

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

#36-343



2mm FL Rugged Blue Series M12 Lens

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.

Outer Diameter (mm):	18
Wavelength Range (nm):	400 - 700
Back Focal Length BFL (mm):	2.26
IR Cut Filter:	No
Imaging Lens Type:	High Performance Lens, Ruggedized to Withstand 50g of Shock

## Optical

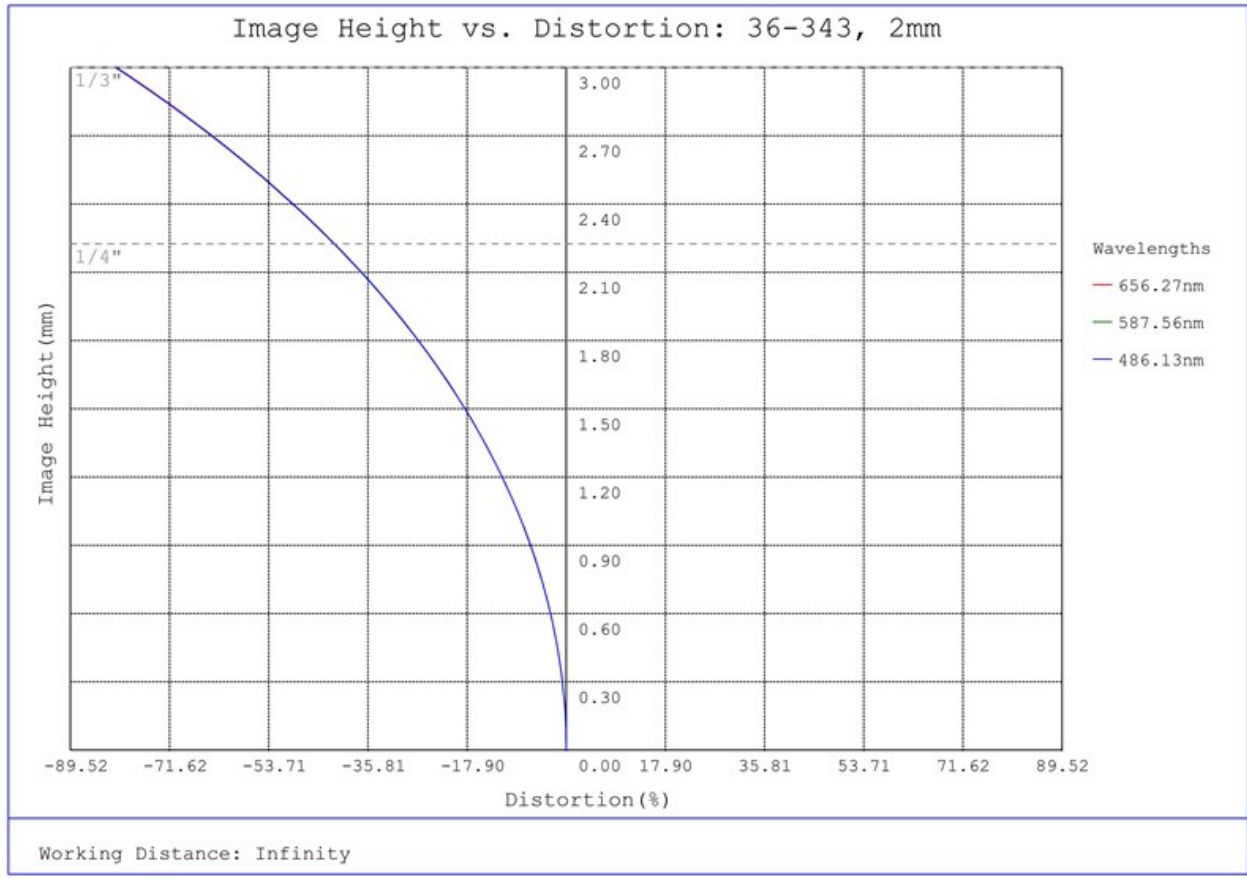
Horizontal Field of View, 1/3" Sensor:	464.4mm - 131.5°
Maximum Image Circle (mm):	6.00
Numerical Aperture NA, Object Side:	0.0017
Horizontal Field of View @ Max Sensor Format:	464.4mm - 131.5°
Focal Length FL (mm):	2.00
Primary Magnification PMAG:	0.020X
Maximum Sensor Format:	1/3"
Working Distance (mm):	100 - ∞
Aperture (f/#):	f/2.5
Distortion (%):	-81.065 @ Full Field
Coating Specification:	λ/4 MgF <sub>2</sub> @ 550nm
Entrance Pupil Position (mm):	4.51
Horizontal Field of View, 1/4" Sensor:	243.3mm - 98.6°
Object Space Principal Plane (mm):	6.31
Image Space Principal Plane (mm):	0.96
Field of View at Max Sensor Format:	Horizontal: 477.2mm - 133.1° Vertical: 249.3mm - 100.2° Diagonal: 1590.3mm - 165.3°
Exit Pupil Position (mm):	-13.41
Lens Wavelength Range:	VIS

