

**TECHSPEC® 0.69X In-Line Illumination CobaltTL Telecentric Lens**  
#15-873



TECHSPEC® CobaltTL Telecentric Lenses are designed for semiconductor and electronics inspection, measurement, and gauging applications. These telecentric lenses achieve high light throughput with industry leading low  $f/\#$ s. Featuring less than  $0.015^\circ$  telecentricity and low 0.013% distortion, these lenses are ideal for image stitching applications. These 17.6mm diagonal sensor format lenses are compatible with the Sony IMX304 1.1" sensors and other similar format sensors such as the Sony IMX183. TECHSPEC® CobaltTL Telecentric Lenses produce unparalleled levels of contrast yielding maximum image quality with the highest degree of measurement accuracy. In-line versions provide the ability to rotate/reposition the inline illumination port to allow for maximum flexibility when machine building. TECHSPEC® CobaltTL Telecentric Lenses are compatible with high vibration environments and feature a removable recessed set screw for securely locking the iris in place.

Length excluding Threads (mm):	175.00
Coating:	$\lambda/4$ MgF <sub>2</sub>
Depth of Field (mm):	$\pm 2.16$ mm at f/10 (20% @ 20 lp/mm)
Typical Distortion @ 520nm (%):	<0.027
Typical Telecentricity @ 520nm (°):	<0.086

## Optical

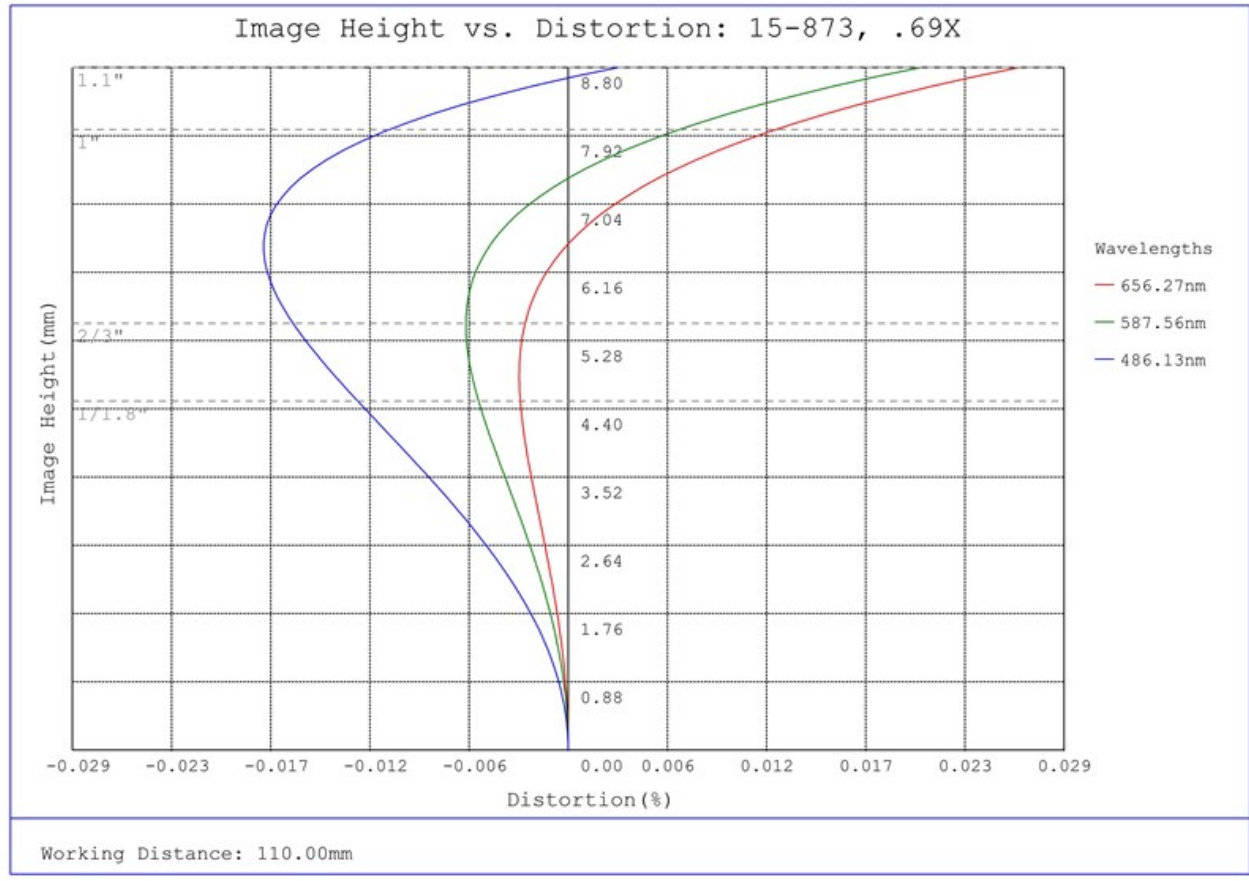
Horizontal Field of View, 1/2" Sensor:	11.59mm
Horizontal Field of View, 2/3" Sensor:	15.93mm
Horizontal Field of View, 1" Sensor:	23.17mm
Maximum Image Circle (mm):	17.60
Numerical Aperture NA, Object Side:	0.058
Horizontal Field of View, 1.1" Sensor:	20.39mm
Horizontal Field of View, 1/1.8" Sensor:	13.04mm
Primary Magnification PMAG:	0.69X
Maximum Sensor Format:	1.1"
Working Distance (mm):	110
Aperture (f/#):	f/4.5 - f/22
FOV @ Max Sensor Format, H x V (mm):	20.4 x 15.3
Lens Wavelength Range:	VIS

