

TECHSPEC® 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens

#20-061



3mm 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.

General

Series:	Rugged Blue Series
Type:	M12 Imaging Lens
IR Cut Filter:	Yes
Special Type of Lens:	IR-Cut Filter

Physical & Mechanical Properties

Iris Option:	Fixed
Length (mm):	16.10
Maximum Diameter (mm):	14
Outer Diameter (mm):	14

Optical Properties

Field of View at Max Sensor Format:	Horizontal: 91.2° Vertical: 68.5° Diagonal: 113°
Horizontal Field of View, 1/3" Sensor:	91.2°
Maximum Image Circle (mm):	6.00
Numerical Aperture NA, Object Side:	0.003
Number of Elements (Groups):	6(5)
Wavelength Range (nm):	400 - 700
Focal Length FL (mm):	3.00
Working Distance (mm):	100 - ∞
Aperture (f/#):	f/5.6
Distortion (%):	34.78 @ Full Field
Back Focal Length BFL (mm):	4.8 - 4.7
Coating Specification:	λ/4 MgF ₂ @ 550nm
Entrance Pupil Position (mm):	4.90
Object Space Principal Plane (mm):	-6.55
Image Space Principal Plane (mm):	2.46
Maximum Distortion (%):	34.78
Exit Pupil Position (mm):	-3.23
Lens Wavelength Range:	VIS