## Mechanical

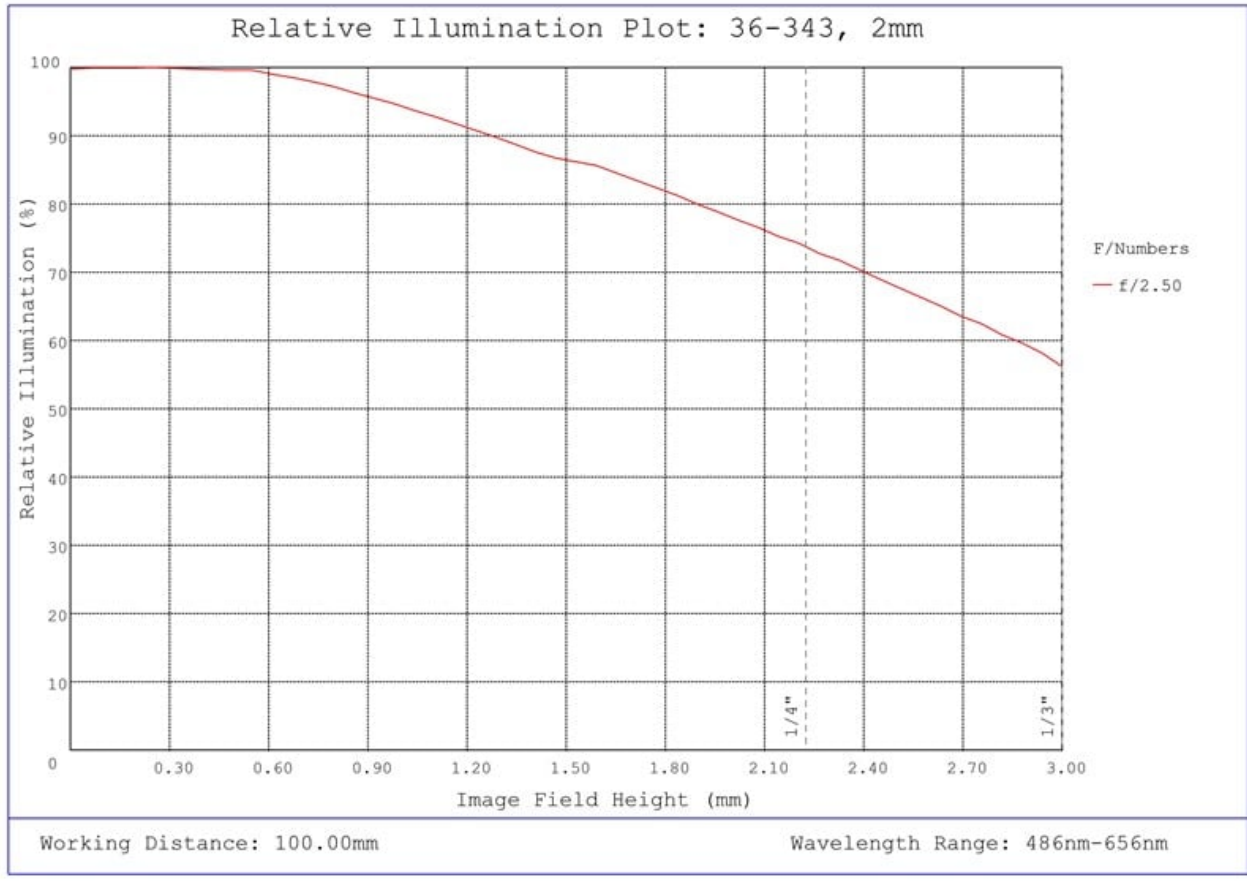
Length (mm):	21.74
Maximum Diameter (mm):	18
Weight (g):	9
Number of Elements (Groups):	6(5)
Mount:	M12 x 0.5 (S-Mount)

