

TECHSPEC® f/1.9, 8mm Focal Length Green Series M12 Lens



8mm Focal Length, #54-853

Stock **#54-853** 20+ In Stock

-

1

+

€87<sup>00</sup>

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1+         | €87,00 each                   |
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Product Downloads

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

| Physical & Mechanical Properties |                                                                                                                          |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Fixed                            | Iris Option:                                                                                                             |
|                                  |                                                                                                                          |
| 20.40                            | Length (mm):                                                                                                             |
|                                  |                                                                                                                          |
| 14                               | Maximum Diameter (mm):                                                                                                   |
|                                  |                                                                                                                          |
| 14                               | Outer Diameter (mm):                                                                                                     |
|                                  |                                                                                                                          |
| 5                                | Weight (g):                                                                                                              |
|                                  |                                                                                                                          |
| Optical Properties               |                                                                                                                          |
|                                  | Horizontal Field of View @ Max Sensor Format:<br>95.7mm - 34.4°                                                          |
|                                  |                                                                                                                          |
|                                  | Field of View at Max Sensor Format:<br>Horizontal: 95.7mm - 34.4°<br>Vertical: 70.8mm - 25.8°<br>Diagonal: 121.8mm - 43° |
|                                  |                                                                                                                          |
|                                  | Horizontal Field of View, 1/3" Sensor:<br>95.7mm - 34.4°                                                                 |
|                                  |                                                                                                                          |
|                                  | Horizontal Field of View, 1/4" Sensor:<br>70.8mm - 25.8°                                                                 |
|                                  |                                                                                                                          |
| 108 lp/mm @20% Contrast          | Resolution:                                                                                                              |
|                                  |                                                                                                                          |
| 11.00                            | Maximum Image Circle (mm):                                                                                               |
|                                  |                                                                                                                          |
| 0.0134                           | Numerical Aperture NA, Object Side:                                                                                      |
|                                  |                                                                                                                          |
| 5(5)                             | Number of Elements (Groups):                                                                                             |
|                                  |                                                                                                                          |
| 400 - 700                        | Wavelength Range (nm):                                                                                                   |
|                                  |                                                                                                                          |
| 8.00                             | Focal Length FL (mm):                                                                                                    |
|                                  |                                                                                                                          |
| 150 - ∞                          | Working Distance (mm):                                                                                                   |
|                                  |                                                                                                                          |
| f/1.9                            | Aperture (f/#):                                                                                                          |
|                                  |                                                                                                                          |
| -5.035 @ Full Field              | Distortion (%):                                                                                                          |
|                                  |                                                                                                                          |
| 8.9 - 8.7                        | Back Focal Length BFL (mm):                                                                                              |
|                                  |                                                                                                                          |
| λ/4 MgF <sub>2</sub> @ 580nm     | Coating Specification:                                                                                                   |
|                                  |                                                                                                                          |
| 68.00                            | Entrance Pupil Position (mm):                                                                                            |
|                                  |                                                                                                                          |
| 10.70                            | Object Space Principal Plane (mm):                                                                                       |
|                                  |                                                                                                                          |
| 1.83                             | Image Space Principal Plane (mm):                                                                                        |
|                                  |                                                                                                                          |
| -5.035                           | Maximum Distortion (%):                                                                                                  |
|                                  |                                                                                                                          |
| -9.47                            | Exit Pupil Position (mm):                                                                                                |
|                                  |                                                                                                                          |
| VIS                              | Lens Wavelength Range:                                                                                                   |
|                                  |                                                                                                                          |
| Sensor                           |                                                                                                                          |
| 1/3"                             | Maximum Sensor Format:                                                                                                   |
|                                  |                                                                                                                          |
| 8.30                             | Pixel Size (μm):                                                                                                         |
|                                  |                                                                                                                          |
| Threading & Mounting             |                                                                                                                          |
| N/A                              | Filter Thread:                                                                                                           |
|                                  |                                                                                                                          |
| M12 x0.5                         | Mounting Threads:                                                                                                        |
|                                  |                                                                                                                          |
| S-Mount (M12 x0.5)               | Mount:                                                                                                                   |
|                                  |                                                                                                                          |
| Regulatory Compliance            |                                                                                                                          |

|           |  |                             |
|-----------|--|-----------------------------|
| Compliant |  | RoHS 2015:                  |
| View      |  | Certificate of Conformance: |
| Compliant |  | REACH 241:                  |

