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TECHSPEC® 2mm FL f/2.5 Rugged Blue Series M12 Lens

2mm FL Rugged Blue Series M12 Lens

Stock **#36-343** **20+ In Stock**

- 1 + **A$198.00**

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Volume Pricing	
Qty 1-49	**A$198.00** each
Qty 50+	**A$156.00** each
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General

Series:	Rugged Blue Series
Type:	M12 Imaging Lens
IR Cut Filter:	No

Imaging Lens Type:
High Performance Lens, Ruggedized to Withstand 50g of Shock

Physical & Mechanical Properties

Iris Option:
Fixed

Length (mm):
21.74

Maximum Diameter (mm):
18

Outer Diameter (mm):
18

Weight (g):
9

Optical Properties

Horizontal Field of View @ Max Sensor Format:
464.4mm - 131.5°

Field of View at Max Sensor Format:
Horizontal: 477.2mm - 133.1°
Vertical: 249.3mm - 100.2°
Diagonal: 1590.3mm - 165.3°

Horizontal Field of View, 1/3" Sensor:
464.4mm - 131.5°

Horizontal Field of View, 1/4" Sensor:
243.3mm - 98.6°

Maximum Image Circle (mm):
6.00

Numerical Aperture NA, Object Side:
0.0017

Number of Elements (Groups):
6(5)

Wavelength Range (nm):
400 - 700

Focal Length FL (mm):
2.00

Working Distance (mm):
100 - ∞

Aperture (f/#):
f/2.5

Distortion (%):
-81.065 @ Full Field

Back Focal Length BFL (mm):
2.26

Coating Specification:
$\lambda/4$ MgF_2 @ 550nm

Entrance Pupil Position (mm):
4.51

Object Space Principal Plane (mm):
6.31

Image Space Principal Plane (mm):
0.96

Maximum Distortion (%):
-81.065

Exit Pupil Position (mm):
-13.41

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)

Environmental & Durability Factors

Type of Ruggedization:
Stabilized (Robust Mechanics for Shock and Vibration)

Regulatory Compliance

View	**Certificate of Conformance:**

Product Details

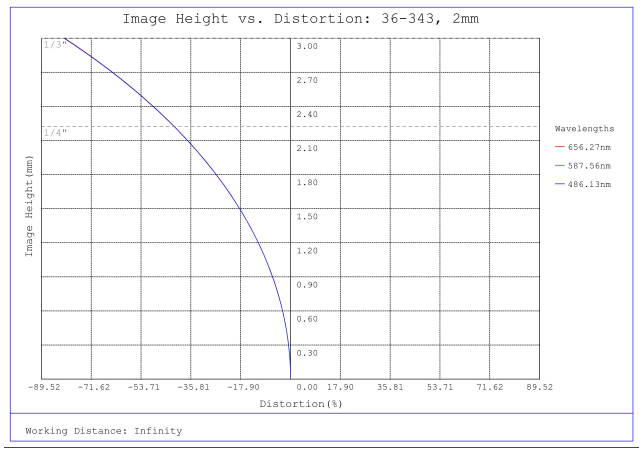
- Up to ½", S-Mount Lens
- Up to 5 MegaPixels, 1.4µm Pixel Size Sensors
- Ruggedized Designs (50g Shock) of our Blue Series Lens with Individual Optics Glued in Place
- 2mm to 25mm Focal Length
- **Non-Ruggedized Designs** Also Available

TECHSPEC® Rugged Blue Series M12 Lenses have **stabilized ruggedization**, protecting the lens from damage, while reducing pixel shift and maintaining optical pointing stability after shock and vibration. Each lens consists of several precision glass optics that are glued in place inside a compact, aluminum housing. Gluing the glass optics prevents even the smallest movements that often cause pixel shift. Object to image mapping is maintained even after heavy shock and vibration; if the center of the object maps onto the center pixel, it will always map to that same center pixel. TECHSPEC Rugged Blue Series M12 Lenses are ideal for calibrated imaging applications such as measurement and gauging, 3D stereo vision, robotics and sensing, autonomous vehicles, and object tracking. These lenses are available in a variety of f/# options ranging from f/2.5 to f/8.

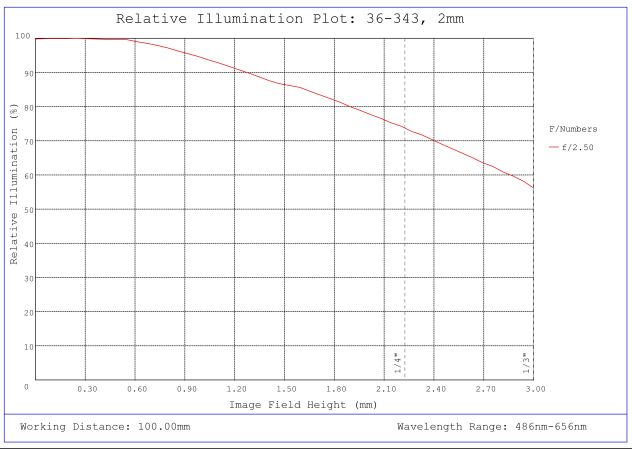
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