## General

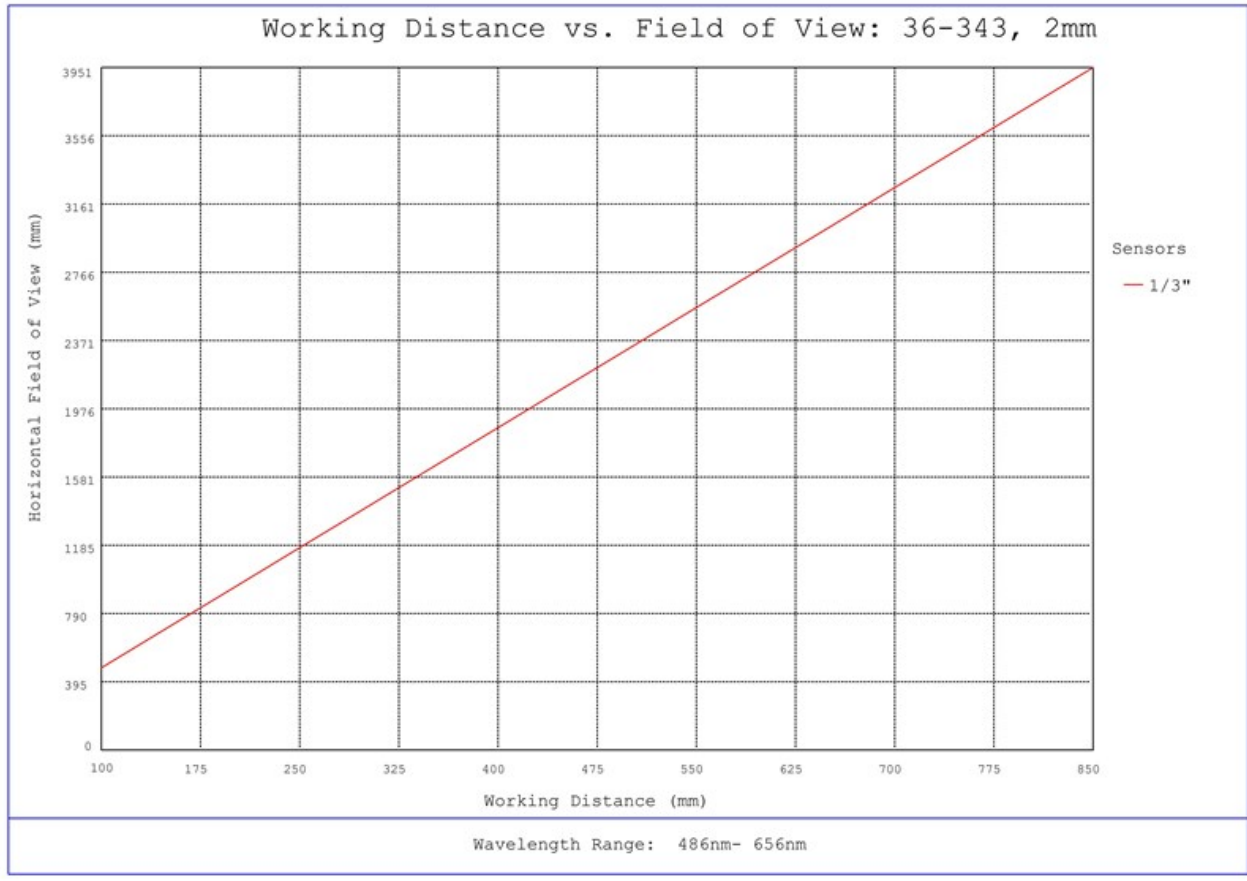
Type:	M12 Imaging Lens
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