TECHSPEC® 4.5mm C Series Fixed Focal Length SWIR Lens

#23-217



Phone: 1-800-363-1992 or 1-856-573-6250, Fax: 1-856-573-6295
101 EAST GLOUCESTER PIKE | P.O BOX 9000
BARRINGTON, NJ 08007-1380 USA
www.edmundoptics.com

TECHSPEC® C Series Fixed Focal Length SWIR Lenses are compact, lightweight lenses designed as a low-cost alternative to the TECHSPEC® SWIR Series Fixed Focal Length Lenses. These lenses feature large maximum apertures, broadband AR coatings optimized for a 900 – 1700nm wavelength range, and with the working distances and resolution requirements of factory automation and inspection in mind. For optimum resolution and performance at the application's target spectral range, SWIR Machine Vision filters and SWIR LED illumination are recommended. TECHSPEC® C Series Fixed Focal Length SWIR Lenses are manufactured to a high tolerance, resulting in greater levels of imaging performance and low lens-to-lens variation, assuring simple installation into multiple systems. Also available with optimized performance in the VIS or VIS-NIR spectral ranges, C-Series lenses are ideal for a wide variety of machine vision, factory automation, and autonomous applications.

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General

Product Family:	C SWIR Series
Type:	Fixed Focal Length Lens
Imaging Lens Type:	Compact Lens

Physical & Mechanical Properties

Iris Option:	Variable
Length (mm):	37.50
Maximum Diameter (mm):	40
Outer Diameter (mm):	40
Weight (g):	69
Maximum Rear Protrusion (mm):	6.8

Optical Properties

Horizontal Field of View @ Max Sensor Format:	84.7°
Horizontal Field of View, 1/1.8" Sensor:	84.7°
Horizontal Field of View, 1/2" Sensor:	76.7°
Horizontal Field of View, 1/2.5" Sensor:	69.4°
Horizontal Field of View, 1/3" Sensor:	59.2°
Horizontal Field of View, 1/4" Sensor:	45.2°
Maximum Image Circle (mm):	9.00
Numerical Aperture NA, Object Side:	0.0285
Number of Elements (Groups):	7 (6)
Wavelength Range (nm):	900 - 1700
Focal Length FL (mm):	4.50
Working Distance (mm):	25 - ∞
FOV @ Max Sensor Format, H x V (mm):	Horizontal: 84.7° Vertical: 66.1° Diagonal: 100.1°
Aperture (f/#):	f/2 - f/11
Coating:	900 - 1700nm BBAR
Coating Specification:	900 - 1700nm BBAR
Entrance Pupil Position (mm):	14.40
Object Space Principal Plane (mm):	17.89
Image Space Principal Plane (mm):	6.51
Maximum Distortion (%):	-15.83
Exit Pupil Position (mm):	-9
Lens Wavelength Range:	SWIR

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Maximum Sensor Format:	1/1.8"
Pixel Size (µm):	2.74

Threading & Mounting

Filter Thread:	M58 x 0.75 (Male)
Filter Thread Adapter:	#87-425 (Required)
Front Thread:	M50 x 0.5 (Male)
Mount:	C-Mount

Environmental & Durability Factors

Storage Temperature (°C):	-20 to +60 For questions regarding operating temperature please contact our support team

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November 10, 2026

To Whom It May Concern,

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

Stock No.	*Description*
23-217	4.5mm C Series Fixed Focal Length SWIR 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
November 10, 2026

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

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Stock No.	Description
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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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This item does not contain any of the substances listed on the Reach SVHC list as of 04 February 2026 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.

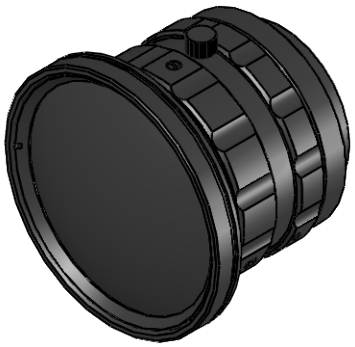
This certification means that:

