

TECHSPEC<sup>®</sup> 2mm FL f/8 IR-Cut, Blue Series M12 Lens



2mm FL Blue Series M12 Imaging Lens



Stock **#35-468** 20+ In Stock

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+

S\$141<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1-49       | S\$141.00 each                |
| Qty 50+        | S\$112.00 each                |
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Product Downloads

| General          |                |
|------------------|----------------|
| Blue Series      | Series:        |
| M12 Imaging Lens | Type:          |
| Yes              | IR Cut Filter: |

|                                                                                                                                  |  |
|----------------------------------------------------------------------------------------------------------------------------------|--|
| Imaging Lens Type:<br>High Performance M12 Lens with IR Cut Filter                                                               |  |
| Special Type of Lens:<br>IR-Cut Filter                                                                                           |  |
| Physical & Mechanical Properties                                                                                                 |  |
| Iris Option:<br>Fixed                                                                                                            |  |
| Length (mm):<br>21.74                                                                                                            |  |
| Maximum Diameter (mm):<br>18                                                                                                     |  |
| Outer Diameter (mm):<br>18                                                                                                       |  |
| Weight (g):<br>9                                                                                                                 |  |
| Optical Properties                                                                                                               |  |
| Horizontal Field of View @ Max Sensor Format:<br>133.1°                                                                          |  |
| Field of View at Max Sensor Format:<br>Horizontal: 477.2mm - 133.1°<br>Vertical: 249.3mm - 100.2°<br>Diagonal: 1590.3mm - 165.3° |  |
| Horizontal Field of View, 1/3" Sensor:<br>464.4mm - 131.5°                                                                       |  |
| Horizontal Field of View, 1/4" Sensor:<br>243.3mm - 98.6°                                                                        |  |
| Maximum Image Circle (mm):<br>6.00                                                                                               |  |
| Numerical Aperture NA, Object Side:<br>0.0012                                                                                    |  |
| Number of Elements (Groups):<br>6(5)                                                                                             |  |
| Wavelength Range (nm):<br>400 - 700                                                                                              |  |
| Focal Length FL (mm):<br>2.00                                                                                                    |  |
| Working Distance (mm):<br>100 - ∞                                                                                                |  |
| Aperture (f/#):<br>f/8.0                                                                                                         |  |
| Distortion (%):<br>-81.065 @ Full Field                                                                                          |  |
| Back Focal Length BFL (mm):<br>2.26                                                                                              |  |
| Coating Specification:<br>λ/4 MgF <sub>2</sub> @ 550nm                                                                           |  |
| Entrance Pupil Position (mm):<br>4.51                                                                                            |  |
| Object Space Principal Plane (mm):<br>6.31                                                                                       |  |
| Image Space Principal Plane (mm):<br>0.96                                                                                        |  |
| Maximum Distortion (%):<br>-81.065                                                                                               |  |
| Exit Pupil Position (mm):<br>-13.41                                                                                              |  |
| Lens Wavelength Range:<br>VIS (IR-Cut Filter)                                                                                    |  |
| Sensor                                                                                                                           |  |
| Maximum Sensor Format:<br>1/3"                                                                                                   |  |
| Pixel Size (μm):<br>1.40                                                                                                         |  |
| Threading & Mounting                                                                                                             |  |
| Filter Thread:<br>N/A                                                                                                            |  |
| Mount:<br>S-Mount (M12 x0.5)                                                                                                     |  |
| Regulatory Compliance                                                                                                            |  |

|                             |  |
|-----------------------------|--|
| RoHS 2015:                  |  |
| Compliant                   |  |
| Certificate of Conformance: |  |
| View                        |  |

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|            |  |
|------------|--|
| Reach 235: |  |
| Compliant  |  |

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## 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.

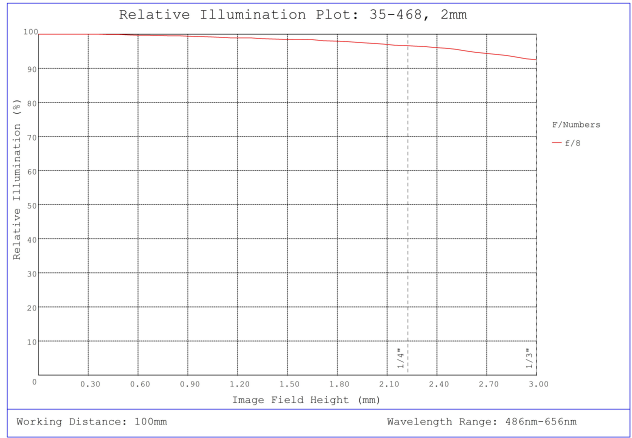
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

