TECHSPEC® 4mm FL f/4.0, Blue Series M12 Lens

4mm FL Blue Series M12 Lens

Stock **#89-345** **11 In Stock**

- 1 + **A$137.00**

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Volume Pricing	
Qty 1-49	**A$137.00** each
Qty 50+	**A$108.00** each
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SPECIFICATIONS

General

Series:

Blue Series

Type:
M12 Imaging Lens

IR Cut Filter:
No

Imaging Lens Type:
High Performance M12 Lens

Physical & Mechanical Properties

Iris Option:
Fixed

Length (mm):
19.70

Maximum Diameter (mm):
14

Outer Diameter (mm):
14

Weight (g):
6

Optical Properties

Horizontal Field of View @ Max Sensor Format:
71.1°

Field of View at Max Sensor Format:
Horizontal: 220mm - 71.1°
Vertical: 152.6mm - 52.6°
Diagonal: 310.8mm - 90.8°

Horizontal Field of View, 1/3" Sensor:
219.4mm - 71.0°

Horizontal Field of View, 1/4" Sensor:
152.3mm - 52.5°

Maximum Image Circle (mm):
6.00

Numerical Aperture NA, Object Side:
0.0032

Number of Elements (Groups):
6(5)

Wavelength Range (nm):
400 - 700

Focal Length FL (mm):
4.00

Working Distance (mm):
150 - ∞

Aperture (f/#):
f/4

Distortion (%):
-25.68 @ Full Field

Back Focal Length BFL (mm):
6.1 - 6.0

Coating Specification:
λ/4 MgF_2 @ 550nm

Entrance Pupil Position (mm):
5.21

Object Space Principal Plane (mm):
7.83

Image Space Principal Plane (mm):
2.85

Maximum Distortion (%):
-25.68

Exit Pupil Position (mm):
-4.99

Lens Wavelength Range:
VIS

Sensor

Maximum Sensor Format:
1/3"

Pixel Size (µm):
1.40

Threading & Mounting

Filter Thread:
N/A

Mount:
S-Mount (M12 x 0.5)

Regulatory Compliance

RoHS 2015:	Compliant
Certificate of Conformance:	View
Reach 247:	Compliant

PRODUCT DETAILS

- Up to ½", 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

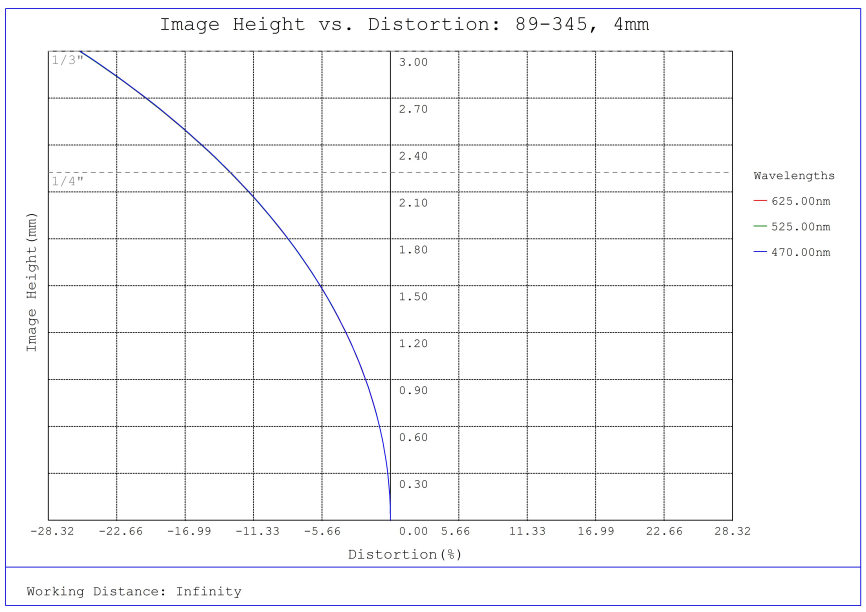
TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great versatility of our **TECHSPEC® Green Series M12 Lenses**. Each lens consists of several precision glass elements mounted in a compact, aluminum housing. These lenses can connect to C-Mount cameras using the M12 x 0.5 Adapter for C-Mount Cameras (**#53-675**) or the M12 x 0.5 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.