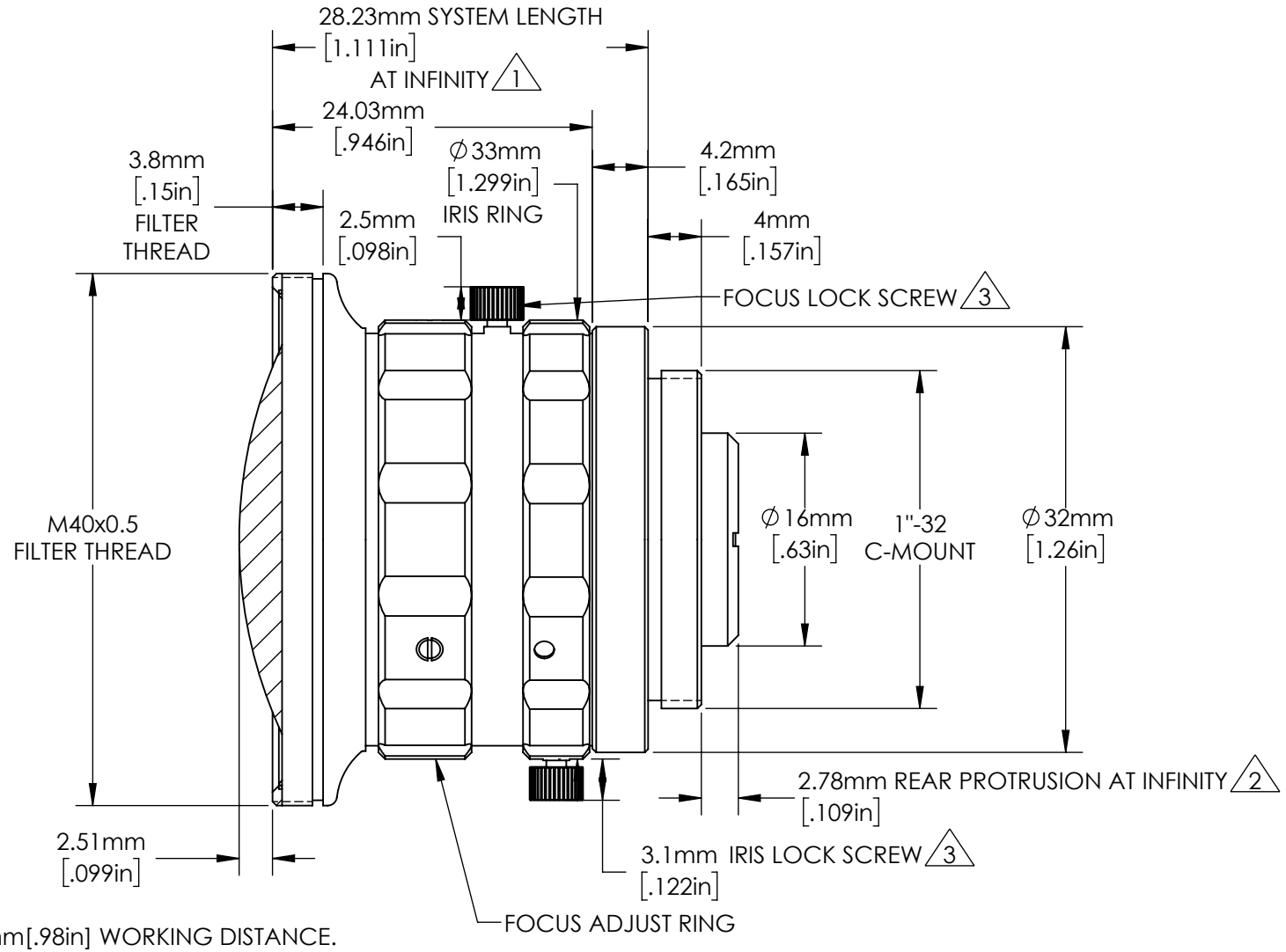
- EO's suppliers have confirmed the material composition of this product.
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NOTES:

1. 28.77mm[1.13in] @ 25mm[.98in] WORKING DISTANCE.
2. 2.24mm[.09in] REAR PROTRUSION @ 25mm[.98in] WORKING DISTANCE.
3. OPTIONAL RECESSED SET SCREW INCLUDED.
4. LENS MAY MOVE MORE THAN INDICATED UNTIL IT REACHES INTERNAL STOPS.

FOR INFORMATION ONLY:

DO NOT MANUFACTURE PARTS TO THIS DRAWING

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.
DIMENSIONS ARE FOR REFERENCE ONLY.
FOR DETAILED SPECIFICATIONS, PLEASE REFER TO THE SPEC SHEET.

Edmund Optics®

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