## Mechanical

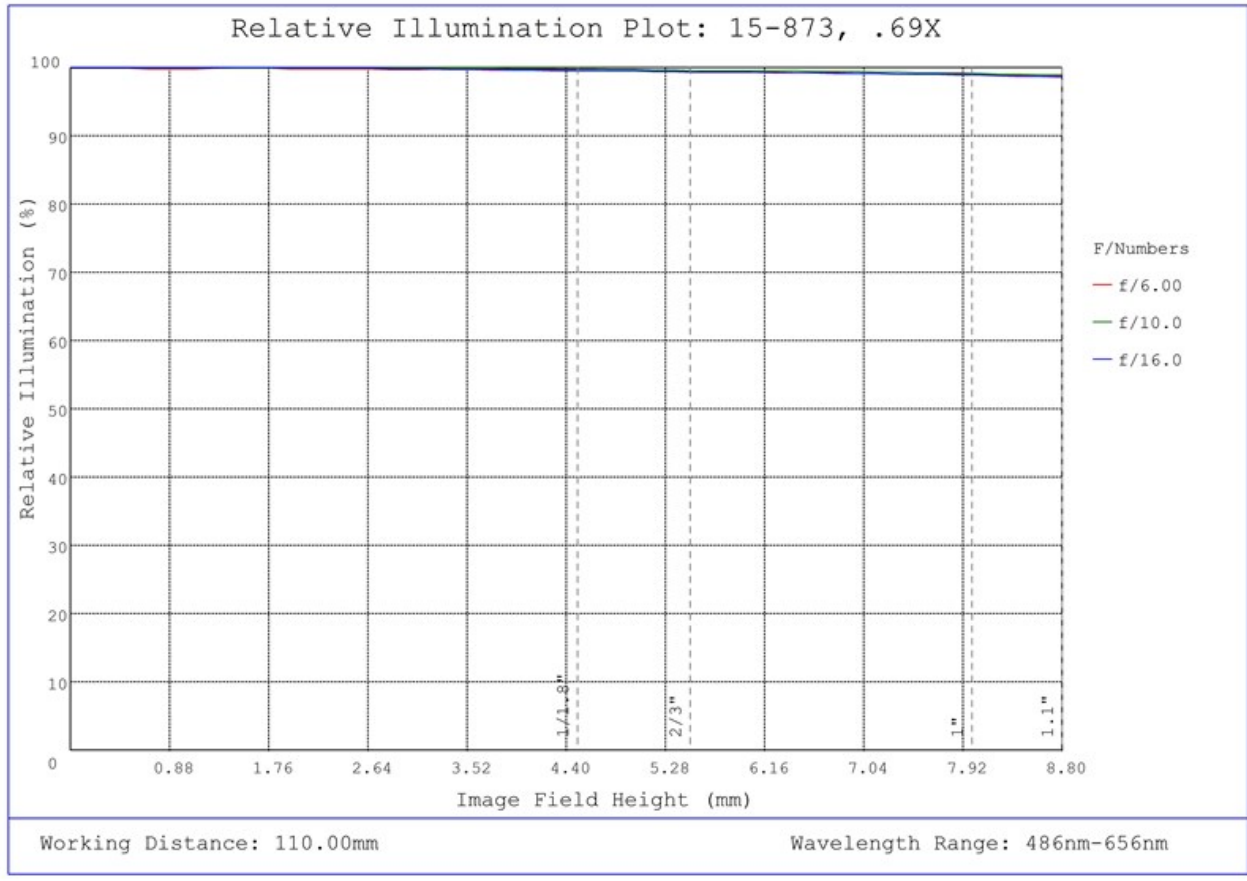
Filter Thread:	M52 x 0.75 (Female)
Maximum Diameter (mm):	55
Number of Elements (Groups):	9 (7)
Mount:	C-Mount

