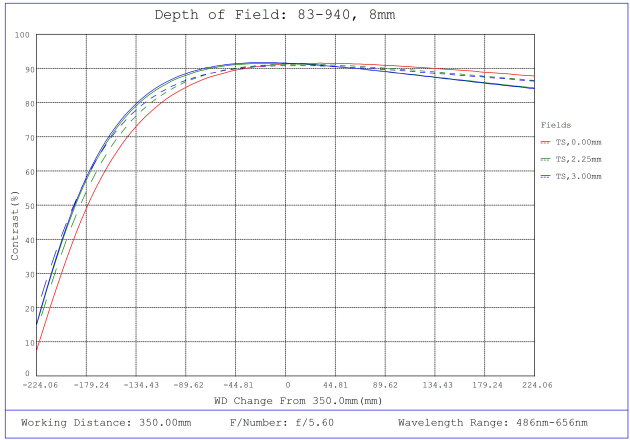
#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f5.6



#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Depth of Field Plot, 150mm Working Distance, f5.6



#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 350mm Working Distance, f5.6



#83-940, 8mm FL f/5.6, Blue Series M12 Lens, Depth of Field Plot, 350mm 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.