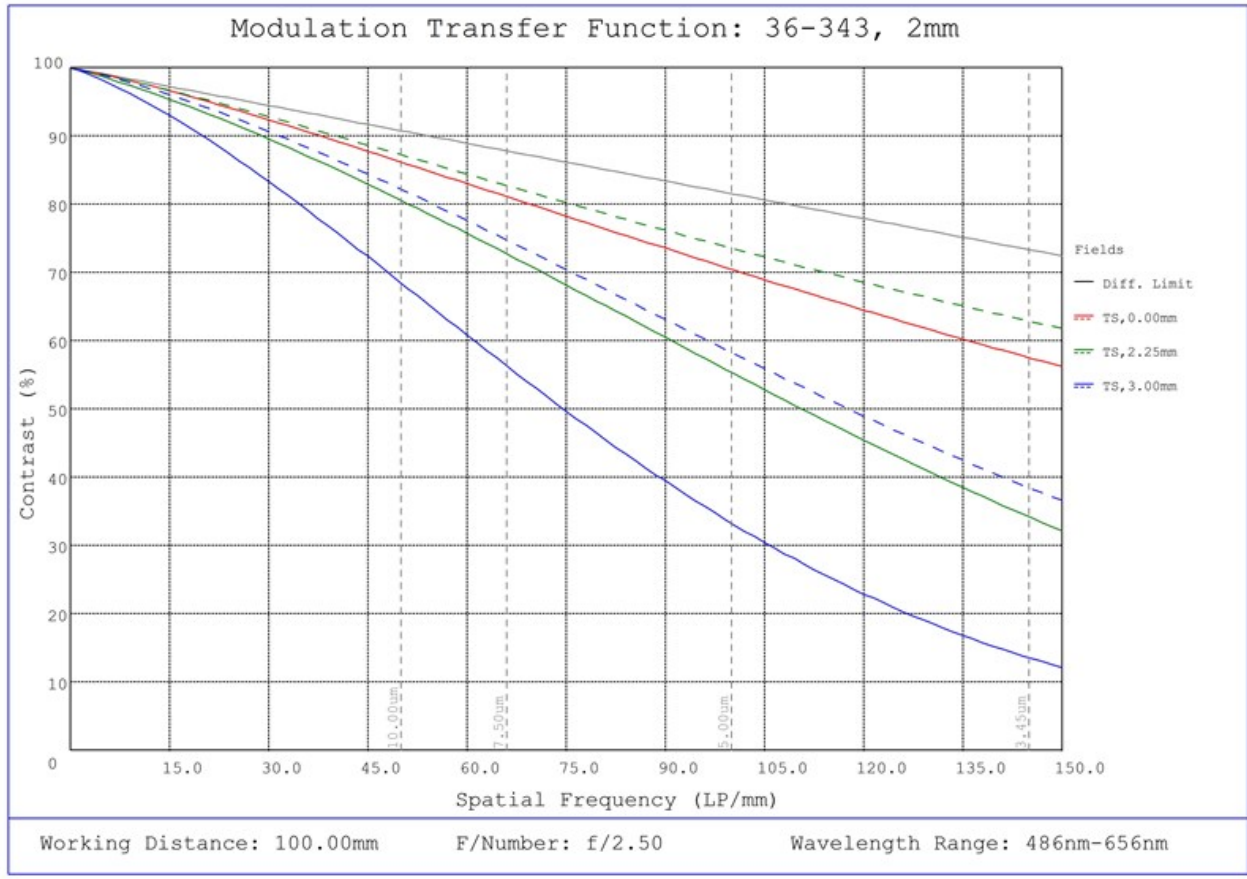
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Distortion Plot