## General

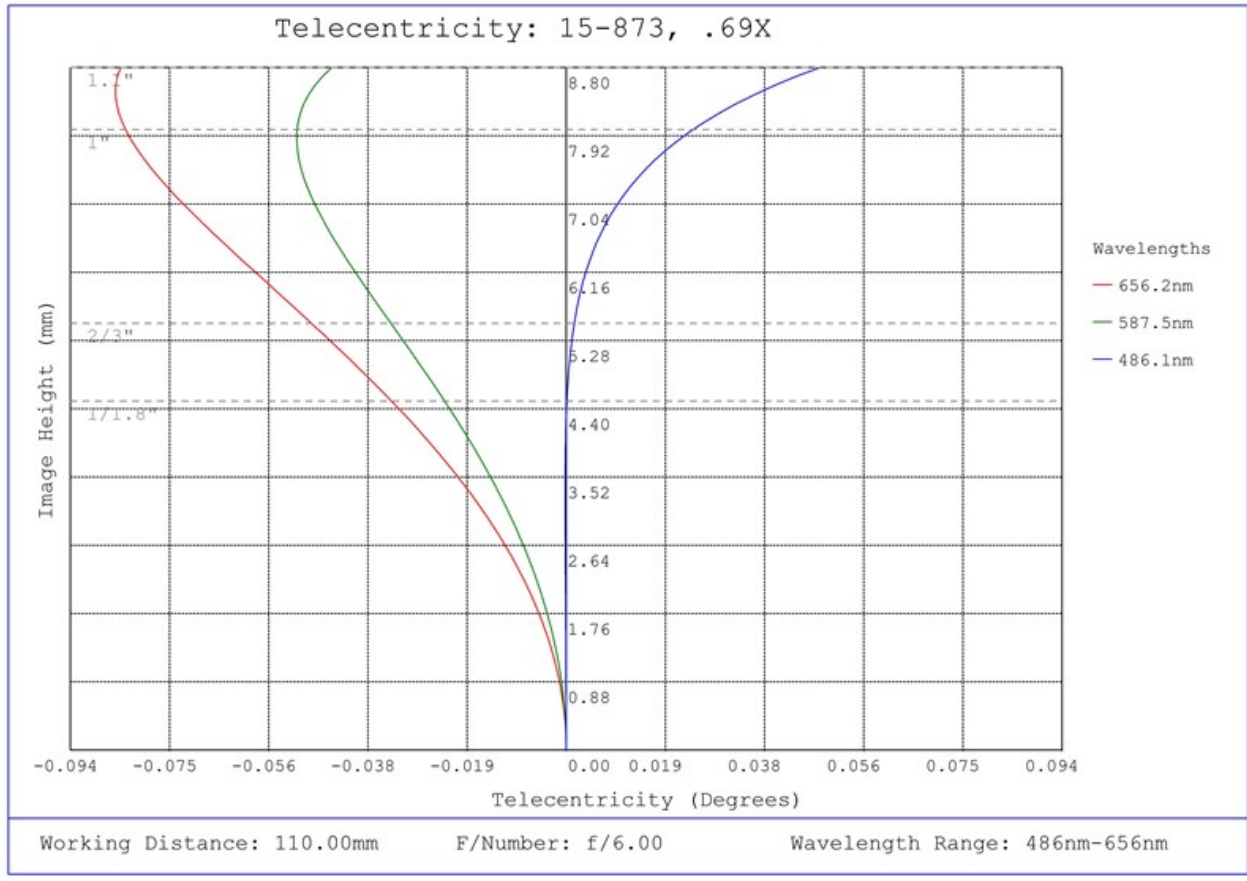
Stock No. of Mounting Clamp:	<a href="#">#63-233</a> - Sold Separately
Type:	Telecentric Lens
Style:	In-Line Illumination



