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TECHSPEC® 8.0mm FL, Red Series M12 Lens



8.0mm Focal Length, #69-255

Stock **#69-255 20+ In Stock**

⊖ 1 ⊕ C\$159⁰⁰

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Volume Pricing	
Qty 1-49	C\$159.60 each
Qty 50+	C\$126.00 each
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General

Red Series **Product Family:**

M12 Imaging Lens **Type:**

No **IR Cut Filter:**

Standard Lens **Imaging Lens Type:**

Physical & Mechanical Properties

Fixed	Iris Option:
15.00	Length (mm):
14	Maximum Diameter (mm):
14	Outer Diameter (mm):
5	Weight (g):

Optical Properties

Horizontal Field of View @ Max Sensor Format:
341.7mm - 46.1°

Field of View at Max Sensor Format:
Horizontal: 341.8mm - 46.1°
Vertical: 249.7mm - 34.5°
Diagonal: 442.8mm - 57.8°

Horizontal Field of View, 1/2" Sensor:
341.7mm - 46.1°

Horizontal Field of View, 1/2.5" Sensor:
306.3mm - 41.8°

Horizontal Field of View, 1/3" Sensor:
249.6mm - 34.5°

Horizontal Field of View, 1/4" Sensor:
184.6mm - 25.9°

Maximum Image Circle (mm):
8.00

Numerical Aperture NA, Object Side:
0.0039

Resolution, On-Axis:
145 lp/mm @ 20% Contrast

Resolution, Full Field:
125 lp/mm @ 20% Contrast

Number of Elements (Groups):
6 (5)

Wavelength Range (nm):
400 - 700

Focal Length FL (mm):
8.00

Working Distance (mm):
400 - ∞

Aperture (f/#):
f/2.5

Distortion (%):
-9.15 @ Full Field

Back Focal Length BFL (mm):
8.67 - 8.53

Coating:
425 - 675nm BBAR

Coating Specification:
λ/2 SiO₂ @ 425 - 675nm

Entrance Pupil Position (mm):
3.67

Object Space Principal Plane (mm):
7.82

Image Space Principal Plane (mm):
0.97

Maximum Distortion (%):
-9.15

Exit Pupil Position (mm):
-7.65

Lens Wavelength Range:
VIS

Sensor

Maximum Sensor Format:
1/2"

Pixel Size (μm):
5.00

Threading & Mounting

Filter Thread:

N/A

Mount:

S-Mount (M12 x0.5)

Regulatory Compliance

RoHS 2015:

Compliant

Certificate of Conformance:

View

Reach 235:

Compliant

Product Details

- Up to 1/2", S-Mount Lens
- Up to 1.3 MegaPixels, 5µm Pixel Size Sensors
- Board Camera Lens Optimized Long WD and Infinite Conjugate
- 3.6mm to 8mm Focal Lengths

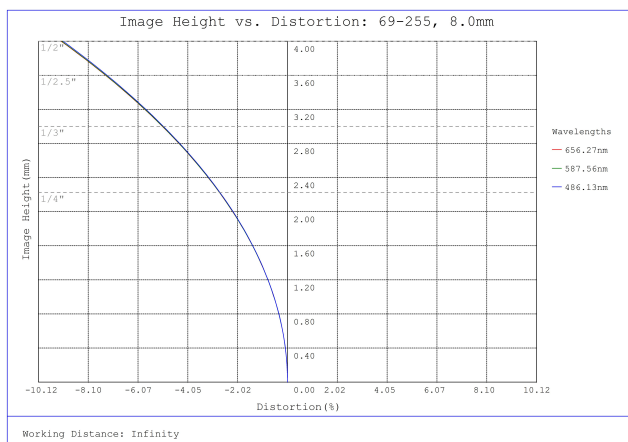
TECHSPEC® Red Series M12 Lenses feature a high resolution, all glass element design. The slight negative (barrel) distortion can be easily factored out since the Angular Field of View is increased, thereby offering more workable field of view (FOV) in the object domain. Threaded for M12 x0.5, these lenses are optimized for 1/3" and 1/2" sensor formats. TECHSPEC® Red Series M12 Lenses are ideal for demanding imaging applications. Prescription data is available by submitting a [Request for Prescription Form](#).