Sensor

Maximum Sensor Format:	1/3"
Pixel Size (µm):	1.40

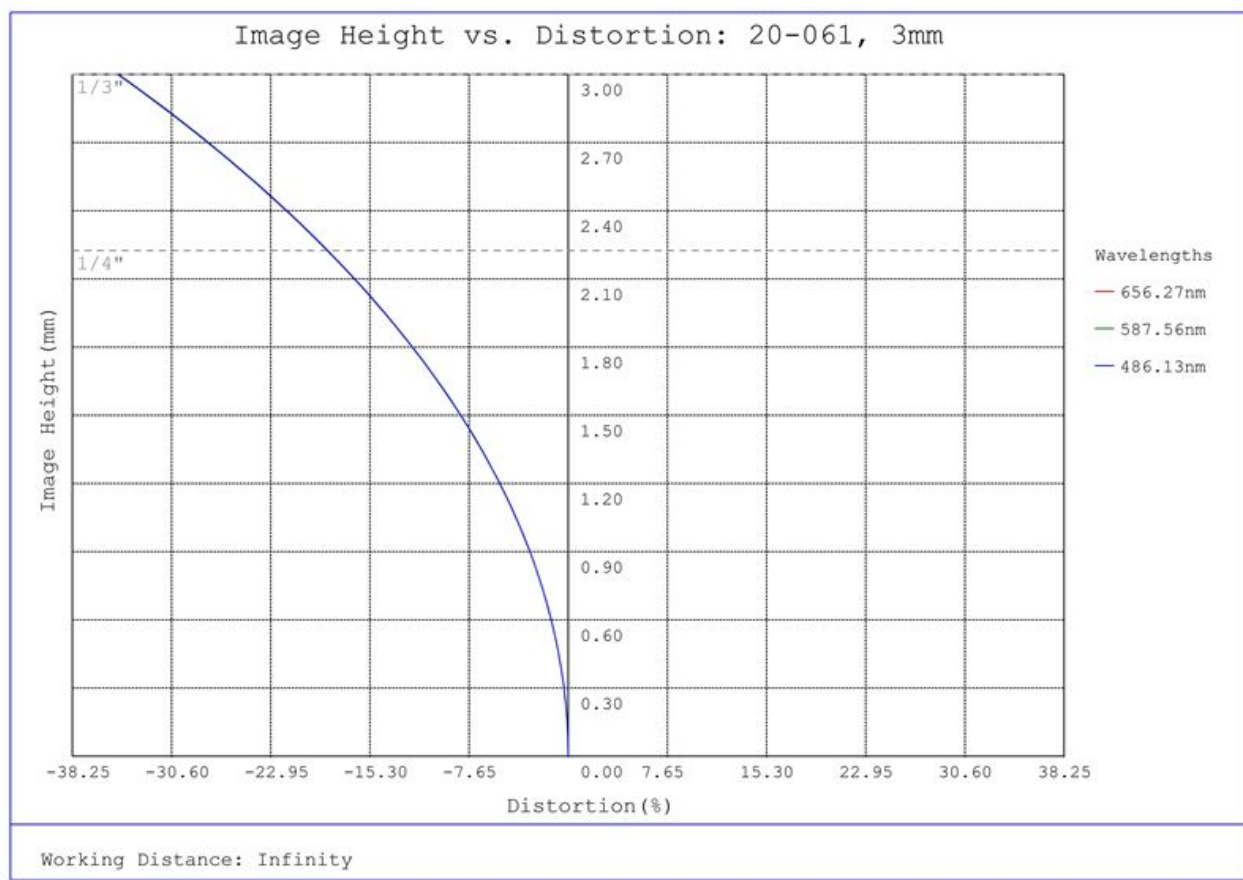
Threading & Mounting

Filter Thread:	N/A
Mount:	S-Mount (M12 x 0.5)