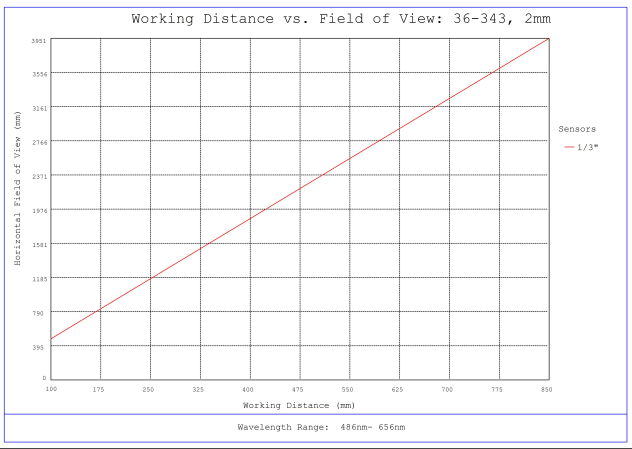
Technical Information



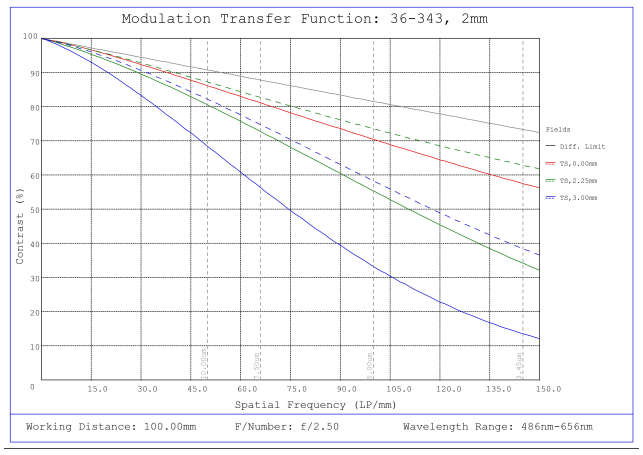
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Distortion Plot



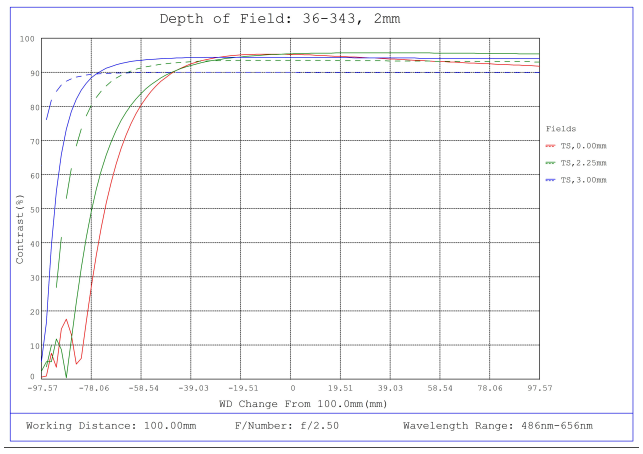
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Relative Illumination Plot



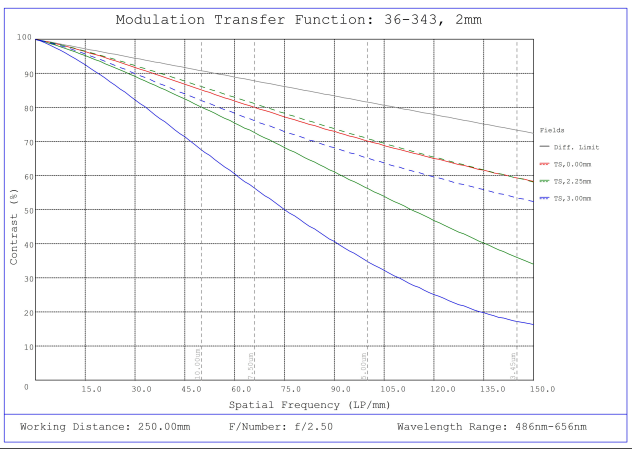
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Working Distance versus Field of View Plot



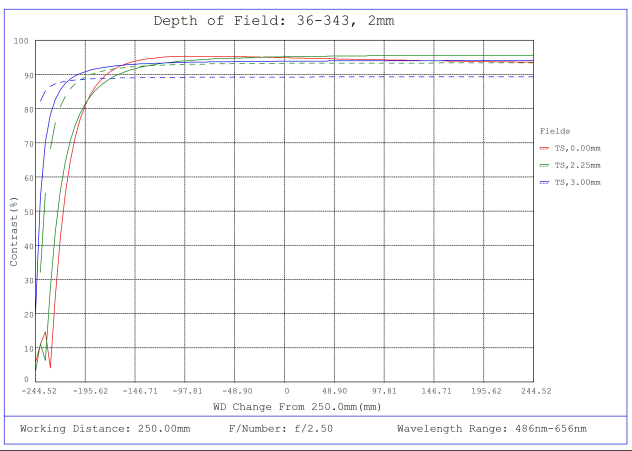
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f2.5



#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Depth of Field Plot, 100mm Working Distance, f2.5



#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f2.5



#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f2.5

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