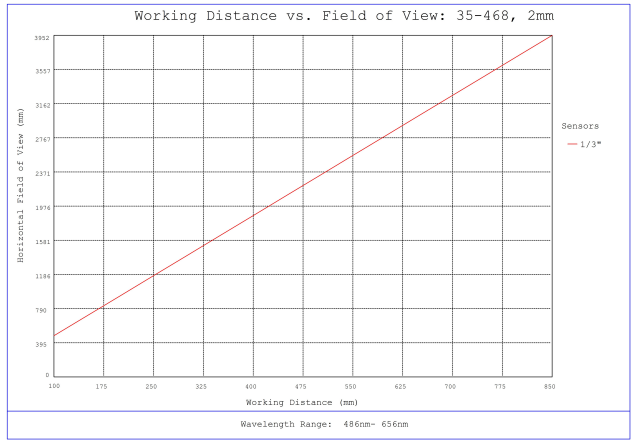
## Technical Information



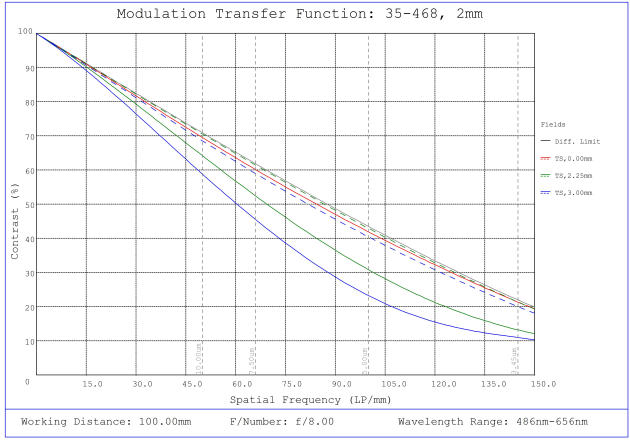
#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Distortion Plot



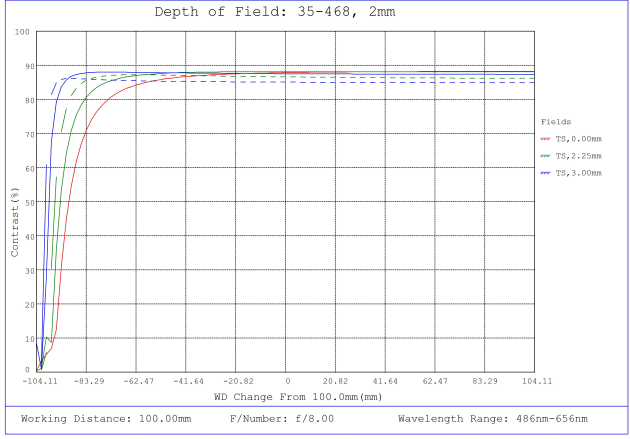
#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Relative Illumination Plot



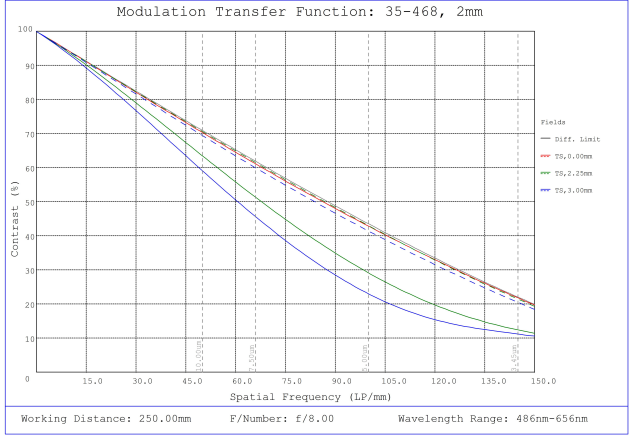
#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Working Distance versus Field of View Plot



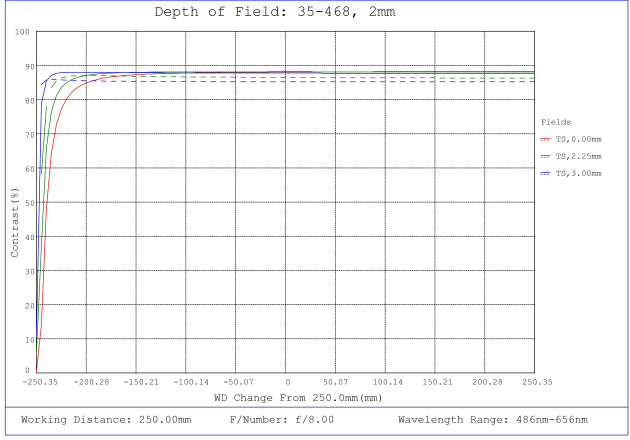
#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f8



#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Depth of Field Plot, 100mm Working Distance, f8



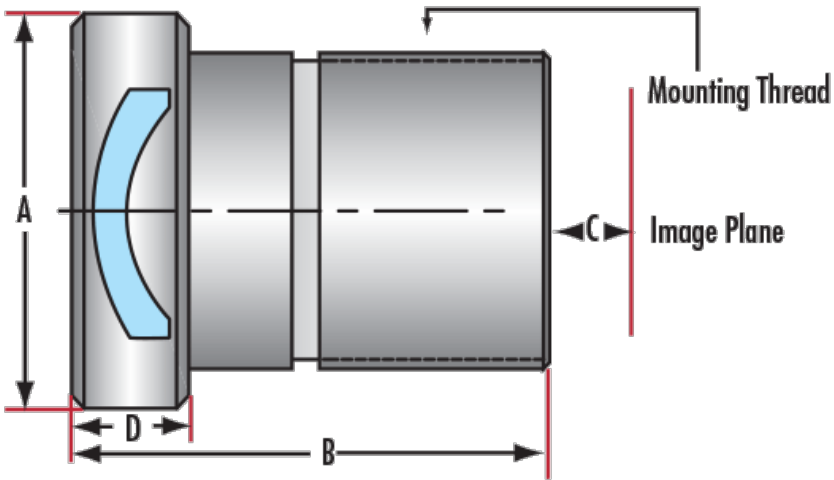
#35-468, 2mm FL f/8 IR-Cut, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f8



#35-468, 2mm FL f/8 IR-Cut, 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.