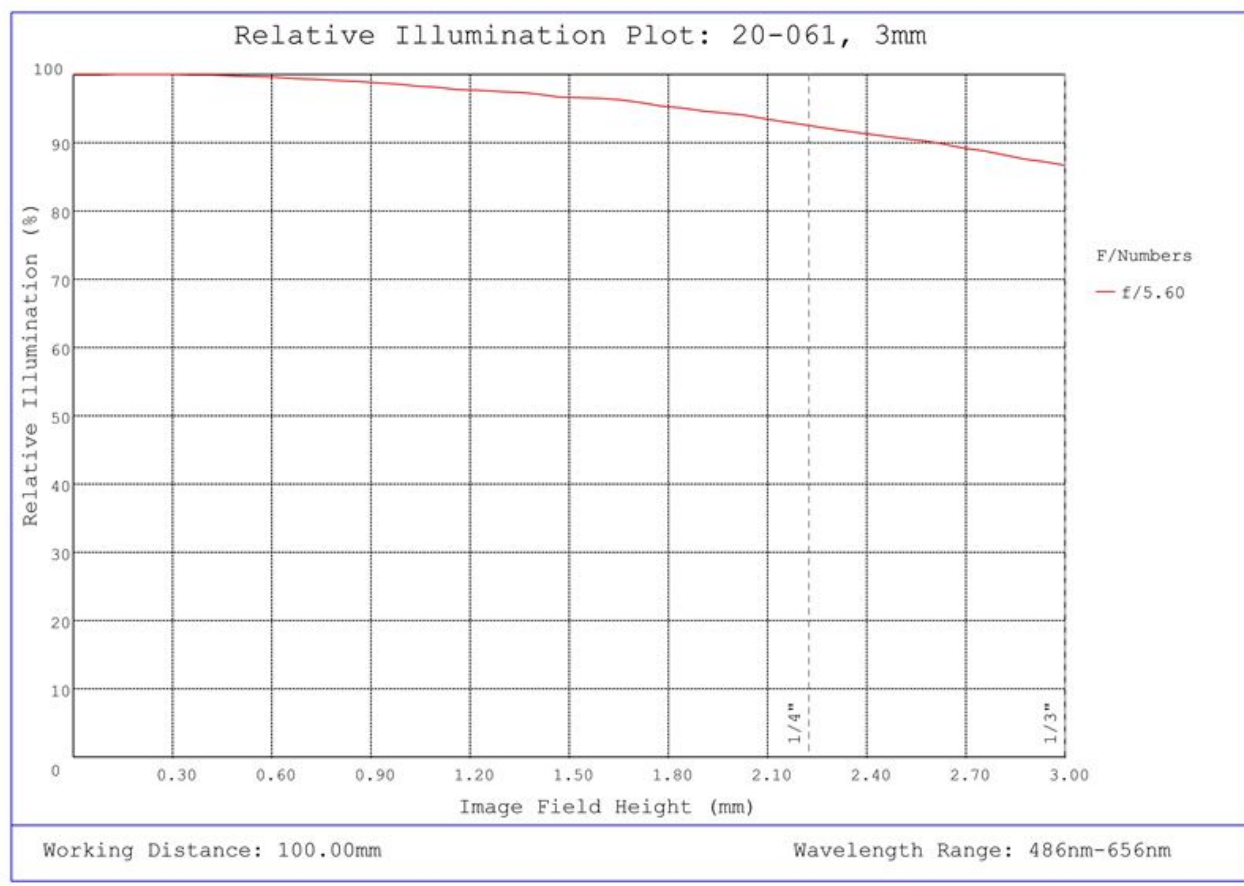
Environmental & Durability Factors

Type of Ruggedization:

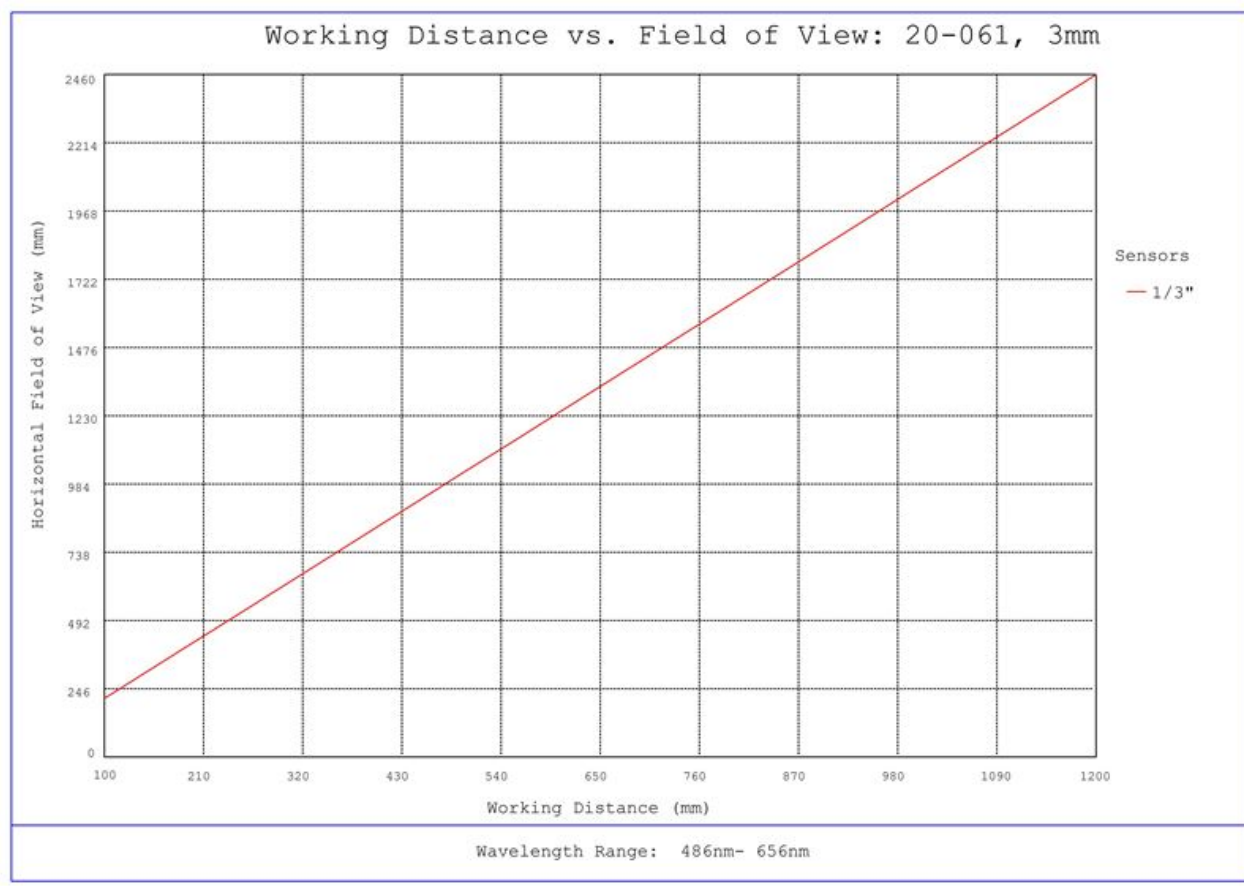
Stabilized (Robust Mechanics for Shock and Vibration)