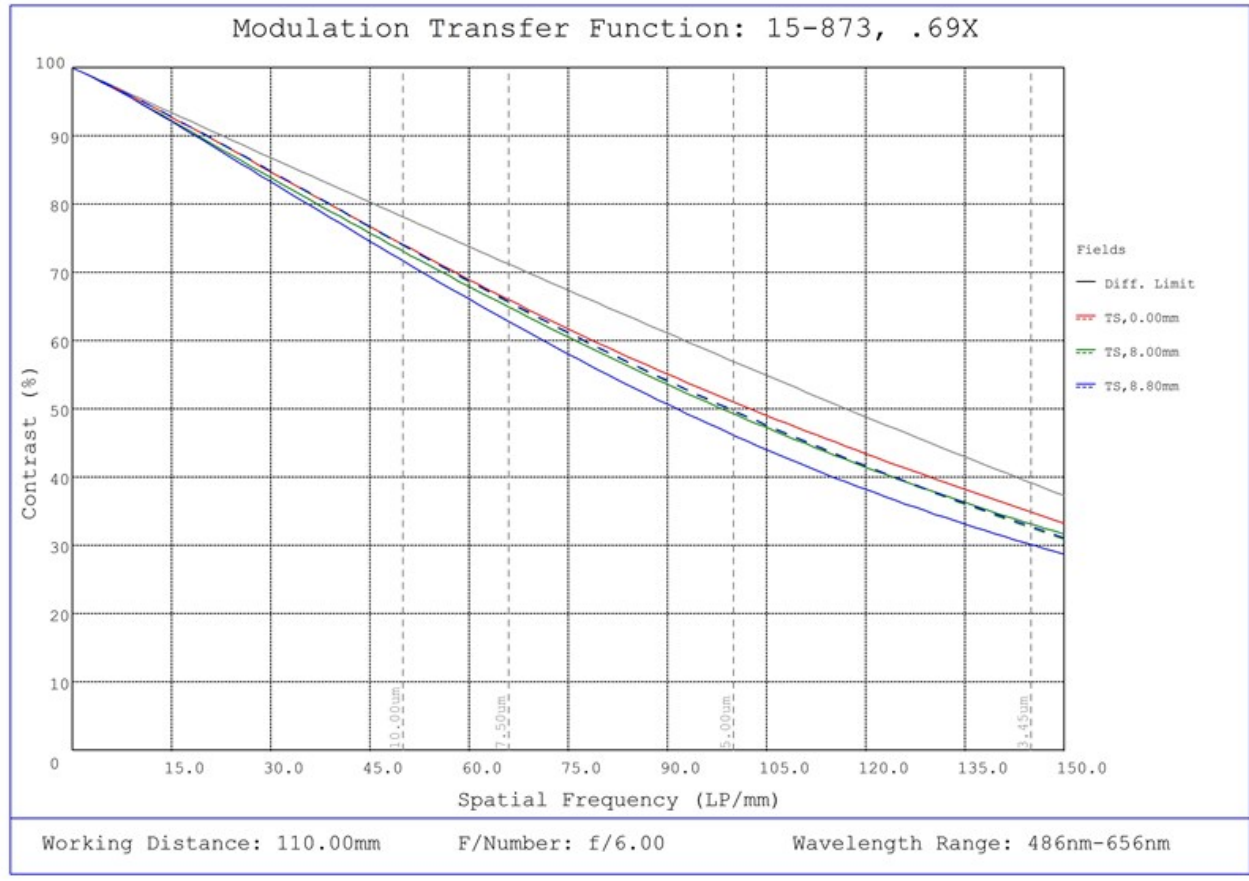
#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Distortion Plot