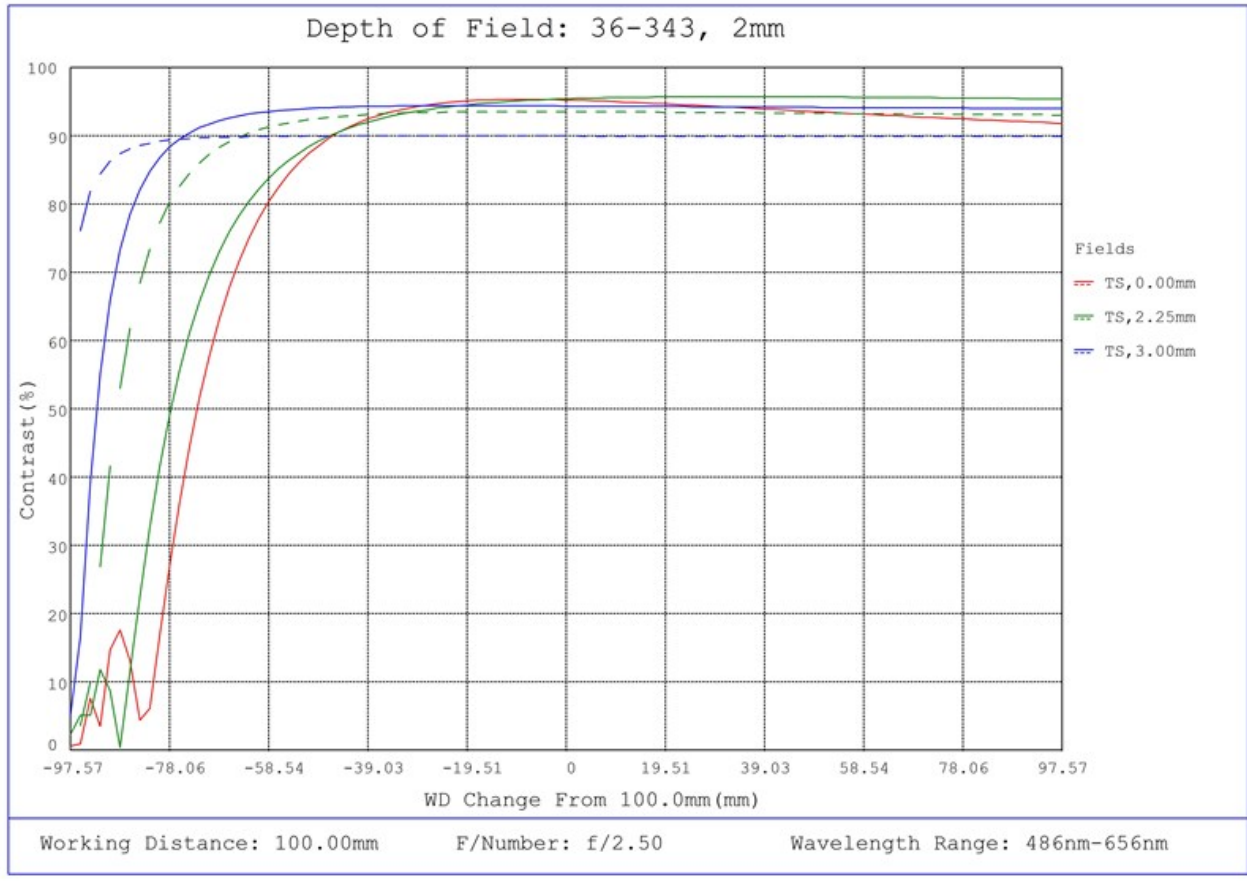
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Relative Illumination Plot



