

TECHSPEC® 8.5mm C Series Fixed Focal Length Lens

#58-000



8.5mm Focal Length, #58-000

TECHSPEC® C Series Fixed Focal Length Lenses are designed for use in machine vision applications with the working distance and resolution requirements of factory automation and inspection in mind. TECHSPEC® C Series Fixed Focal Length Lenses feature large maximum apertures, allowing these high performance lenses to be used in even the most restrictive lighting conditions. Each lens has a broadband anti-reflection coating, locking iris and focus adjustment with recessed set screws, and a ruggedized, robust housing for space-restrictive applications. C Series lenses are manufactured to high tolerances, which result in high levels of imaging performance with low lens-to-lens variation. Through combining optical performance, industrial features, and compact package sizes, our TECHSPEC® C Series Fixed Focal Length Lenses are ideal for use in factory automation and inspection.

General

Series:	C Series
Functionality:	Full Function
Type:	Fixed Focal Length Lens
Imaging Lens Type:	Compact Lens

Physical & Mechanical Properties

Iris Option:	Variable
Length (mm):	34.50
Maximum Diameter (mm):	32
Outer Diameter (mm):	32
Weight (g):	80
Maximum Rear Protrusion (mm):	0

Optical Properties

Horizontal Field of View @ Max Sensor Format:	60.6°
Field of View at Max Sensor Format:	Horizontal: 60.4° Vertical: 44.9° Diagonal: 76.7°
Horizontal Field of View, 2/3" Sensor:	60.4°
Horizontal Field of View, 1/1.8" Sensor:	49.2°
Horizontal Field of View, 1/2" Sensor:	43.6°
Horizontal Field of View, 1/2.5" Sensor:	39.5°
Horizontal Field of View, 1/3" Sensor:	32.6°
Horizontal Field of View, 1/4" Sensor:	24.4°
Maximum Image Circle (mm):	11.00
Numerical Aperture NA, Object Side:	0.0289
Number of Elements (Groups):	7 (5)
Focal Length FL (mm):	8.50
Primary Magnification PMAG:	0.077
Working Distance (mm):	100 - ∞
Aperture (f/#):	f/1.3 - f/16
Coating:	425 - 675nm BBAR
Coating Specification:	425 - 675nm BBAR
Entrance Pupil Position (mm):	8.22
Object Space Principal Plane (mm):	14.08
Image Space Principal Plane (mm):	6.67
Maximum Distortion (%):	-18.4
Exit Pupil Position (mm):	-12.23
Lens Wavelength Range:	VIS
Resolution (lp/mm):	180

Sensor

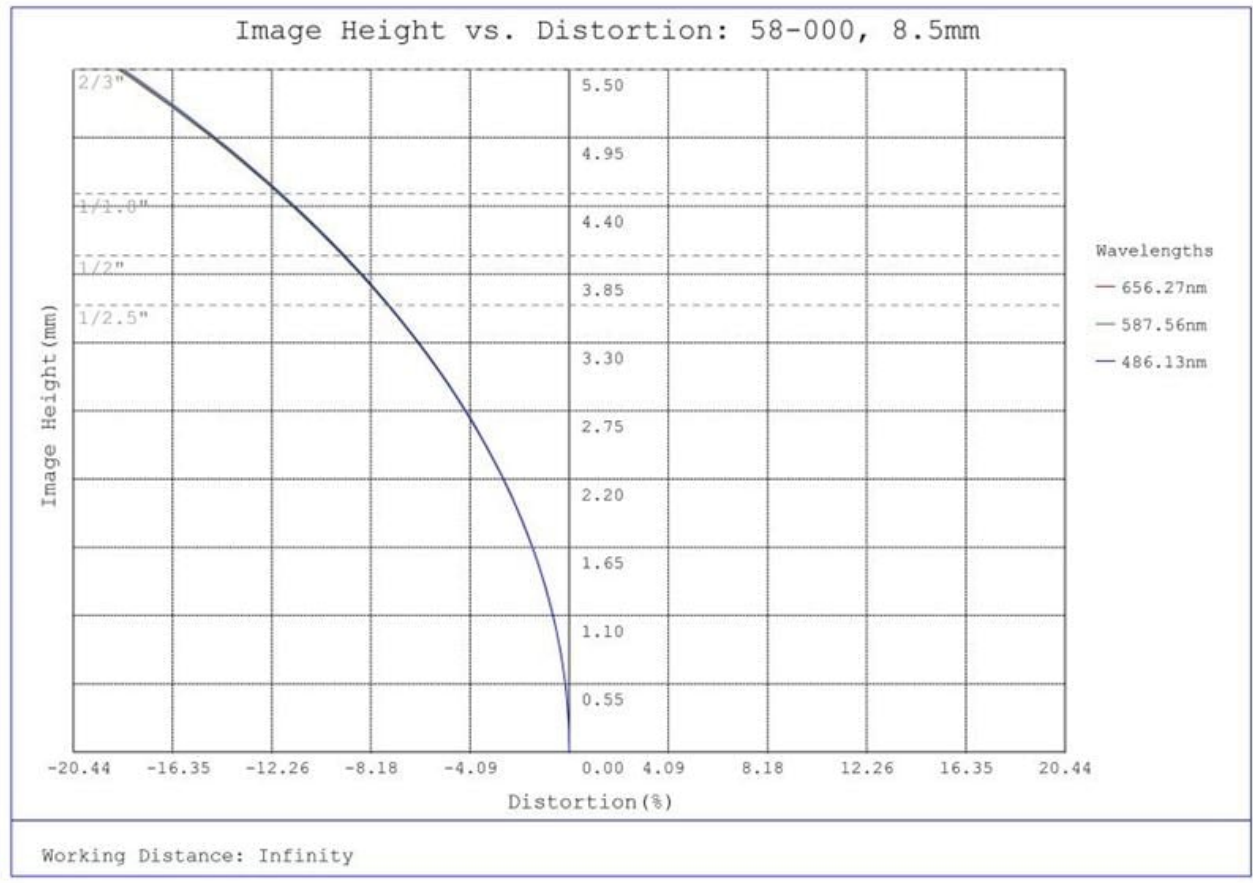
Maximum Sensor Format:	2/3"
Pixel Size, H x V (µm):	2.74 x 2.74