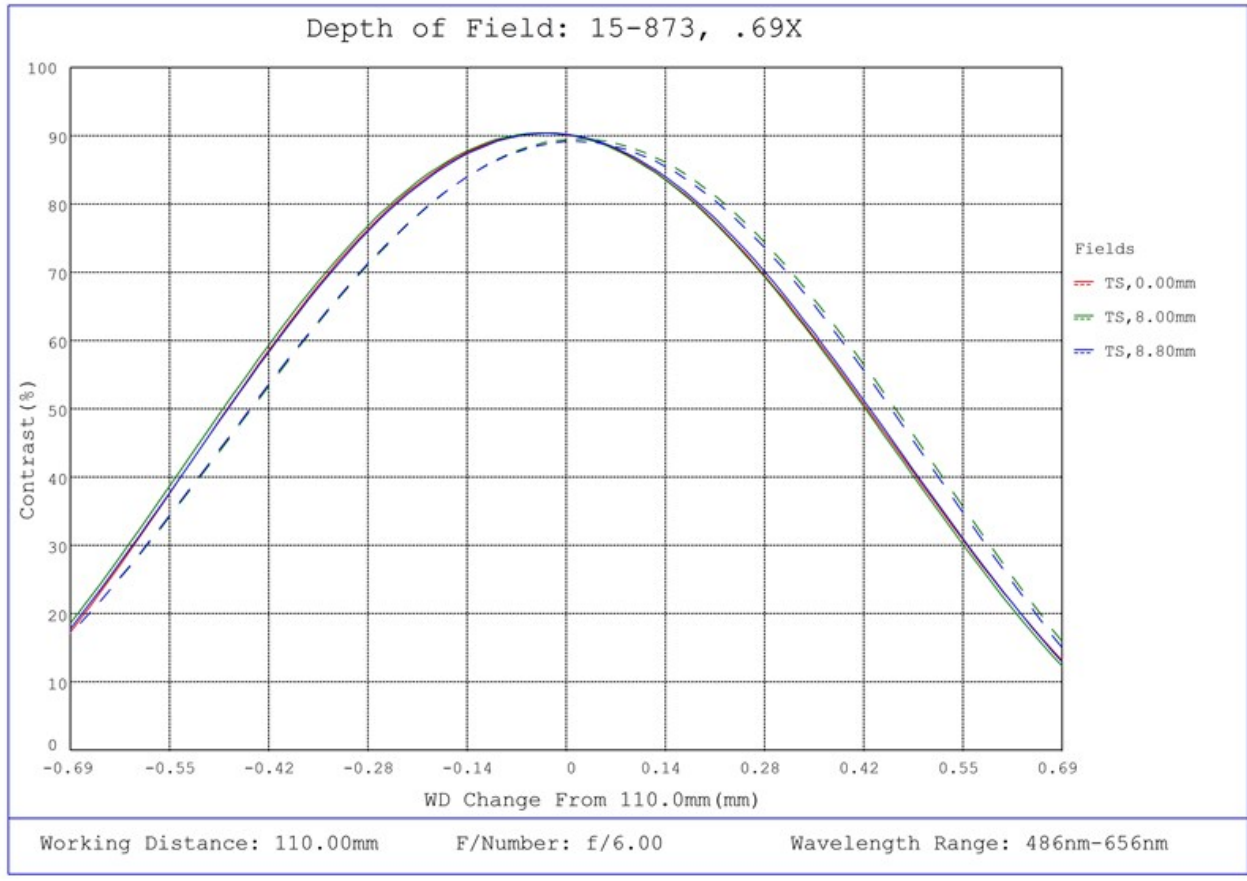
#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Relative Illumination Plot