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

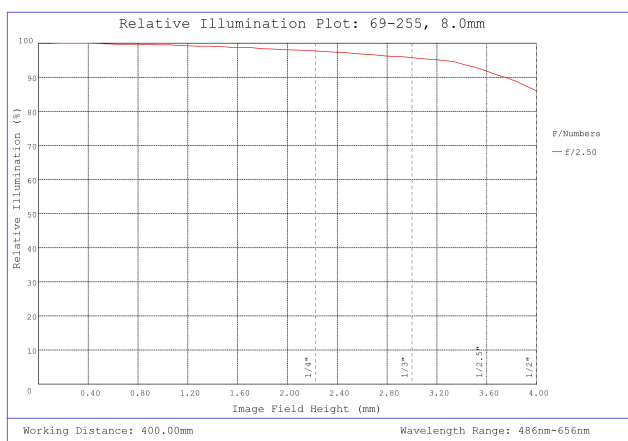
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

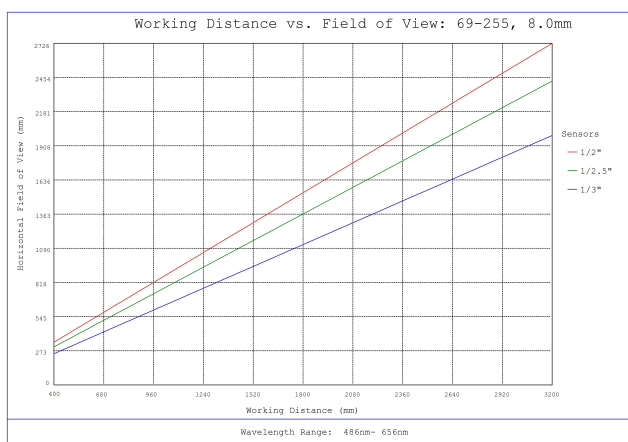
Technical Information



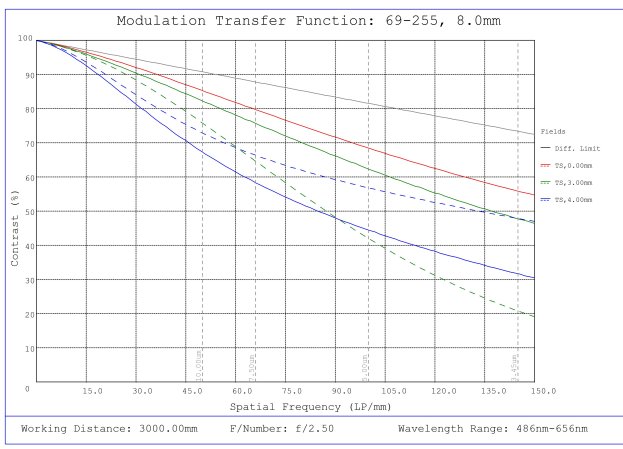
#69-255, 8.0mm FL, Red Series M12 Lens, Distortion Plot



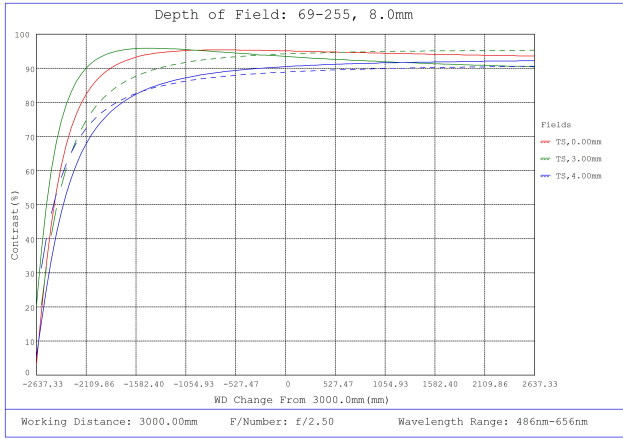
#69-255, 8.0mm FL, Red Series M12 Lens, Relative Illumination Plot



#69-255, 8.0mm FL, Red Series M12 Lens, Working Distance versus Field of View Plot



#69-255, 8.0mm FL, Red Series M12 Lens, Modulated Transfer Function (MTF) Plot, 3000mm Working Distance, f2.5



#69-255, 8.0mm FL, Red Series M12 Lens, Depth of Field Plot, 3000mm Working Distance, f2.5

Focal Length	A	B	C	D
3.6	14	14.6	4.5	4.2
4.4	14	24	6.4	3.8
6.4	14	30	10.2	3.8
7.2	14	22.1	8.3	4.0
8.0	14	15	8.7	4.0