Threading & Mounting

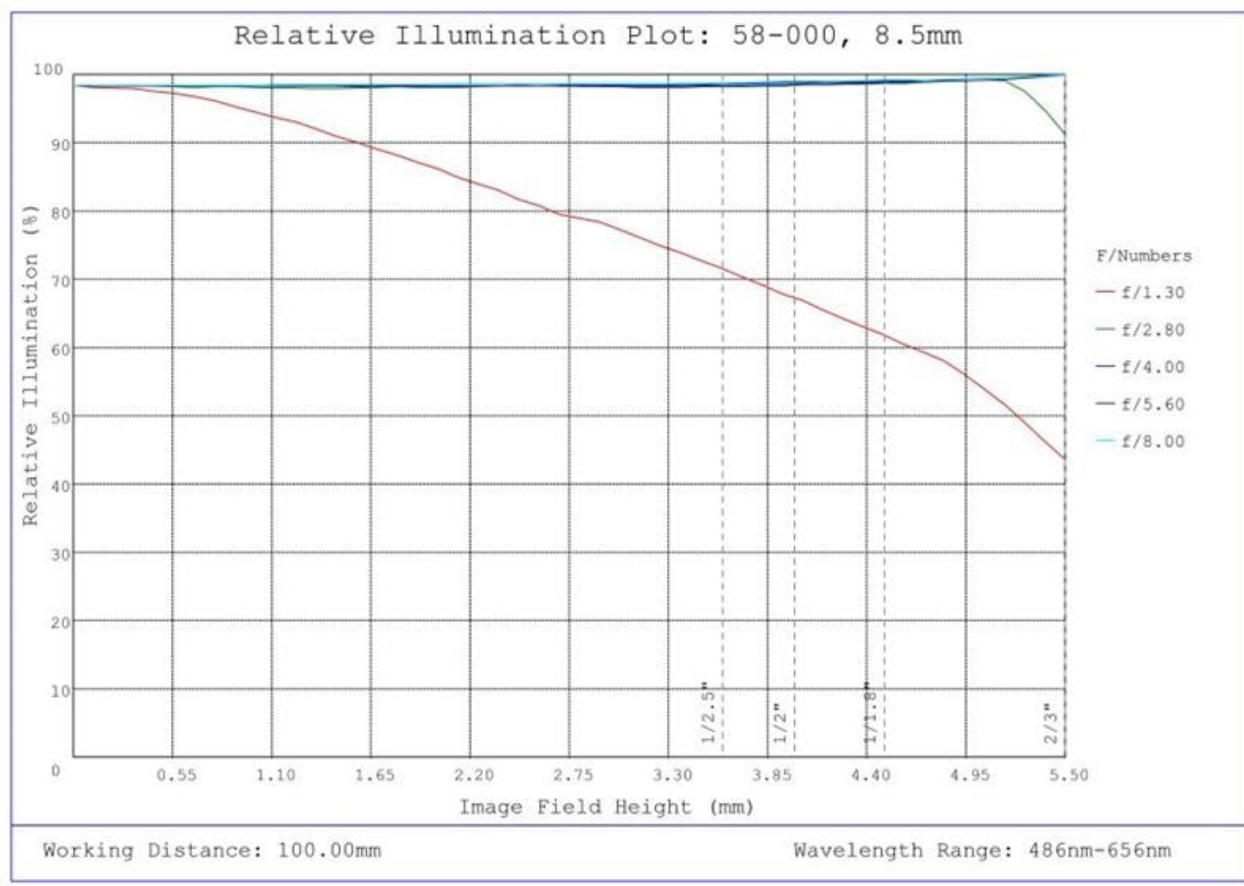
Filter Thread:	M25.5 x 0.50 (Female)
Mount:	C-Mount