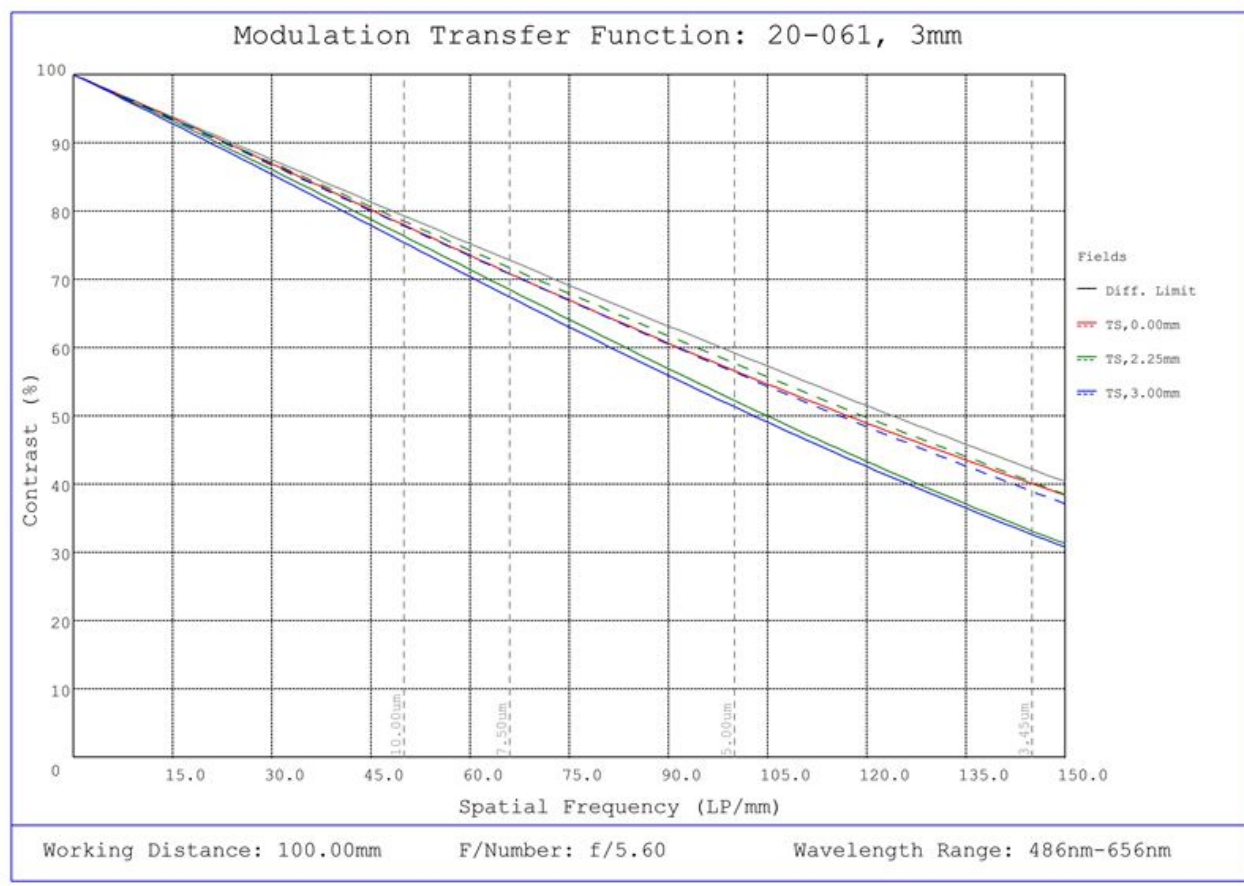
#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Distortion Plot



