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TECHSPEC®

f/2, 12mm Focal Length Green Series M12 Lens



12mm Focal Length, #54-854

Stock **#54-854** [CONTACT US](#)

-

1

+

₹5,298

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

Physical & Mechanical Properties

|       |                        |
|-------|------------------------|
| Fixed | Iris Option:           |
| 19.50 | Length (mm):           |
| 16    | Maximum Diameter (mm): |
| 16    | Outer Diameter (mm):   |
| 6     | Weight (g):            |

Optical Properties

|                                                                                                                          |                                     |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Horizontal Field of View @ Max Sensor Format:<br>80.5mm - 30.1°                                                          |                                     |
| Field of View at Max Sensor Format:<br>Horizontal: 80.5mm - 30.1°<br>Vertical: 60mm - 22.7°<br>Diagonal: 101.5mm - 37.5° |                                     |
| Horizontal Field of View, 1/2" Sensor:<br>80.5mm - 30.1°                                                                 |                                     |
| Horizontal Field of View, 1/2.5" Sensor:<br>72.7mm - 27.4°                                                               |                                     |
| Horizontal Field of View, 1/3" Sensor:<br>60.0mm - 22.7°                                                                 |                                     |
| Horizontal Field of View, 1/4" Sensor:<br>44.9mm - 17.1°                                                                 |                                     |
| 150 lp/mm @20% Contrast                                                                                                  | Resolution:                         |
| 8.00                                                                                                                     | Maximum Image Circle (mm):          |
| 0.0191                                                                                                                   | Numerical Aperture NA, Object Side: |
| 5(5)                                                                                                                     | Number of Elements (Groups):        |
| 400 - 700                                                                                                                | Wavelength Range (nm):              |
| 12.00                                                                                                                    | Focal Length FL (mm):               |
| 150 - ∞                                                                                                                  | Working Distance (mm):              |
| f/2                                                                                                                      | Aperture (f/#):                     |
| -2.2 @ Full Field                                                                                                        | Distortion (%):                     |
| 7.1 - 6.75                                                                                                               | Back Focal Length BFL (mm):         |
| λ/4 MgF <sub>2</sub> @ 580nm                                                                                             | Coating Specification:              |
| 7.50                                                                                                                     | Entrance Pupil Position (mm):       |
| 10.41                                                                                                                    | Object Space Principal Plane (mm):  |
| -3.73                                                                                                                    | Image Space Principal Plane (mm):   |
| -2.2                                                                                                                     | Maximum Distortion (%):             |
| -7.56                                                                                                                    | Exit Pupil Position (mm):           |
| VIS                                                                                                                      | Lens Wavelength Range:              |

Sensor

|      |                        |
|------|------------------------|
| 1/2" | Maximum Sensor Format: |
| 8.30 | Pixel Size (μm):       |

Threading & Mounting

|                     |                   |
|---------------------|-------------------|
| N/A                 | Filter Thread:    |
| M12 x 0.5           | Mounting Threads: |
| S-Mount (M12 x 0.5) | Mount:            |

| Regulatory Compliance               |                             |
|-------------------------------------|-----------------------------|
| Compliant                           | RoHS 2015:                  |
|                                     |                             |
| View                                | Certificate of Conformance: |
|                                     |                             |
| Compliant                           | REACH 241:                  |
|                                     |                             |
|                                     |                             |
| China                               | Country of Origin:          |
|                                     |                             |
| Edmund Optics India Private Limited | Imported By:                |
|                                     |                             |

## 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

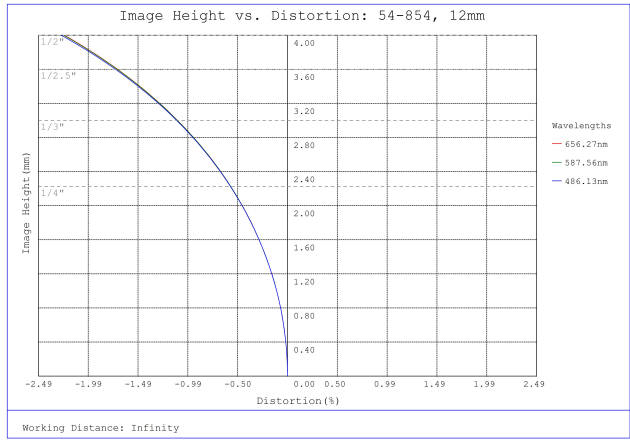
TECHSPEC® Green Series M12 Lenses designed for use in compact and board level cameras provide excellent image quality in a small, versatile package. Optimized to cover 1/3" and 1/2" sensor formats and weighing only a few grams, these machine vision lenses meet the most demanding space and weight restrictions. Each lens is threaded for M12 x0.5, 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.