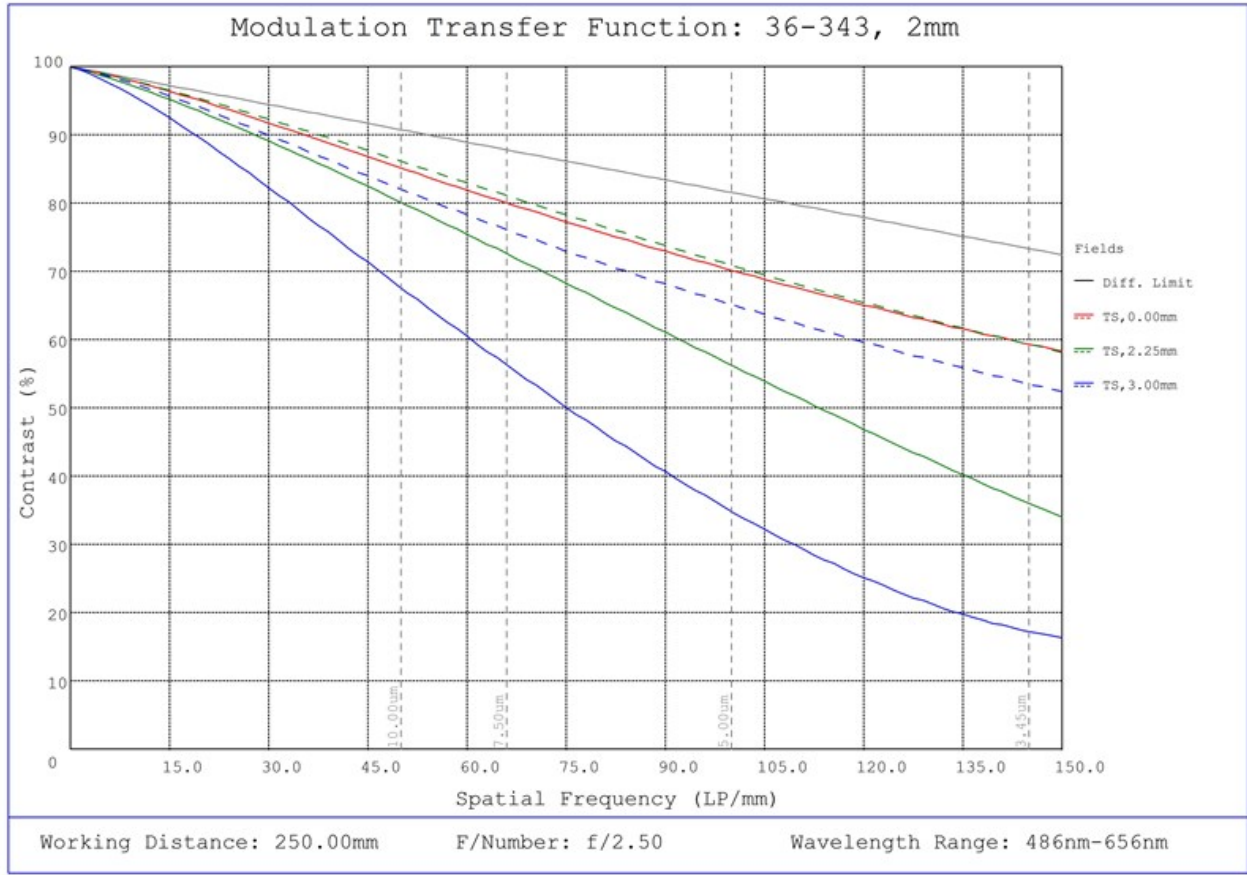
#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Working Distance versus Field of View Plot