## Product Details

Optimized Working Distance: 150 - 250mm

- Up to 1/2", S-Mount Lens
- Up to 0.4 MegaPixels, 8.3µm Pixel Size Sensors
- Board Camera Lens Optimized for Close WD and Finite Conjugate
- 6mm to 25mm Focal Lengths

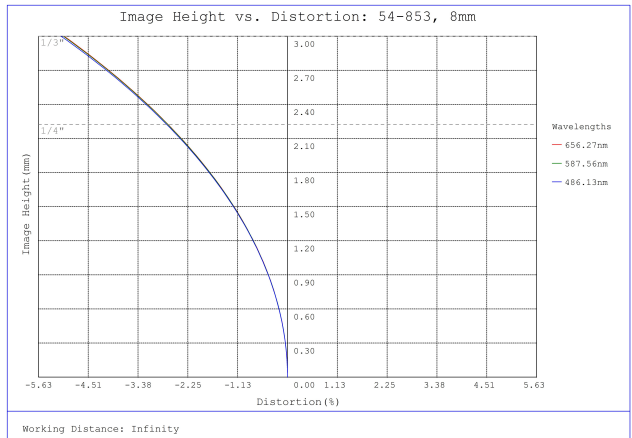
TECHSPEC® Green Series M12 Lenses designed for use in compact and board level cameras provide excellent image quality in a small, versatile package. Optimized to cover 1/3" and ½" sensor formats and weighing only a few grams, these machine vision lenses meet the most demanding space and weight restrictions. Each lens is threaded for M12 x 0.5, except the 25.0mm focal length option ([#54-855](#)). TECHSPEC® Green Series M12 Lenses are ideal for wide angle and close focus applications, large area inspect for the automotive, forensic, pharmaceutical, and food industries. Prescription data is available by submitting a [Request for Prescription Form](#).

**Note:** Compatible [TECHSPEC M12 Imaging Lens Accessories](#) available.

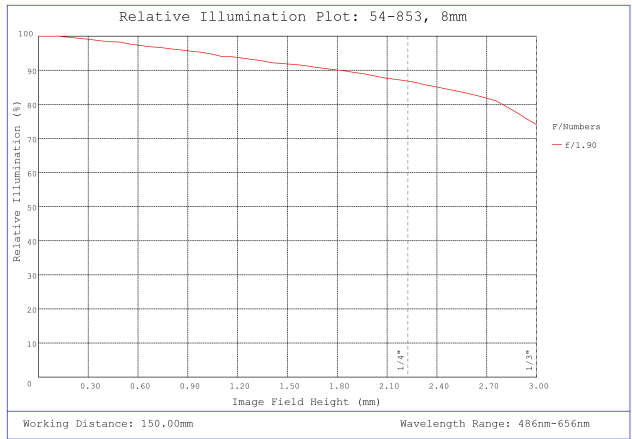
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