#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Relative Illumination Plot



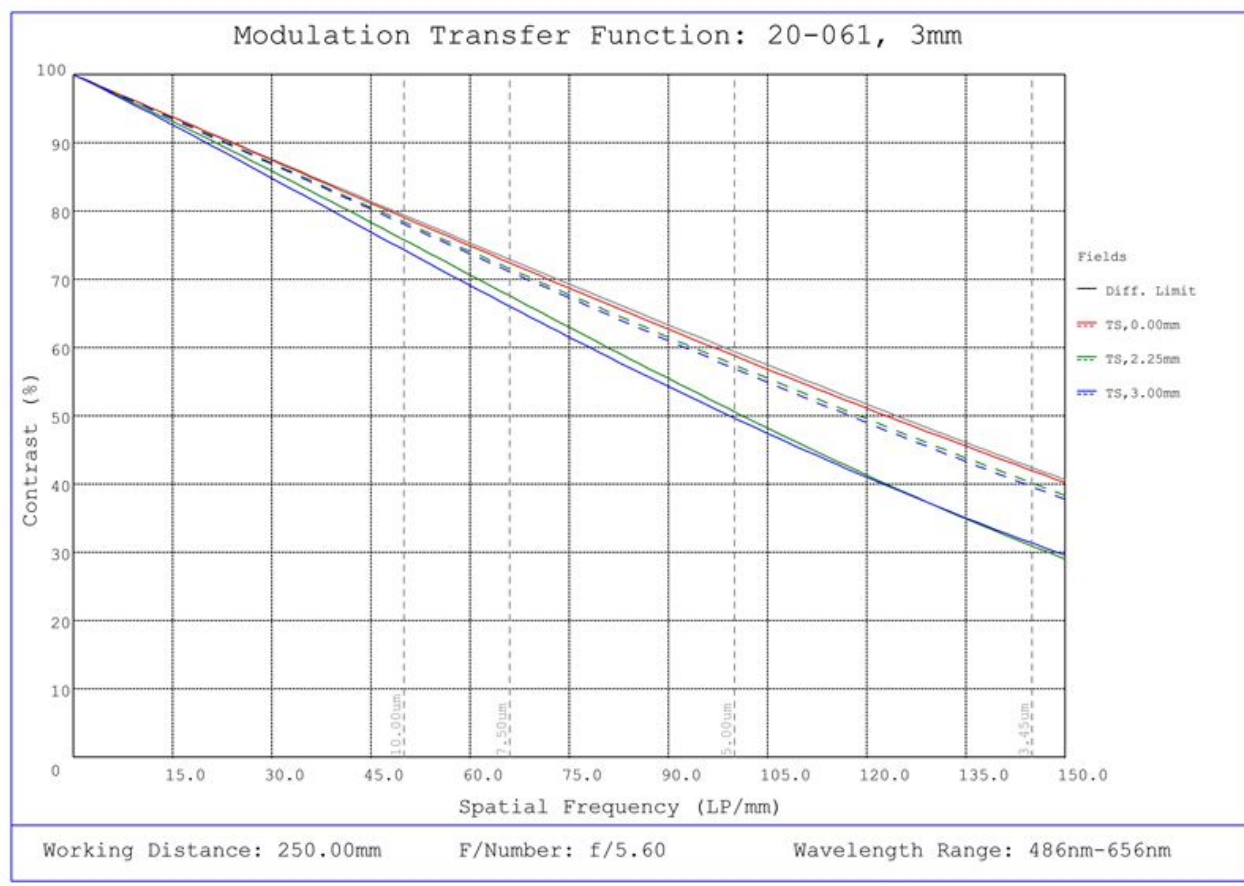
#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Working Distance versus Field of View Plot



#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 100mm Working Distance, f5.6



#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Depth of Field Plot, 100mm Working Distance, f5.6



#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f5.6



#20-061, 3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens, Depth of Field Plot, 250mm Working Distance, f5.6