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

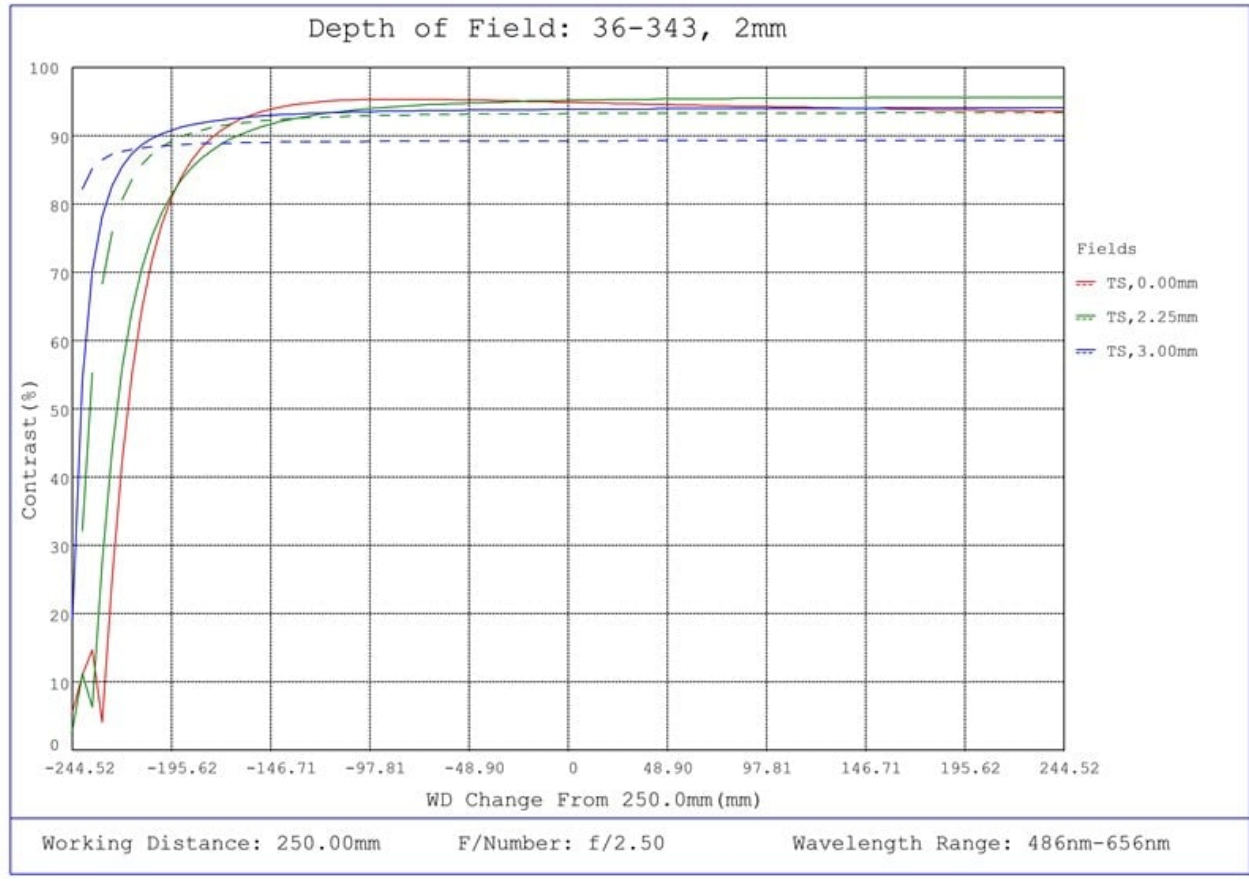


#36-343, 2mm FL f/2.5 Rugged Blue Series M12 Lens, Depth of Field Plot, 100mm Working Distance, f2.5



#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



September 24, 2023

To Whom It May Concern,

This document certifies that the product stated below has been reviewed as requested by Edmund Optics:

<i>Stock No.</i>	<i>Description</i>
36-343	2mm FL f/2.5 Rugged Blue Series M12 Lens

This item is EU RoHS (2011/65/EU) compliant without the use of exemptions.

This certification means that:

- EO's suppliers have confirmed the material composition of this product.
- EO has implemented rigorous procedures to document this compliance.
- The information provided may, or may not, be based upon actual test data, or on information from our Vendors, Raw Material Suppliers or Subcontractors.



Jay Budd, Director of Corporate Compliance  
September 24, 2023

Edmund Optics Inc. - 101 E Gloucester Pike, Barrington, NJ 08007 | 1-800-363-1992 | [Compliance@edmundoptics.com](mailto:Compliance@edmundoptics.com)