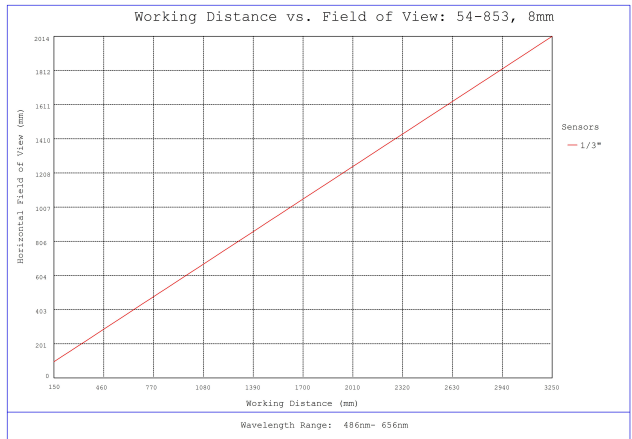
## Technical Information



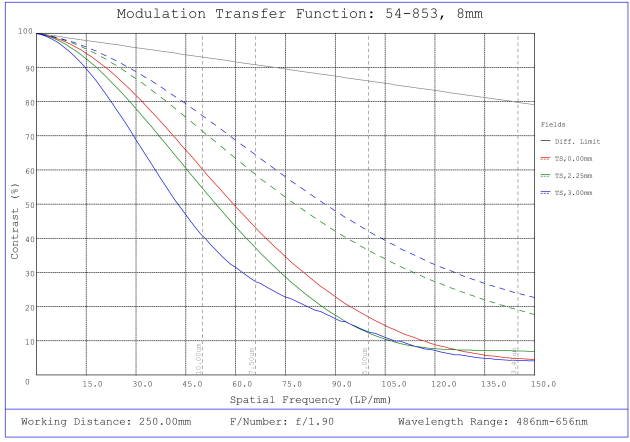
#54-853, f/1.9, 8mm Focal Length Green Series M12 Lens, Distortion Plot



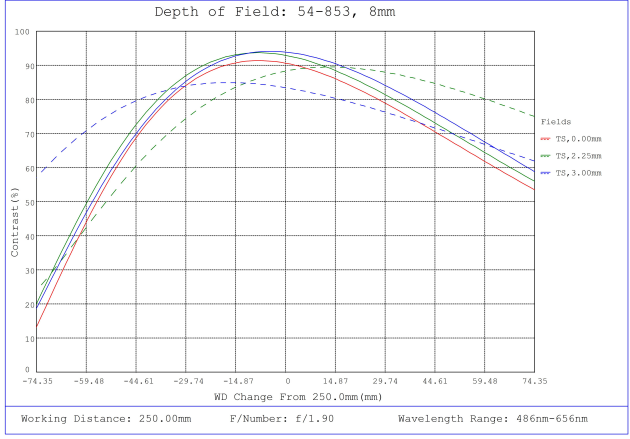
#54-853, f/1.9, 8mm Focal Length Green Series M12 Lens, Relative Illumination Plot



#54-853, f/1.9, 8mm Focal Length Green Series M12 Lens, Working Distance versus Field of View Plot

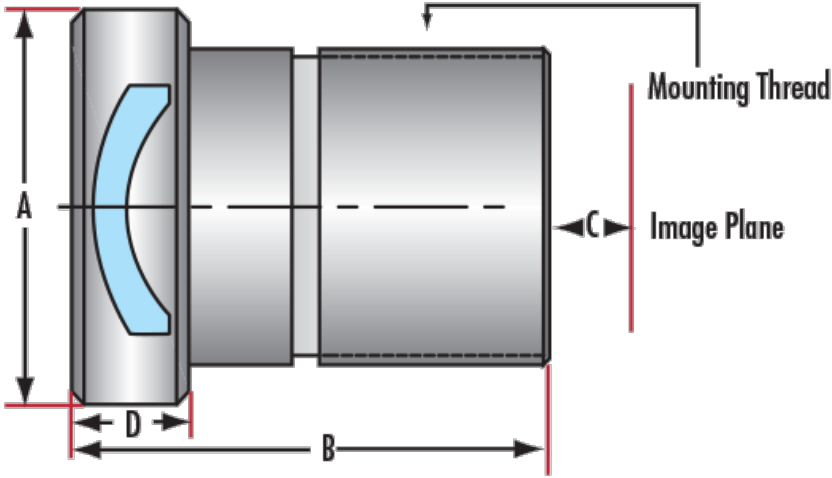


#54-853, f/1.9, 8mm Focal Length Green Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f1.9



#54-853, f/1.9, 8mm Focal Length Green Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f1.9

| Focal Length | A    | B     | C**         | D   | Mounting Thread |
|--------------|------|-------|-------------|-----|-----------------|
| 6.00         | 14.0 | 11.70 | 4.0 - 3.9   | 3.5 | M12 x0.5        |
| 8.00         | 14.0 | 20.40 | 8.9 - 8.7   | 6.0 | M12 x0.5        |
| 12.00        | 16.0 | 19.50 | 7.1 - 6.75  | 6.0 | M12 x0.5        |
| 25.00        | 18.0 | 24.40 | 12.6 - 11.9 | 9.0 | M16 x0.5        |



\*\*Minor adjustment required to match WD limits.