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



12mm Focal Length, #54-854

Stock **#54-854** **20+ In Stock**

⊖ 1 ⊕ **S\$114<sup>00</sup>**

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Volume Pricing	
Qty 1-49	<b>S\$114.00</b> each
Qty 50+	<b>S\$91.00</b> each
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**General**

Green Series **Product Family:**

M12 Imaging Lens **Type:**

No **IR Cut Filter:**

Standard Lens **Imaging Lens Type:**

## Physical & Mechanical Properties

Fixed	<b>Iris Option:</b>
19.50	<b>Length (mm):</b>
16	<b>Maximum Diameter (mm):</b>
16	<b>Outer Diameter (mm):</b>
6	<b>Weight (g):</b>

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
80.5mm - 30.1°

**Field of View at Max Sensor Format:**  
Horizontal: 80.5mm - 30.1°  
Vertical: 60mm - 22.7°  
Diagonal: 101.5mm - 37.5°

**Horizontal Field of View, 1/2" Sensor:**  
80.5mm - 30.1°

**Horizontal Field of View, 1/2.5" Sensor:**  
72.7mm - 27.4°

**Horizontal Field of View, 1/3" Sensor:**  
60.0mm - 22.7°

**Horizontal Field of View, 1/4" Sensor:**  
44.9mm - 17.1°

**Resolution:**  
150 lp/mm @20% Contrast

**Maximum Image Circle (mm):**  
8.00

**Numerical Aperture NA, Object Side:**  
0.0191

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

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

**Focal Length FL (mm):**  
12.00

**Working Distance (mm):**  
150 - ∞

**Aperture (f#):**  
f/2

**Distortion (%):**  
-2.2 @ Full Field

**Back Focal Length BFL (mm):**  
7.1 - 6.75

**Coating Specification:**  
M4 MgF<sub>2</sub> @ 580nm

**Entrance Pupil Position (mm):**  
7.50

**Object Space Principal Plane (mm):**  
10.41

**Image Space Principal Plane (mm):**  
-3.73

**Maximum Distortion (%):**  
-2.2

**Exit Pupil Position (mm):**  
-7.56

**Lens Wavelength Range:**  
VIS

## Sensor

**Maximum Sensor Format:**  
1/2"

**Pixel Size (µm):**  
8.30

## Threading & Mounting

**Filter Thread:**  
N/A

**Mounting Threads:**  
M12 x 0.5

**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

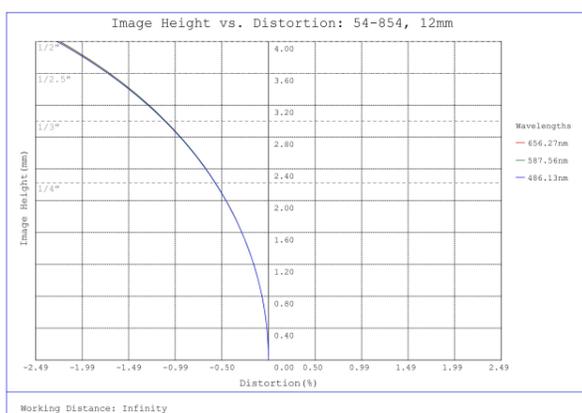
TECHSPEC® Green Series M12 Lenses designed for use in compact and board level cameras provide excellent image quality in a small, versatile package. Optimized to cover 1/3" and 1/2" sensor formats and weighing only a few grams, these machine vision lenses meet the most demanding space and weight restrictions.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

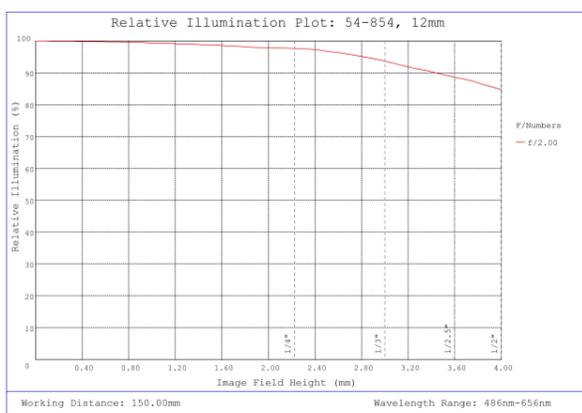
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