Environmental & Durability Factors

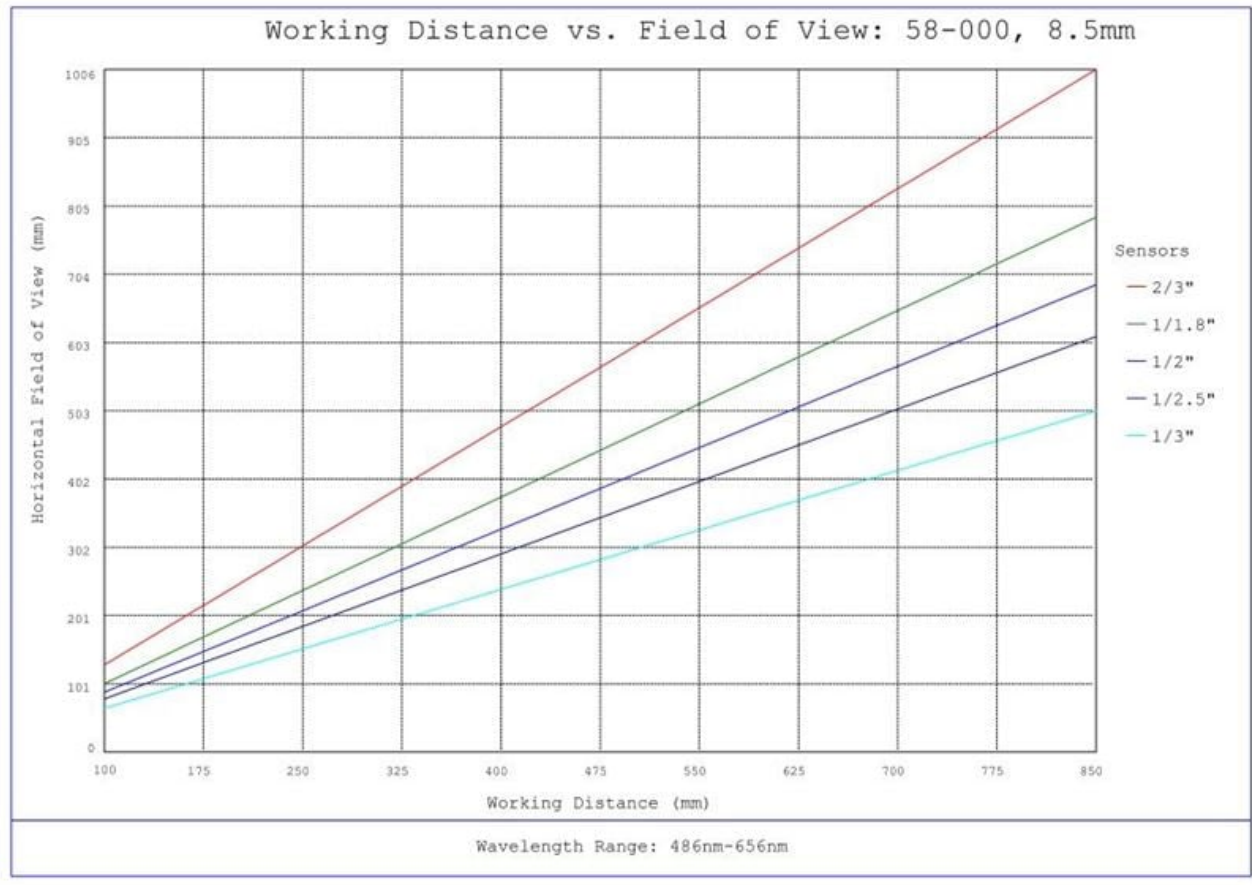
Storage Temperature (°C):	-20 to +60
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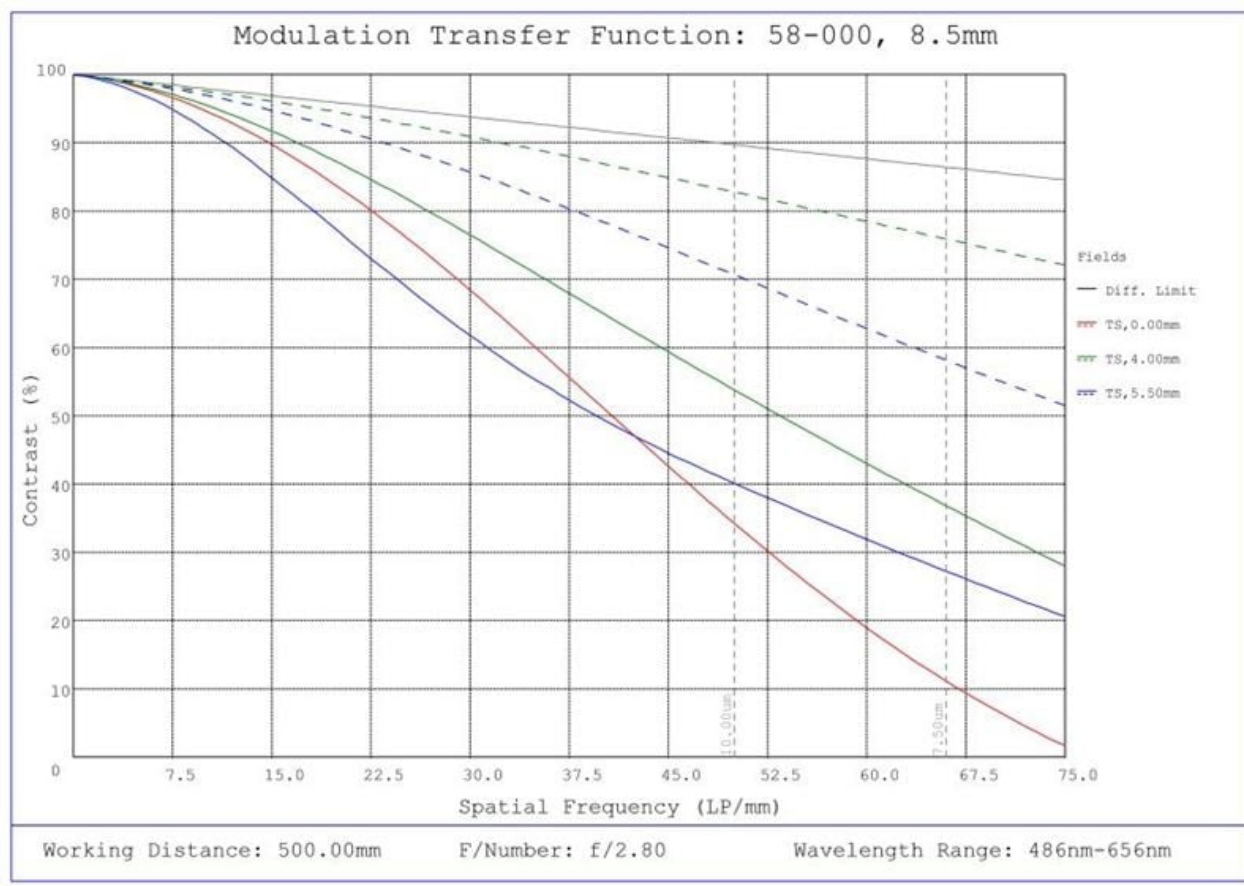
#58-000, 8.5mm C Series Fixed Focal Length Lens, Distortion Plot