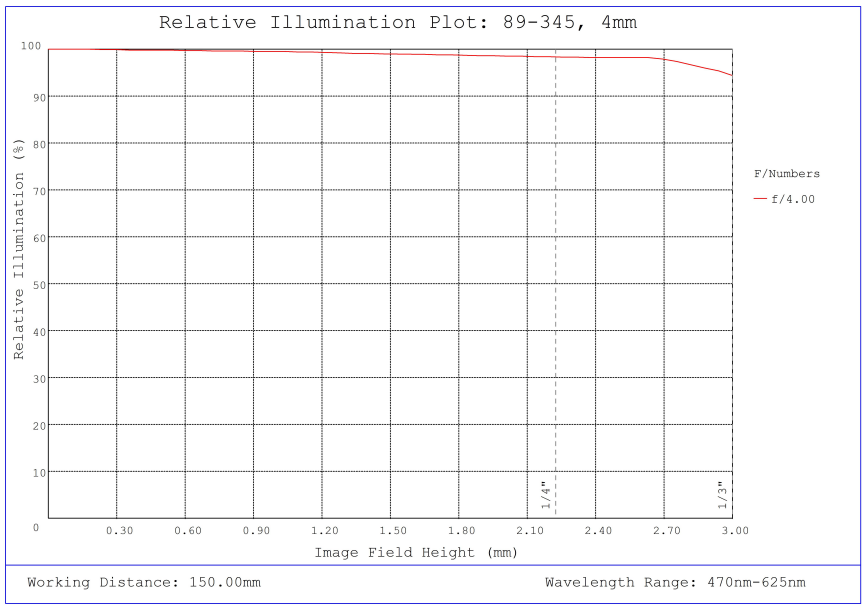
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