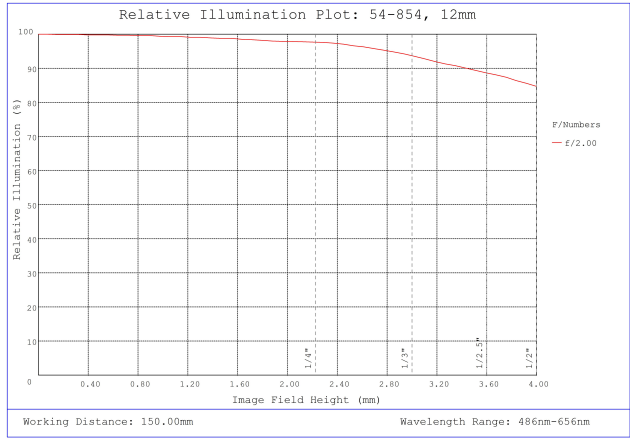
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

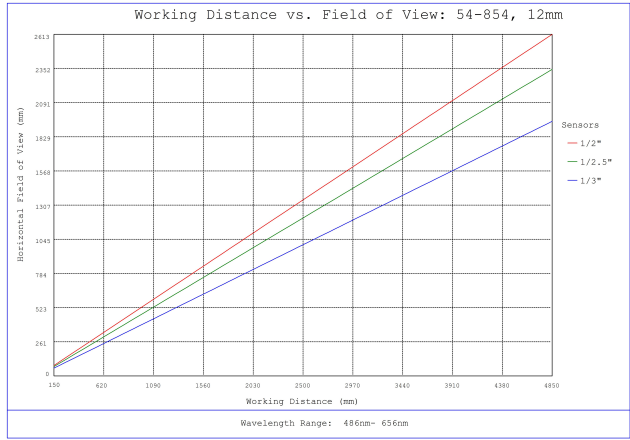
## Technical Information



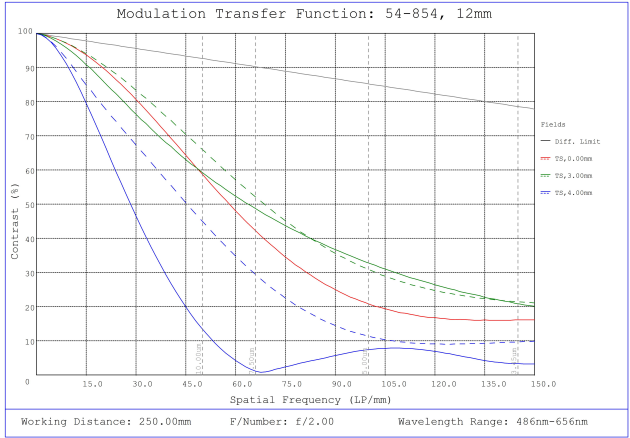
#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Distortion Plot



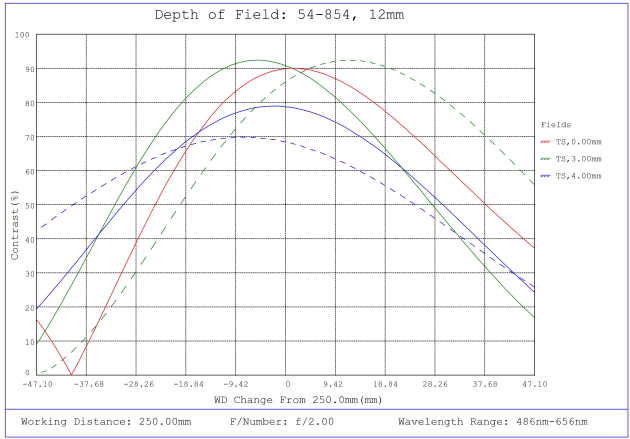
#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Relative Illumination Plot



#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Working Distance versus Field of View Plot

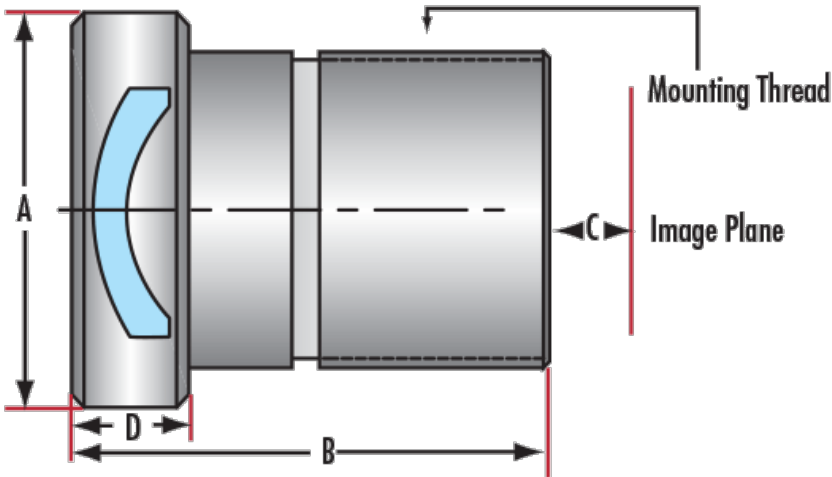


#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f2



#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f2

| 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.