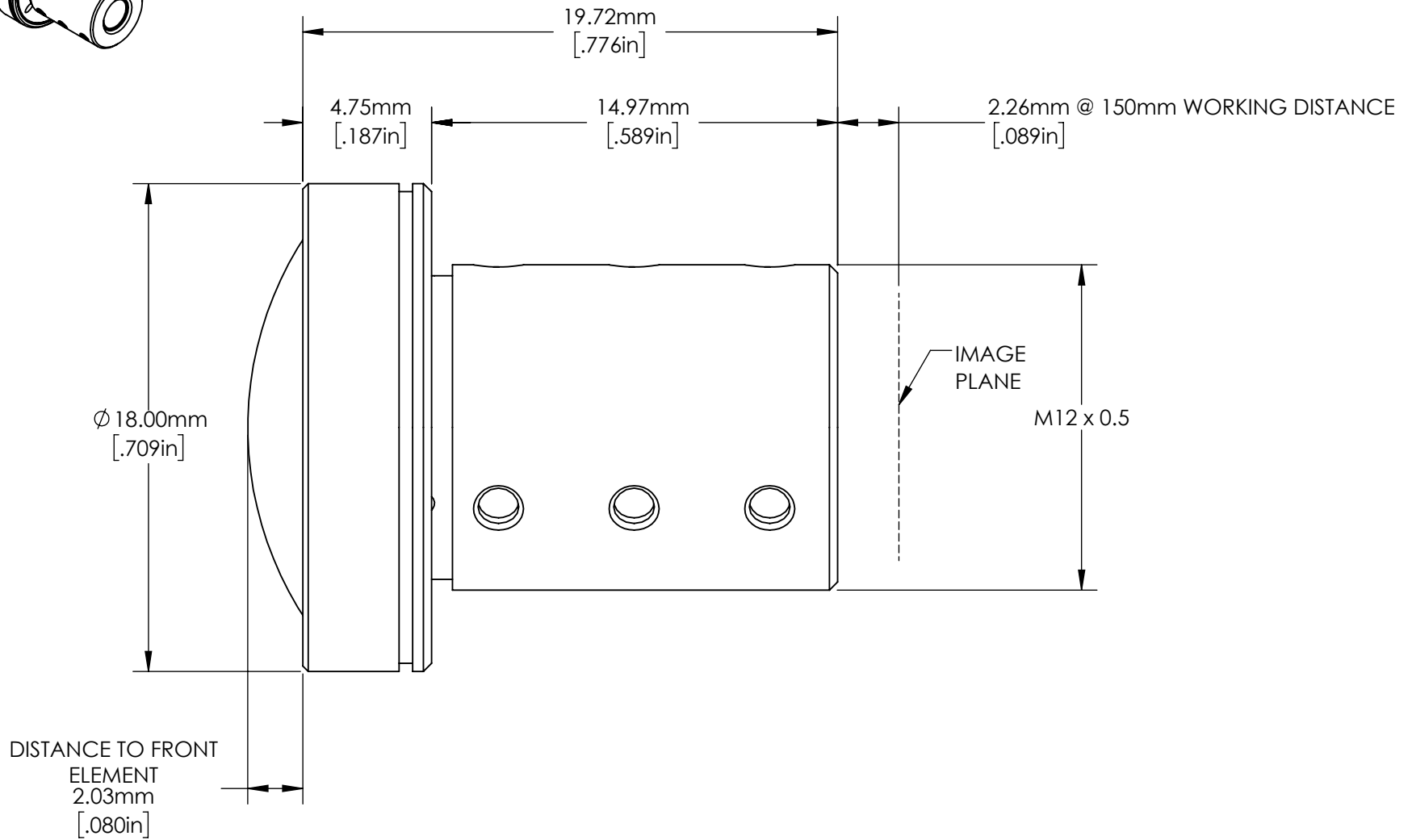
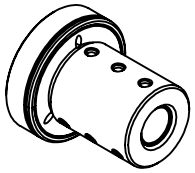
September 24, 2023

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Edmund Optics certifies that all articles included in this shipment are in compliance with the terms and conditions of this order. The company also certifies that the articles included in this shipment are in accordance to all agreed upon specifications and quality assurance provisions. Please call 1-800-363-1992 should any questions arise from this shipment.



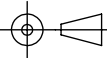
Jeff Harvey- EVP of Operations



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THIRD ANGLE PROJECTION 		TITLE	2mm FL f/2.5 Rugged Blue Series M12 Imaging Lens	
ALL DIMS IN	mm	DWG NO	36343	SHEET 1 OF 1