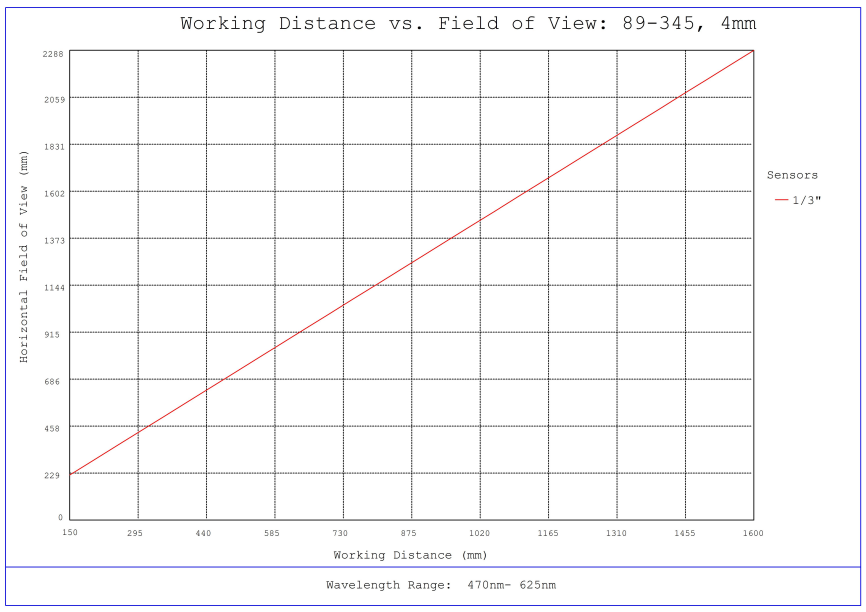
TECHNICAL INFORMATION



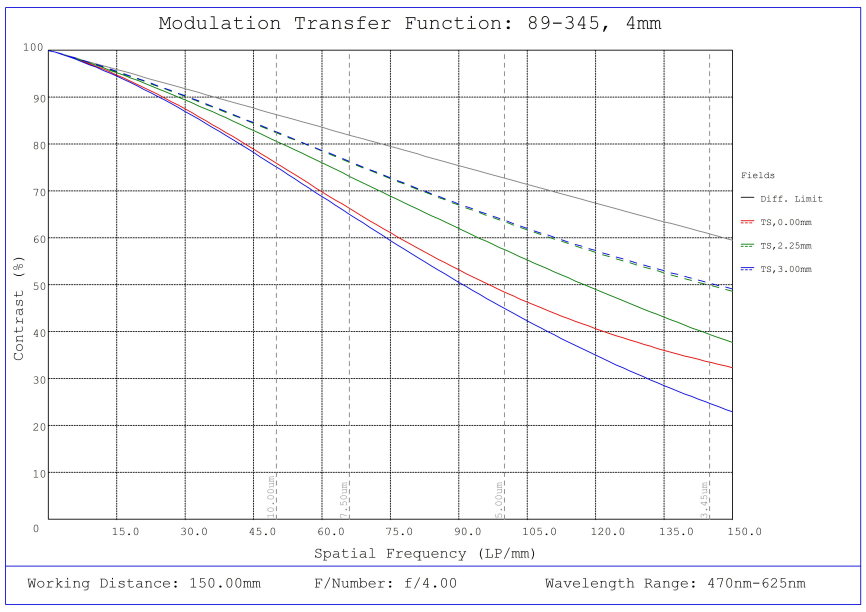
#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Distortion Plot



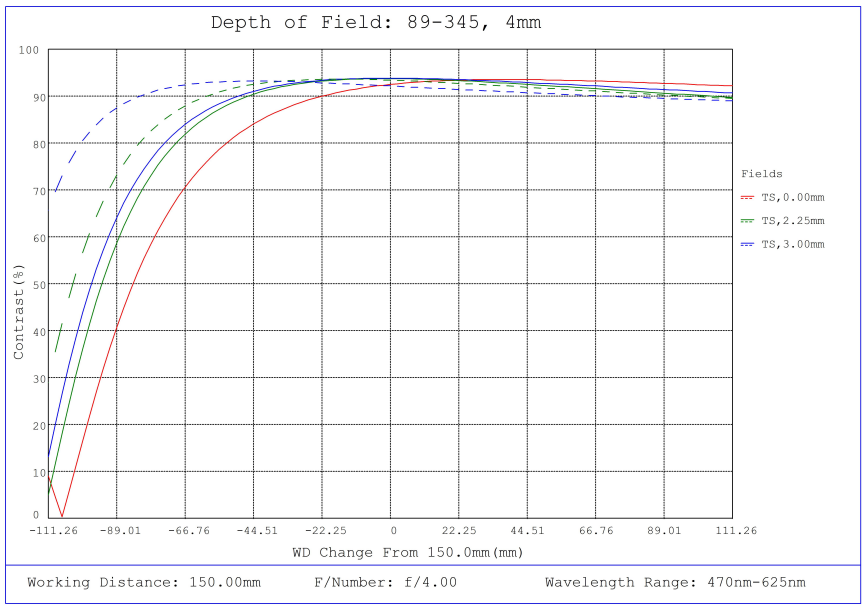
#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Relative Illumination Plot



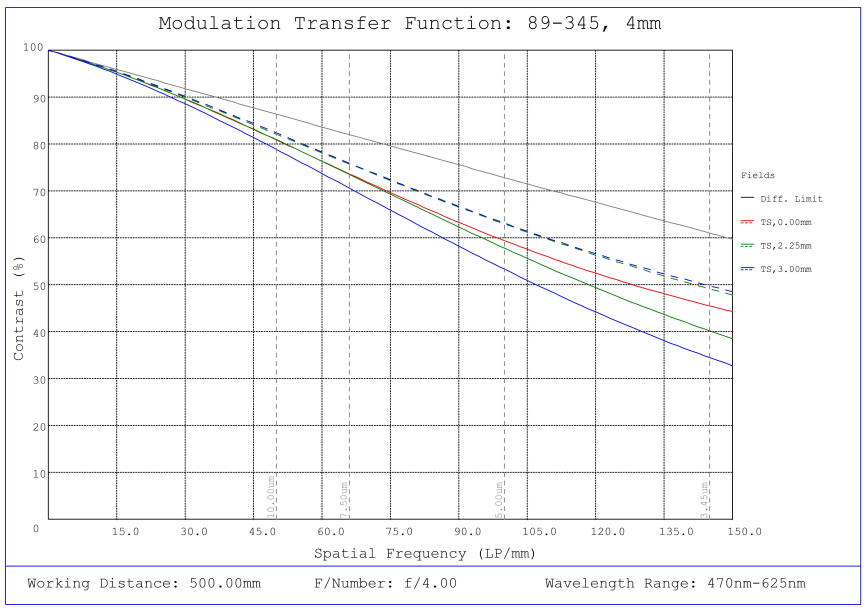
#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Working Distance versus Field of View Plot