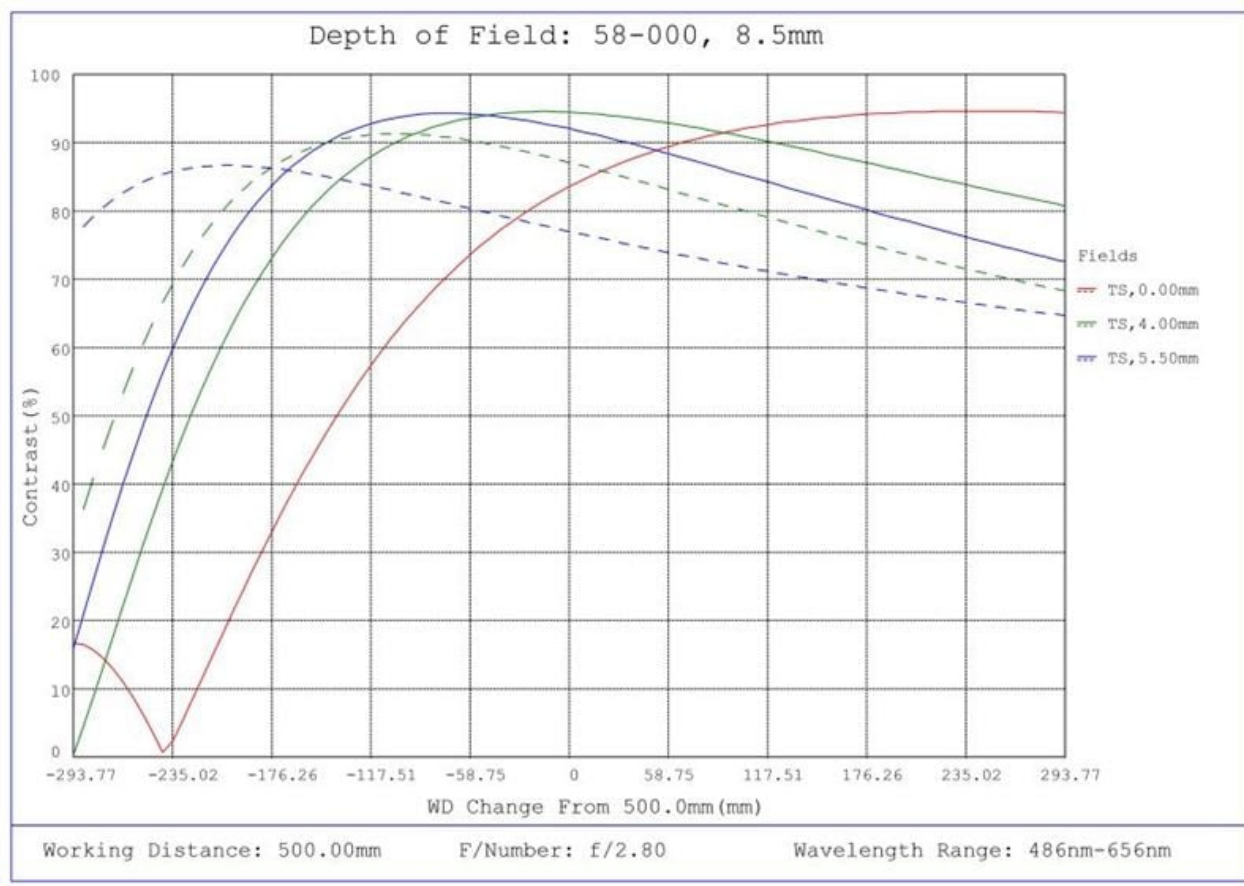
#58-000, 8.5mm C Series Fixed Focal Length Lens, Relative Illumination Plot



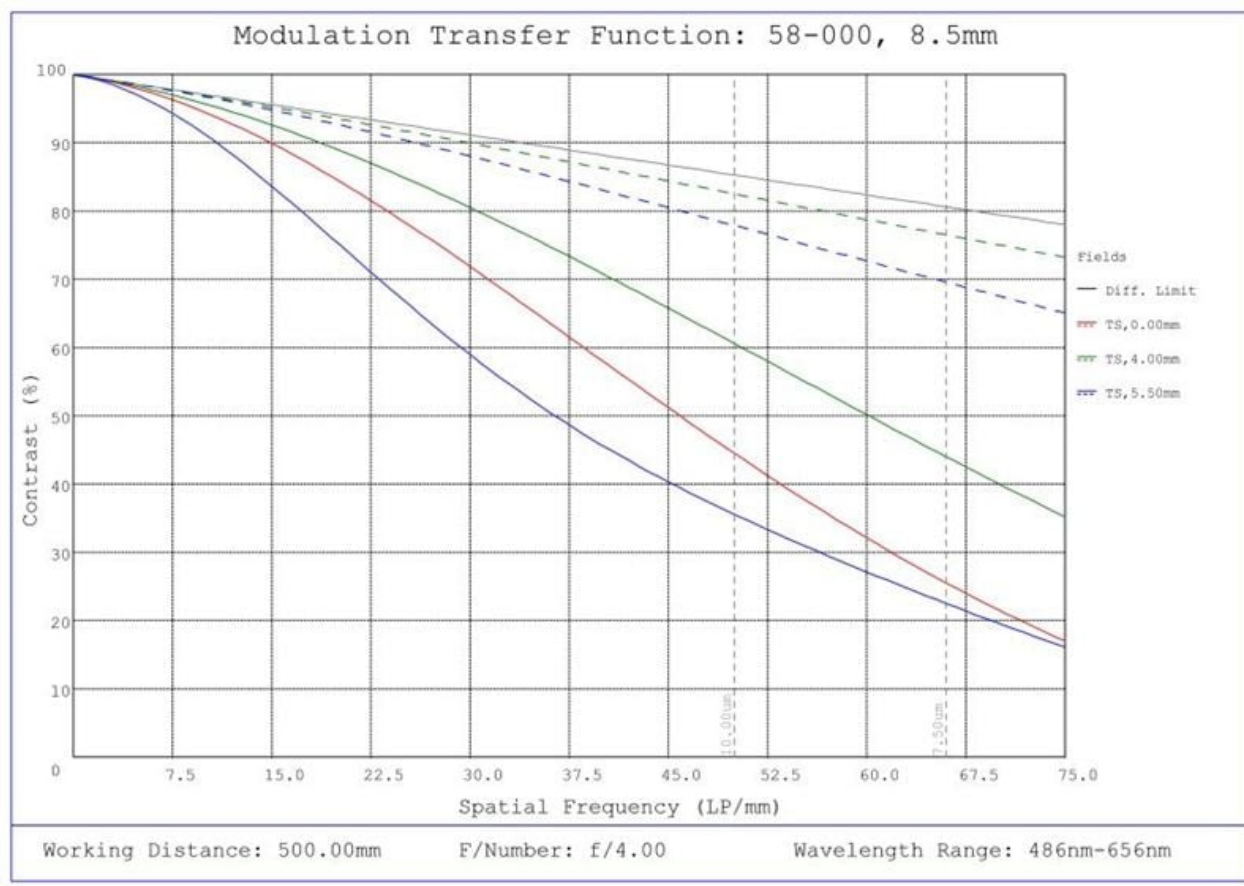
#58-000, 8.5mm C Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