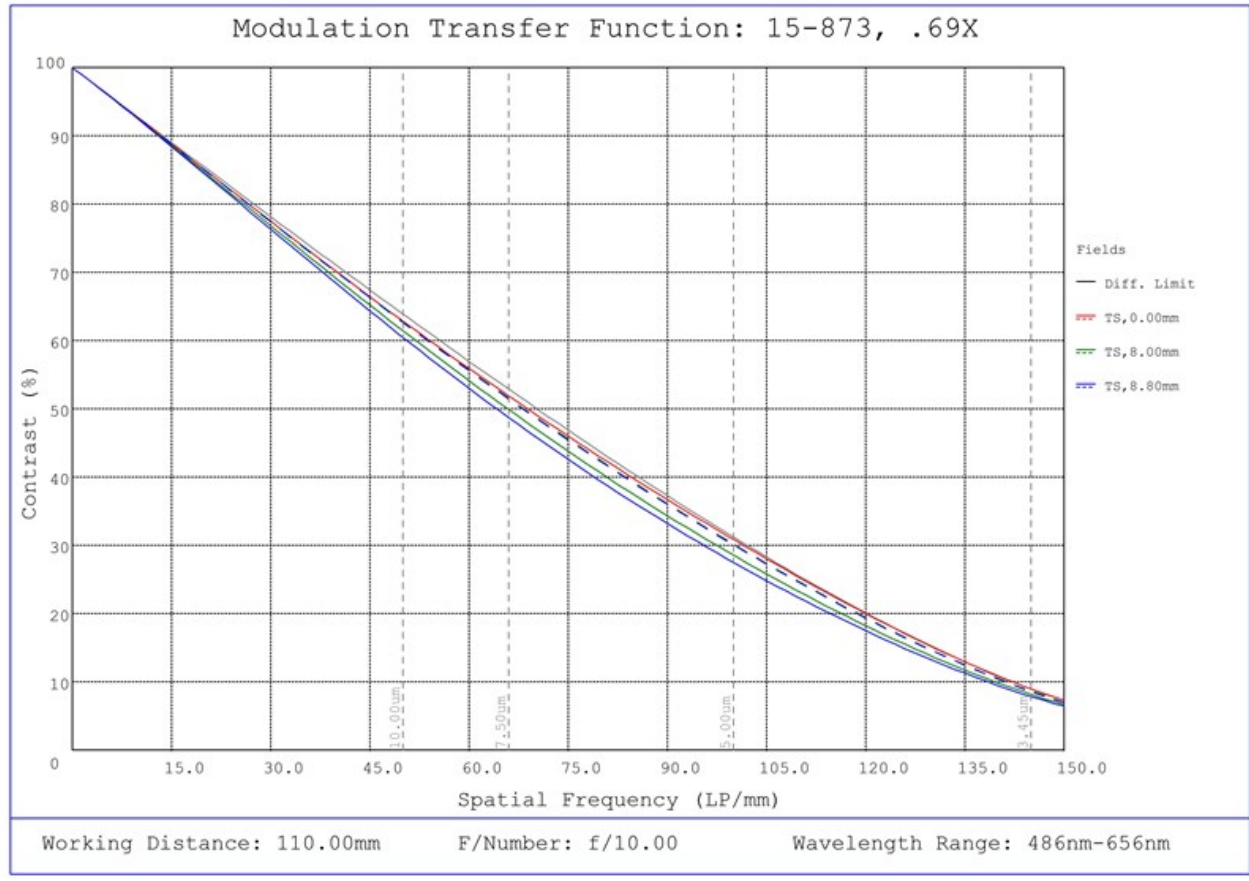
#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Telecentricity Plot



#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 110mm Working Distance, f6