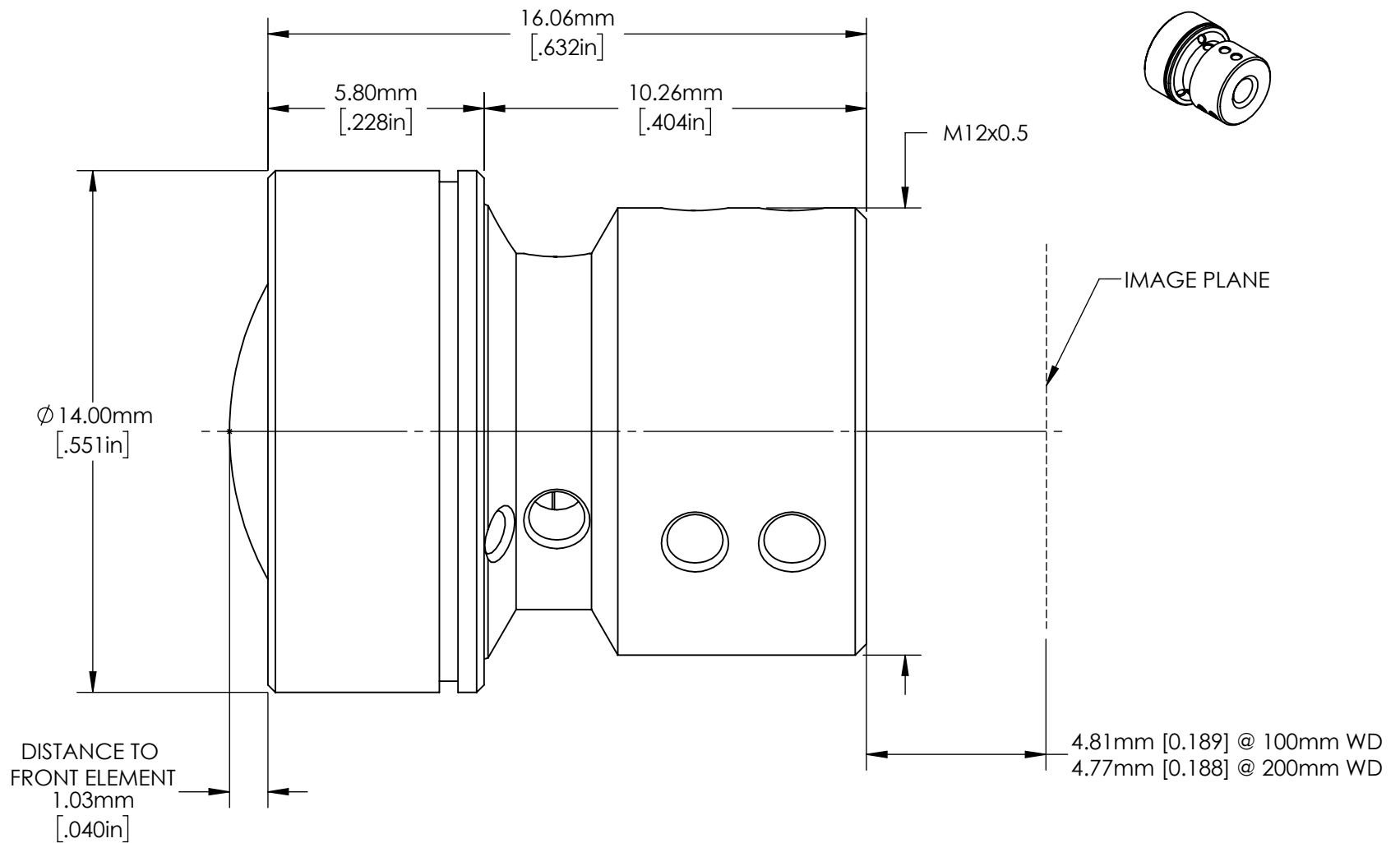
February 20, 2026

<i>Stock No.</i>	<i>Description</i>
20-061	3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens

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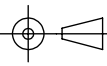
Jeff Harvey- EVP of Operations



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THIRD ANGLE PROJECTION 	TITLE		3mm FL f/5.6 IR-Cut Rugged Blue Series M12 Lens	
	ALL DIMS IN	mm	DWG NO	20061
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