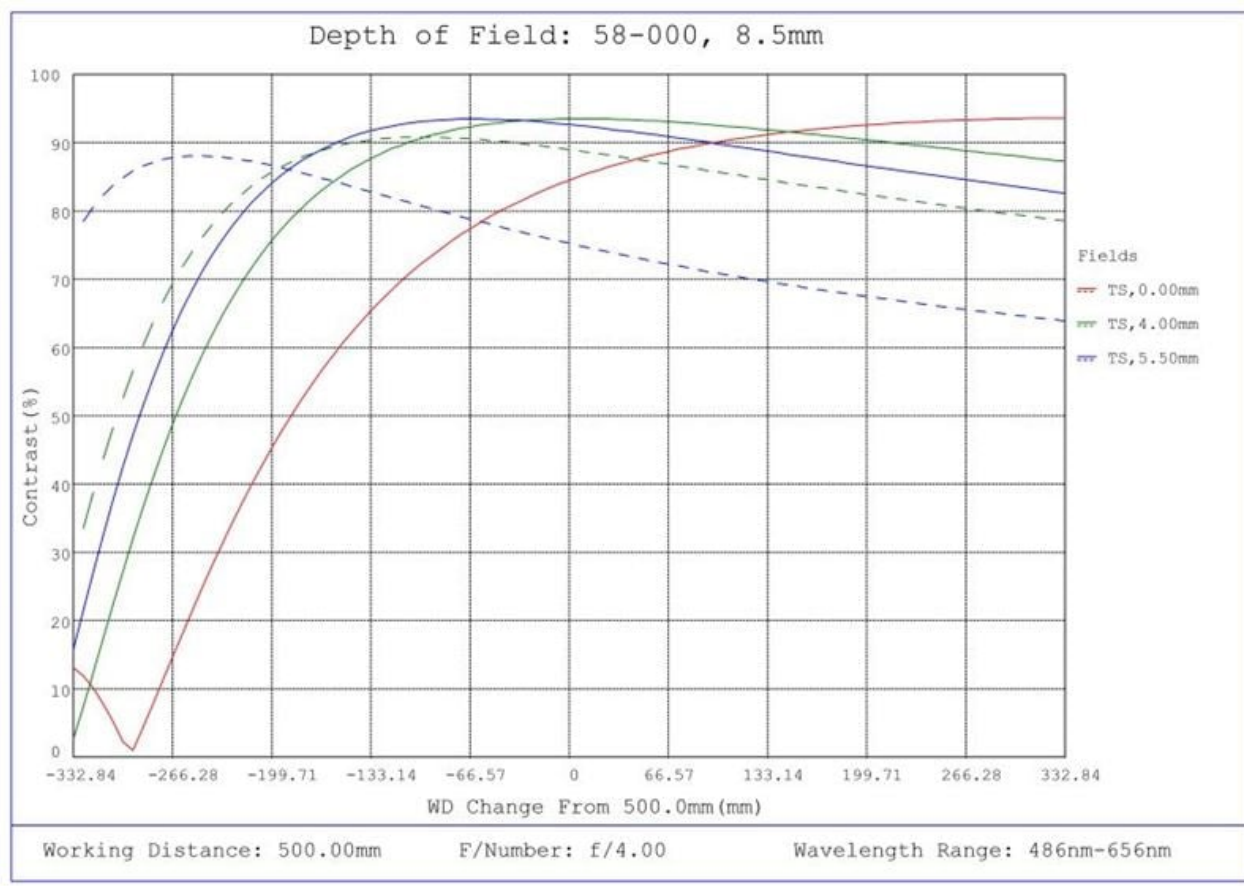
#58-000, 8.5mm C Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f2.8



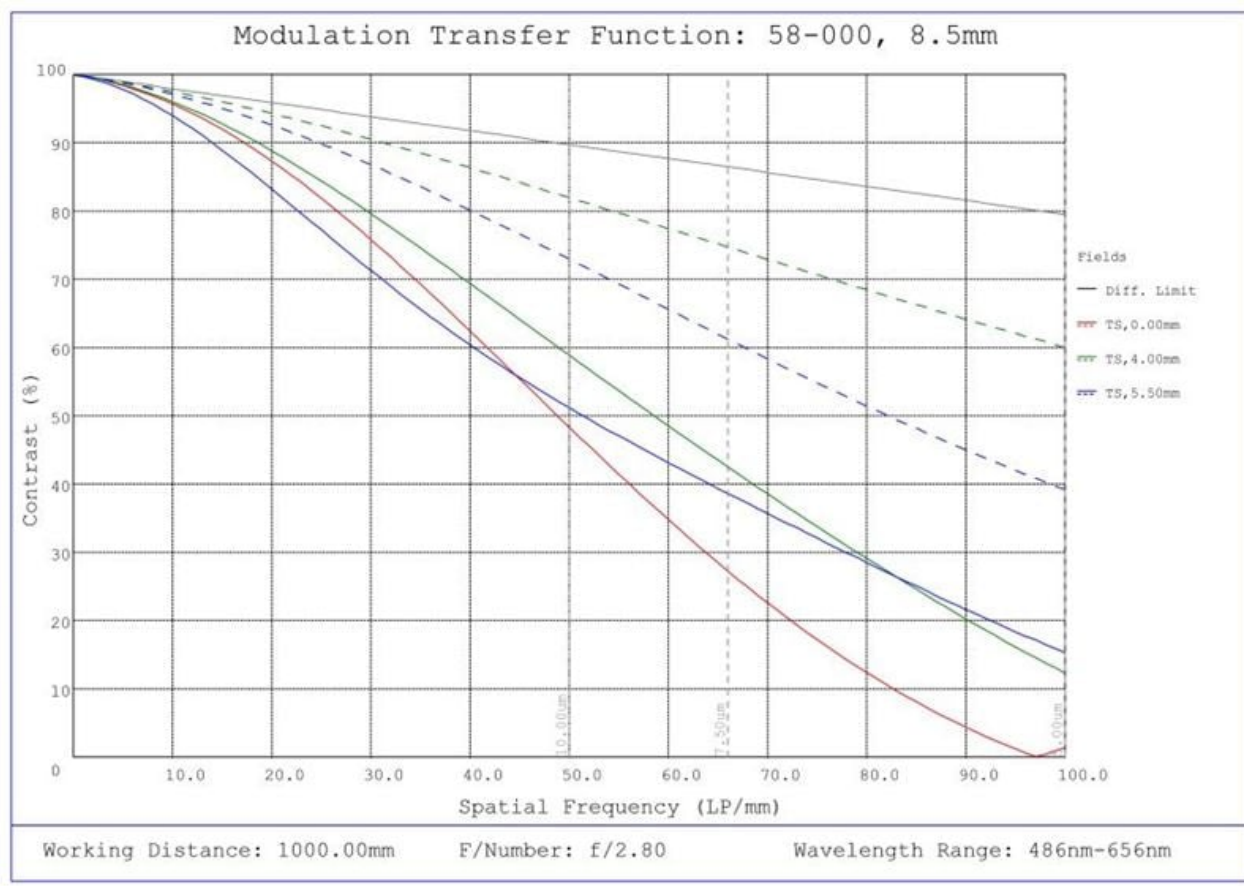
#58-000, 8.5mm C Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f2.8