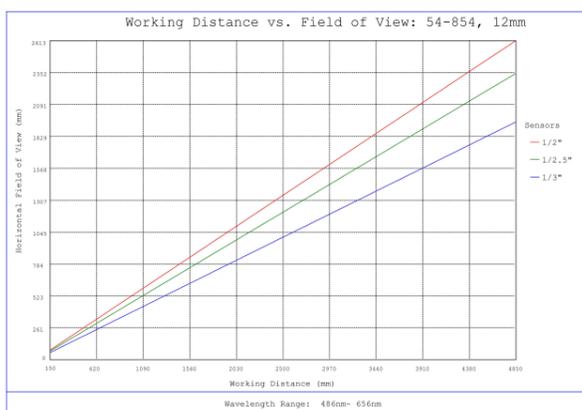
## Technical Information



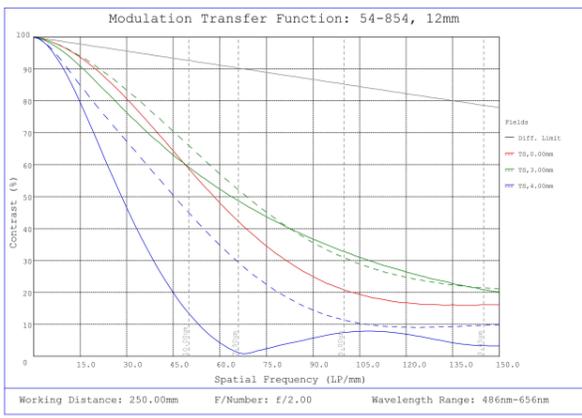
#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Distortion Plot



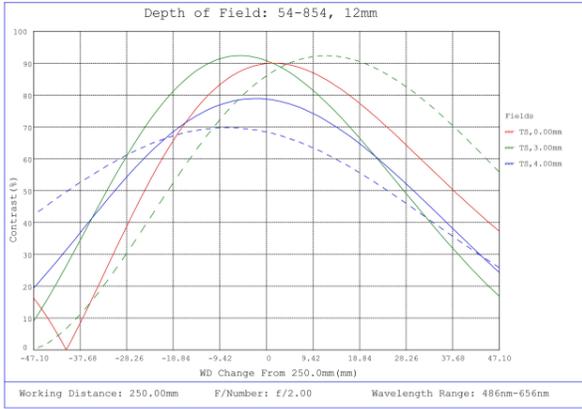
#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Relative Illumination Plot



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

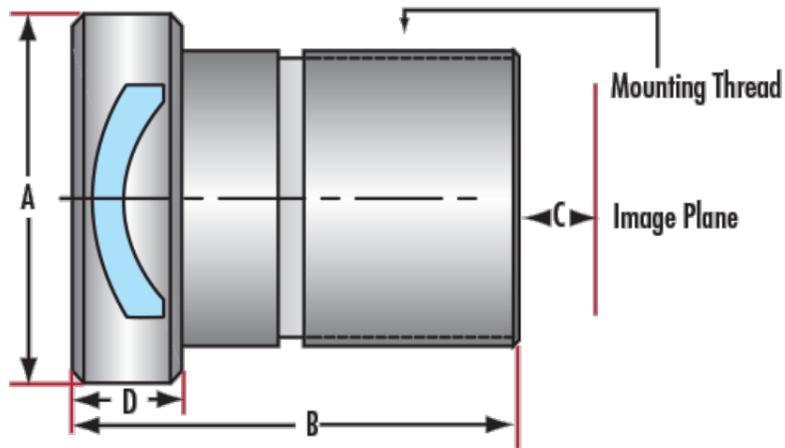


#54-854, f/2, 12mm Focal Length Green Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f2



#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 x 0.5
8.00	14.0	20.40	8.9 - 8.7	6.0	M12 x 0.5
12.00	16.0	19.50	7.1 - 6.75	6.0	M12 x 0.5
25.00	18.0	24.40	12.6 - 11.9	9.0	M16 x 0.5



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