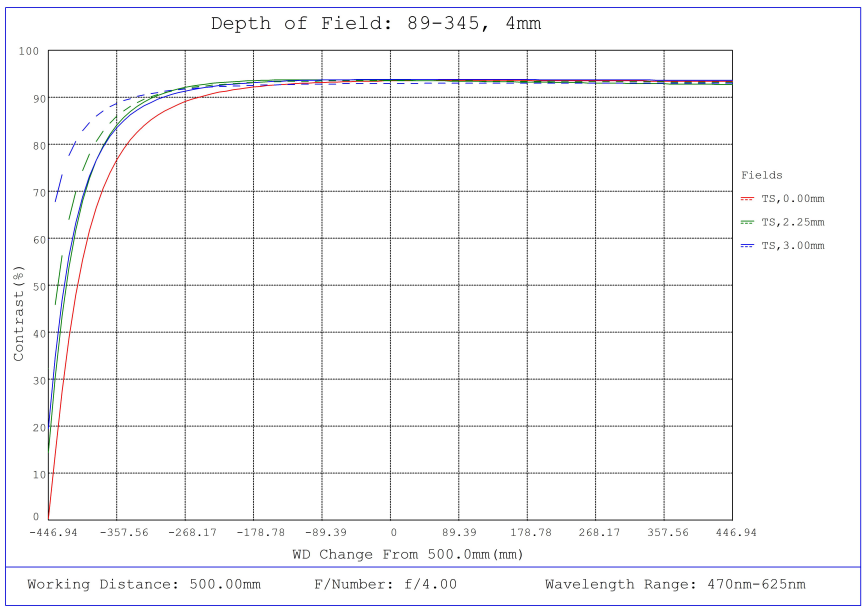
#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f4



#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Depth of Field Plot, 150mm Working Distance, f4

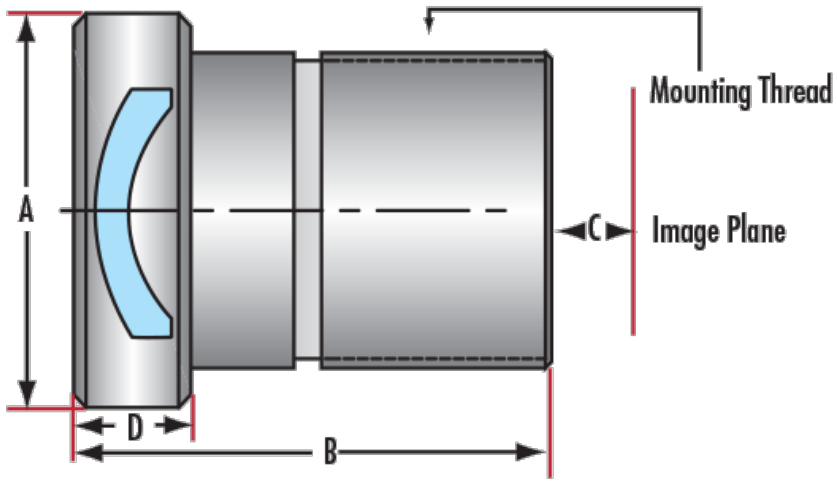


#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f4



#89-345, 4mm FL f/4.0, Blue Series M12 Lens, Depth of Field Plot, 500mm Working Distance, f4

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.