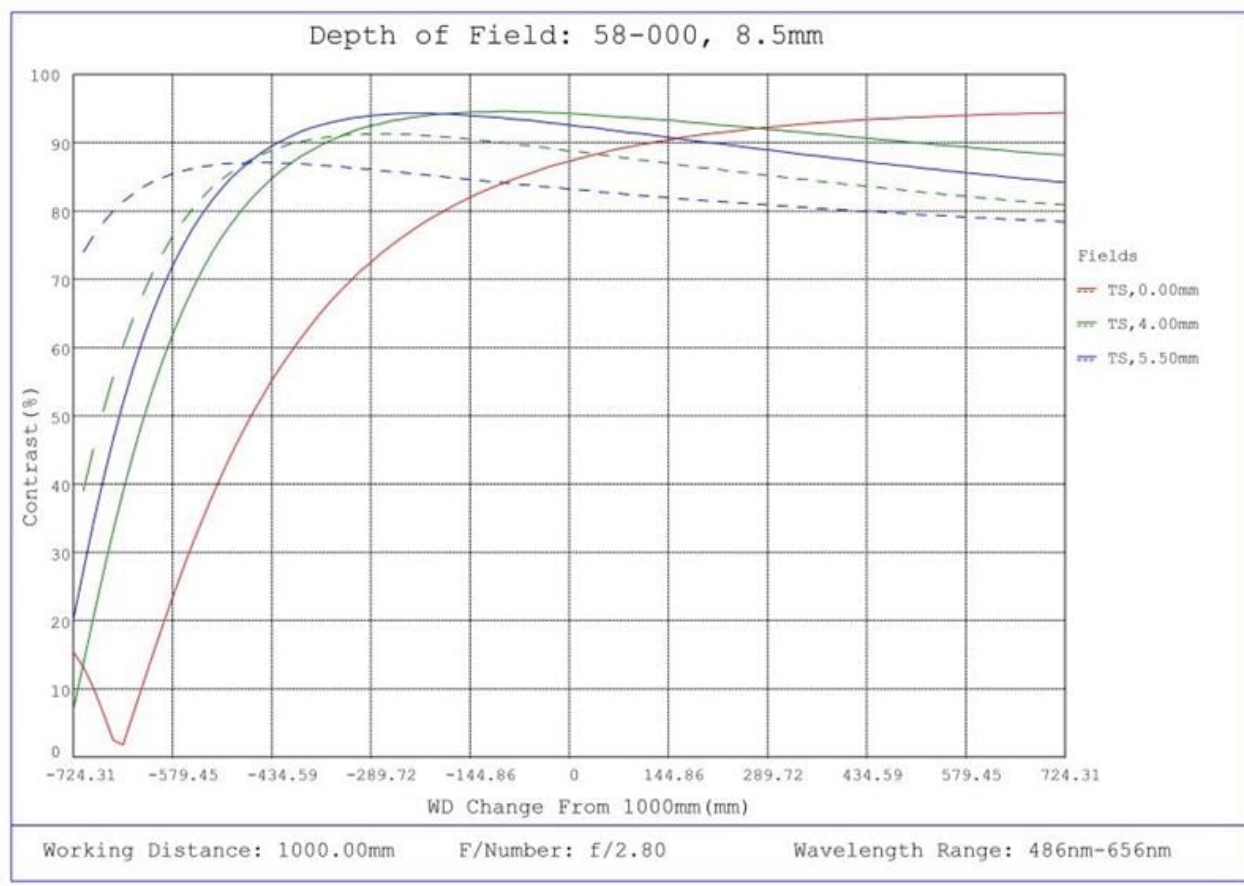
#58-000, 8.5mm C Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f4