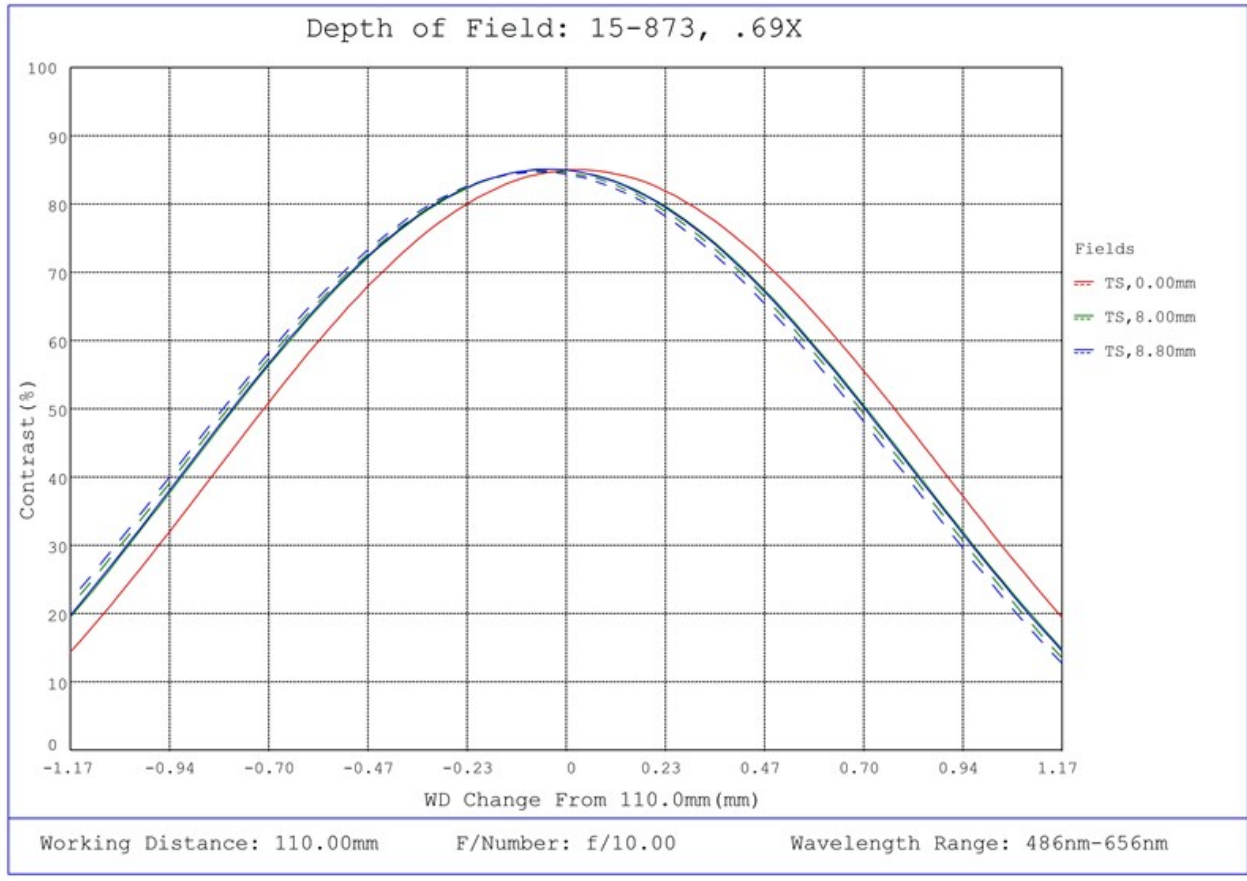


#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Depth of Field Plot, 110mm Working Distance, f6



#15-873, 0.69X In-Line Illumination CobaltTL Telecentric Lens, Modulated Transfer Function (MTF) Plot, 110mm Working Distance, f10





#15-873, 0.69X In-Line Illumination CobaltTTL Telecentric Lens, Depth of Field Plot, 110mm Working Distance, f10



September 08, 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>
15-873	0.69X In-Line Illumination CobaltTL Telecentric 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 08, 2023