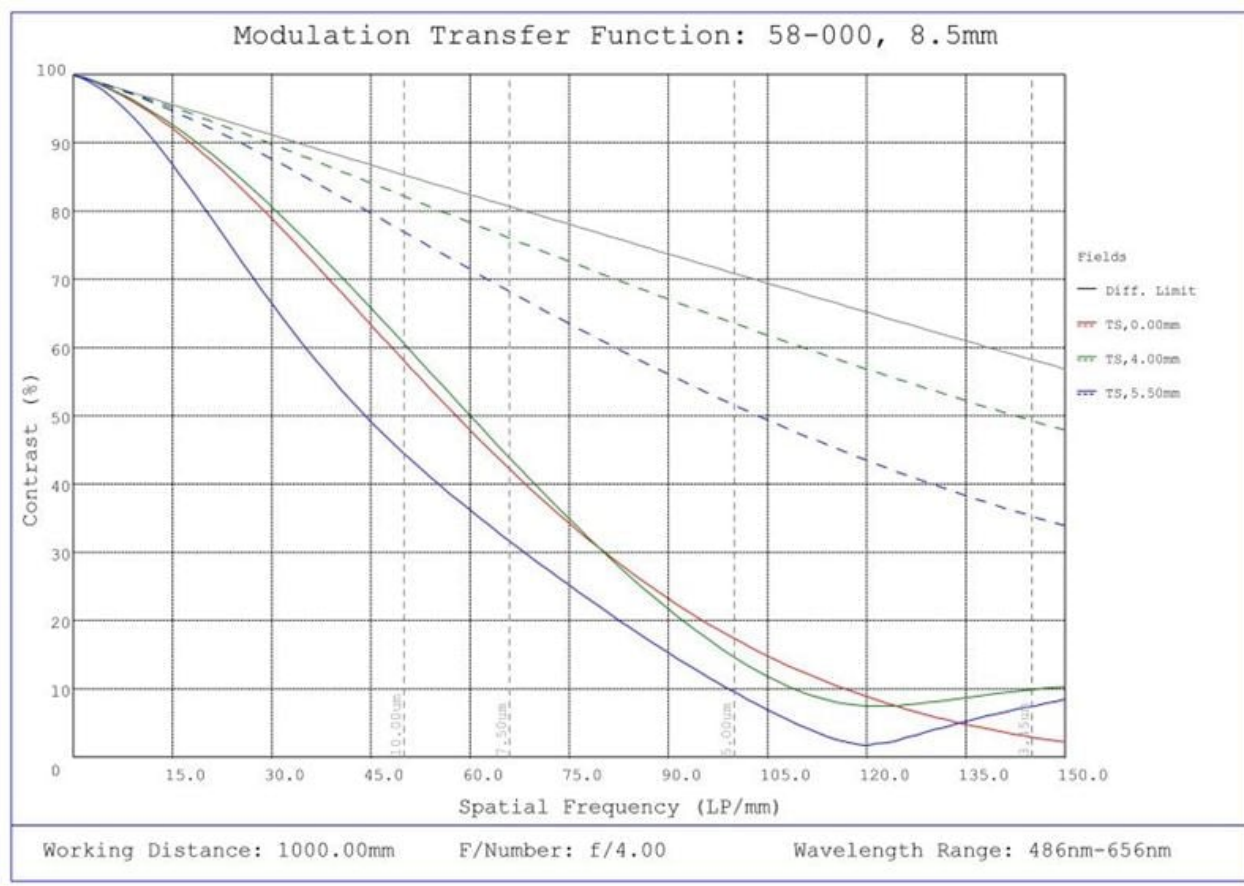
#58-000, 8.5mm C Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f4



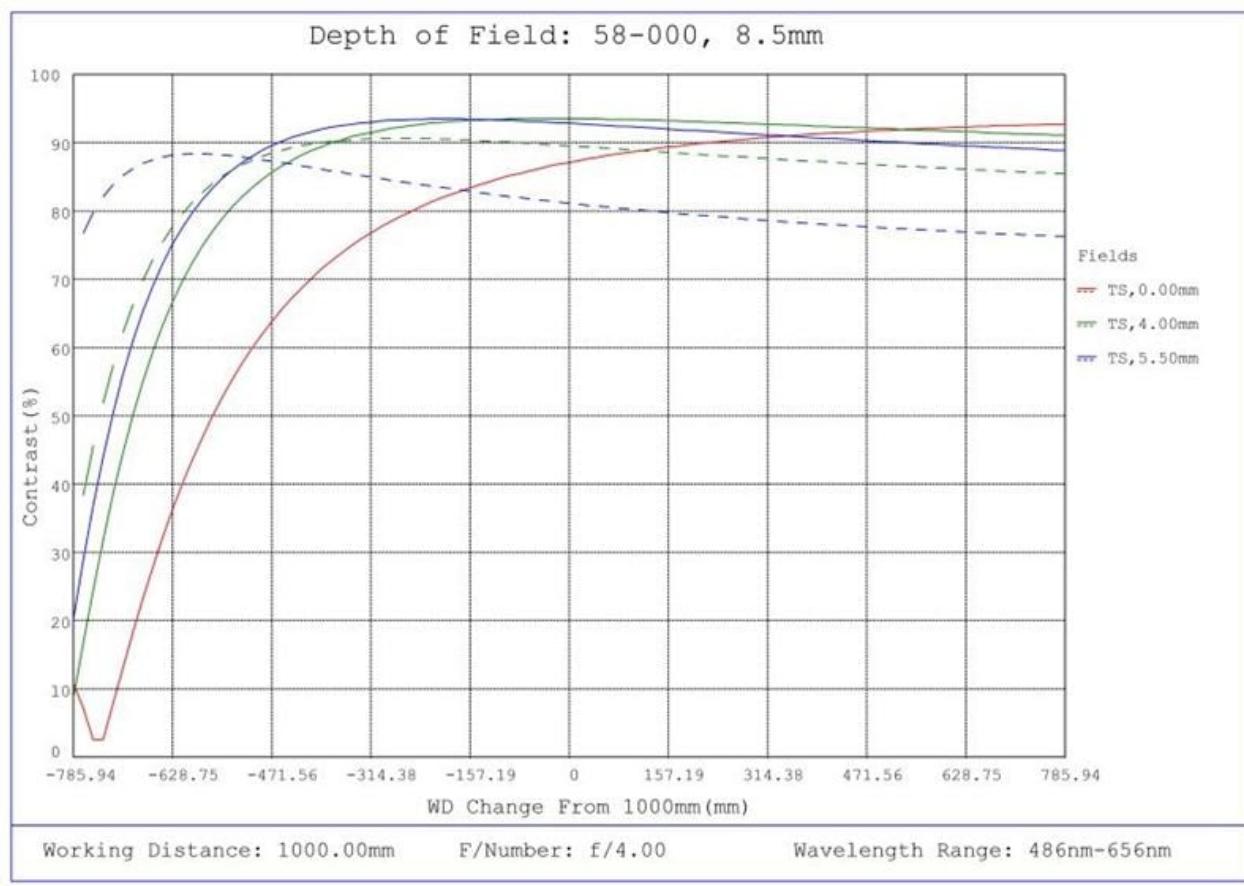
#58-000, 8.5mm C Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f2.8



#58-000, 8.5mm C Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f2.8



#58-000, 8.5mm C Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f4



#58-000, 8.5mm C Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f4



August 07, 2025

To Whom It May Concern,

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

Stock No.	Description
58-000	8.5mm C Series Fixed Focal Length Lens

This item is EU RoHS (2015/863/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
August 07, 2025

Edmund Optics Inc. - 101 E Gloucester Pike, Barrington, NJ 08007 | 1-800-363-1992 | Compliance@edmundoptics.com



August 07, 2025

Stock No.	Description
58-000	8.5mm C Series Fixed Focal Length 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



August 07, 2025

To Whom It May Concern,

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

Stock No.	Description
58-000	8.5mm C Series Fixed Focal Length Lens

This item does not contain any of the substances listed on the Reach SVHC list as of 21 January 2025 in quantities exceeding 0.1% weight by weight.

Please note the following:

- Entry 11 of Annex V of the REACH regulation EC 1907/2006 as amended by regulation 987/2008, exempts "non-hazardous" glass components from registration.
- Items considered to be packing materials and which do not form part of, or are not required for the operation of, the product, are not considered to be within scope of this declaration.
- EO does not routinely analyze products for substances not purposely added or specified within the design specifications, drawings and assembly procedures.

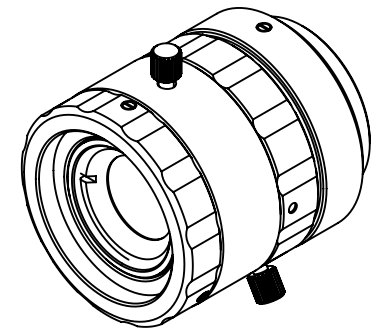
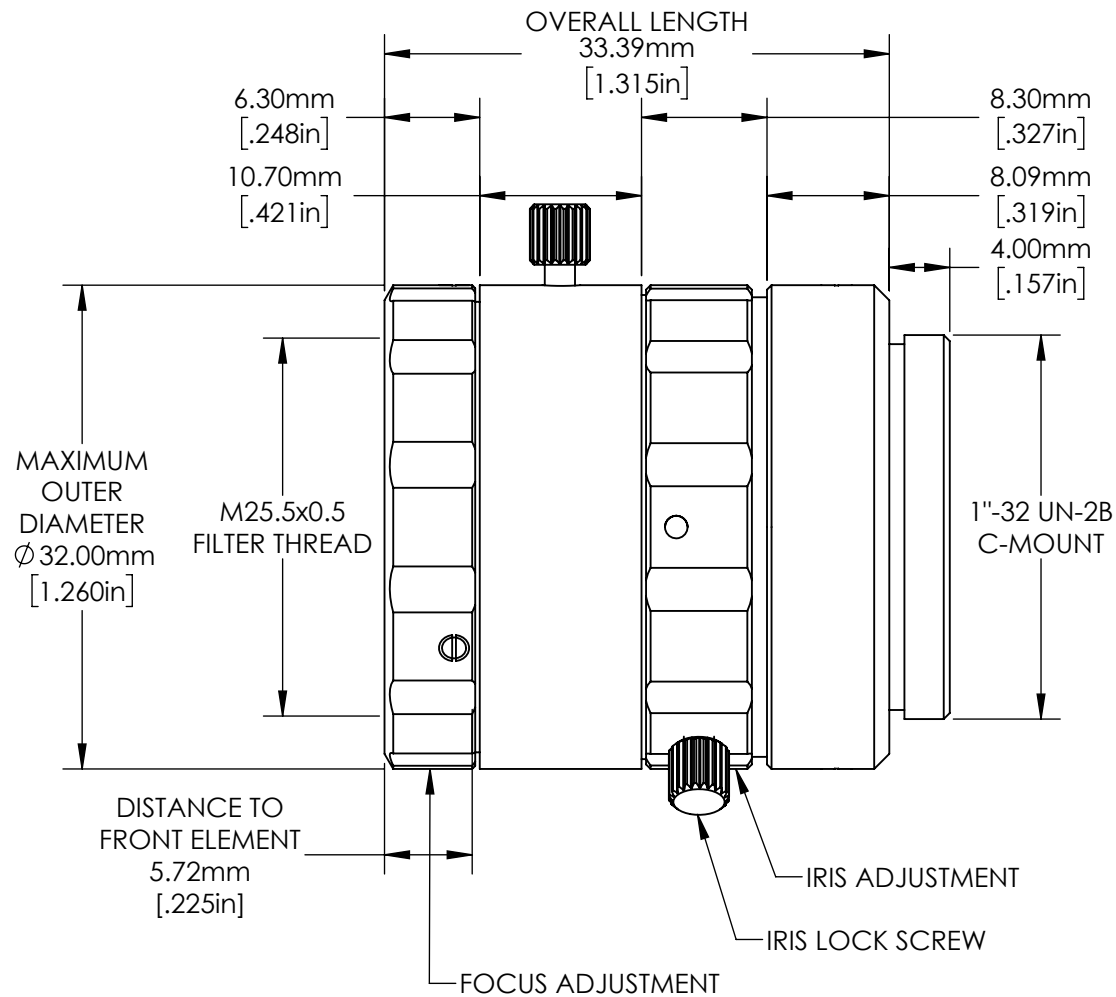
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Jay Budd, Director of Corporate Compliance
August 07, 2025

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PARTS TO THIS DRAWING**

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DIMENSIONS ARE FOR REFERENCE ONLY

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THIRD ANGLE PROJECTION	TITLE	8.5mm C Series Fixed Focal Length Lens	
ALL DIMS IN	mm	DWG NO	SHEET 1 OF 1
		58000	