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



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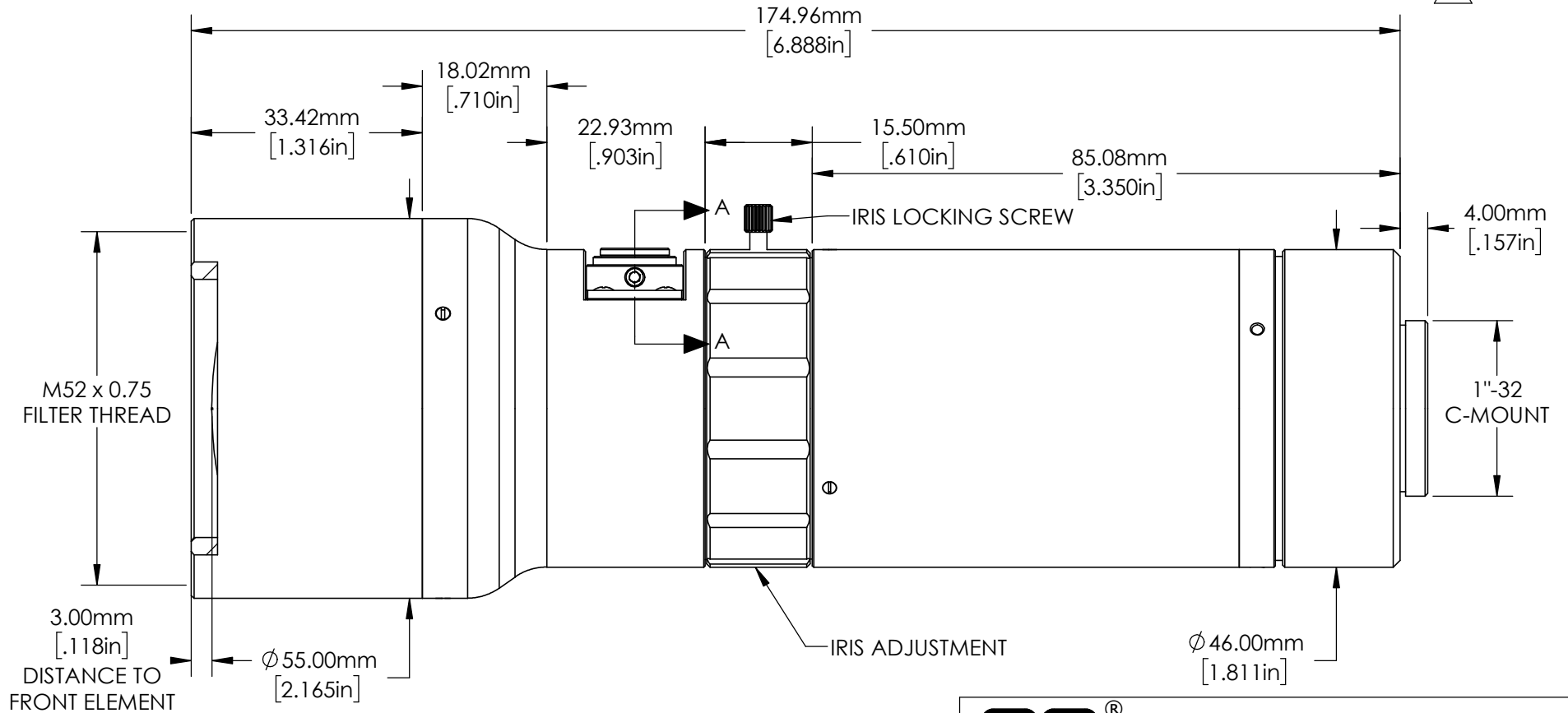
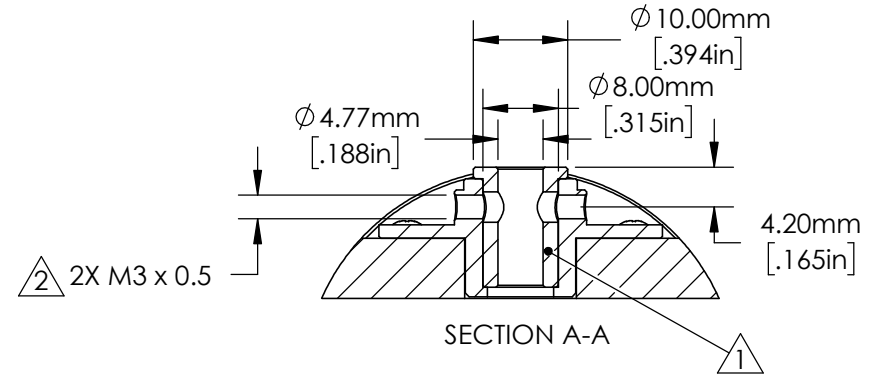
<i>Stock No.</i>	<i>Description</i>
15-873	0.69X In-Line Illumination CobaltTL Telecentric Lens

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

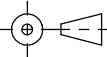
- ① ACCEPTS  $\phi 0.25$ " LIGHT GUIDE OR  $\phi 0.125$ " WITH REMOVEABLE ADAPTER
- ② SET SCREWS TO HOLD LIGHT GUIDE INCLUDED



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DO NOT MANUFACTURE  
PARTS TO THIS DRAWING**

SPECIFICATIONS SUBJECT  
TO CHANGE WITHOUT  
NOTICE  
DIMENSIONS ARE FOR  
REFERENCE ONLY

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THIRD ANGLE PROJECTION 		TITLE	0.69X In-Line Illumination CobaltTL Telecentric Lens	
ALL DIMS IN	mm	DWG NO	15873	SHEET 1 OF 1