

TECHSPEC®

16mm, f/1.6 Cw Series Fixed Focal Length Lens



16mm Focal Length



Stock **#15-638** 20+ In Stock

-

1

+

C\$641²⁰

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Volume Pricing	
Qty 1+	C\$641.20 each
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Product Downloads

General	
Cw Series	Series:
C-Mount compatible with O-ring 25mm ID x2mm	Note:
Fixed Focal Length Lens	Type:
Meets IEC IPX7 and IPX9K	Imaging Lens Type:

Physical & Mechanical Properties	
Fixed	Iris Option:
48.60	Length (mm):
37.77	Maximum Diameter (mm):
34.1	Outer Diameter (mm):
1.9	Maximum Rear Protrusion (mm):
38.00	Diameter (mm):

Optical Properties	
Horizontal Field of View @ Max Sensor Format: 65.5mm - 27.8°	
Field of View at Max Sensor Format: Horizontal: 31° Vertical: 23.4° Diagonal: 38.3°	
27.8°	Horizontal Field of View, 2/3" Sensor:
22.9°	Horizontal Field of View, 1/1.8" Sensor:
20.4°	Horizontal Field of View, 1/2" Sensor:
18.5°	Horizontal Field of View, 1/2.5" Sensor:
15.3°	Horizontal Field of View, 1/3" Sensor:
11.5°	Horizontal Field of View, 1/4" Sensor:
11.00	Maximum Image Circle (mm):
0.0407	Numerical Aperture NA, Object Side:
7 (6)	Number of Elements (Groups):
16.00	Focal Length FL (mm):
100 - ∞	Working Distance (mm):
f/1.6	Aperture (f/#):
425 - 675nm BBAR	Coating:
425 - 675nm BBAR	Coating Specification:
12.97	Entrance Pupil Position (mm):
25.15	Object Space Principal Plane (mm):
-3.00	Image Space Principal Plane (mm):
-1.26	Maximum Distortion (%):
-53.79	Exit Pupil Position (mm):
VIS	Lens Wavelength Range:

Sensor	
2/3"	Maximum Sensor Format:
2.74	Pixel Size (µm):

Threading & Mounting	
M30.5 x0.50 (Female)	Filter Thread:
C-Mount	Mount:

Environmental & Durability Factors

Environmental Rating:	
IPX7 and IPX9K	
Storage Temperature (°C):	
-20 to +60	
Type of Ruggedization:	
Waterproof (IPX7 and IPX9K)	

Regulatory Compliance

Certificate of Conformance:	
View	

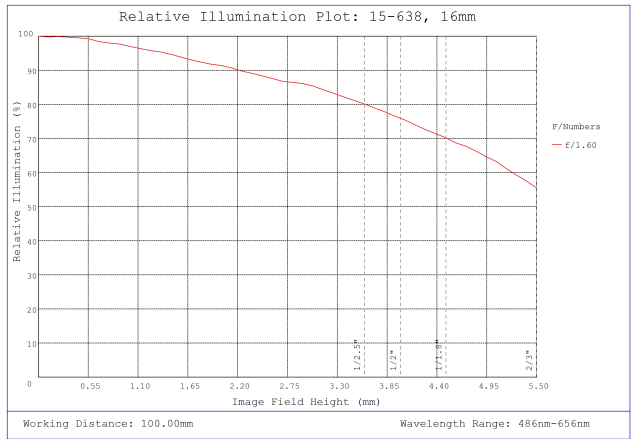
Product Details

- Up to 2/3", C-Mount Lens
 - Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
 - Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
 - Designed to Eliminate the Need for a Protective Lens Cover
- TECHSPEC® Cw Series Fixed Focal Length Lenses are waterproof versions of our [TECHSPEC® C Series Fixed Focal Length Lenses](#). Designed to meet IEC Ingress Protection Codes IPX7 and IPX9K, these lenses withstand exposure to water up to 1 meter depth for 30 minutes and operate in close-range high pressure, high temperature water spray downs with the exception of all 3.5 and 4.5mm options which are IPX7. These lenses include a hydrophobic coated window to prevent water droplets from settling on the lens' surface. To prevent moisture from entering the housing, the lenses are sealed with multiple O-rings. TECHSPEC® Cw Series Fixed Focal Length Lenses are designed for up to 7.5 MegaPixel, 2/3" sensors and are ideal for applications including food, pharma, automotive, and security. These lenses won the Bronze-Level 2021 Vision Systems Design Innovators Award.
- Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:
- **C Series:** Features locking cam focus and iris adjustment and is the most adjustable version of these optical designs; they are the typical high quality machine vision lenses. Also available with a [VIS-NIR Broadband Anti-Reflection \(BBAR\) Coating](#).
 - **Cl Series:** Simplified mechanics featuring fixed apertures with compact housing. [Industrial Ruggedization](#) for reduced size, cost, and locked focus.
 - **Cr Series:** All optics glued in place and a locking C-clamp focus ring. [Stabilized Ruggedization](#) for reduced pixel shift and improved focus stability.
 - **Cx Series:** Modular, flexible mechanics allows lenses to be taken apart for easy integration of accessories such as liquid lenses, apertures, and more.
 - **Liquid Lens Cx Series:** Designed with an integrated liquid lens for quick autofocus.
 - Cw Series: Waterproof, designed to meet IEC [Ingress Protection](#) Code IPX7 and IPX9K.

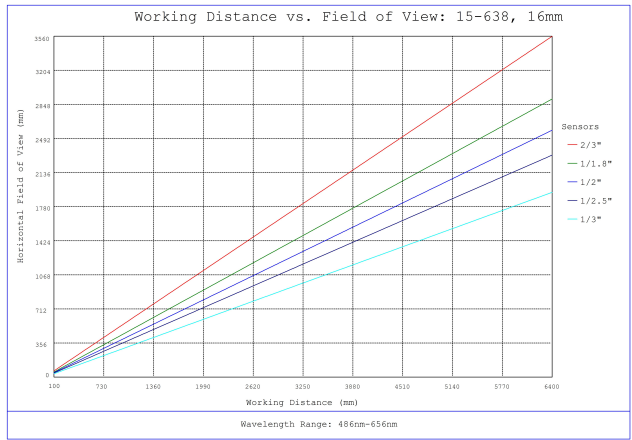
Technical Information



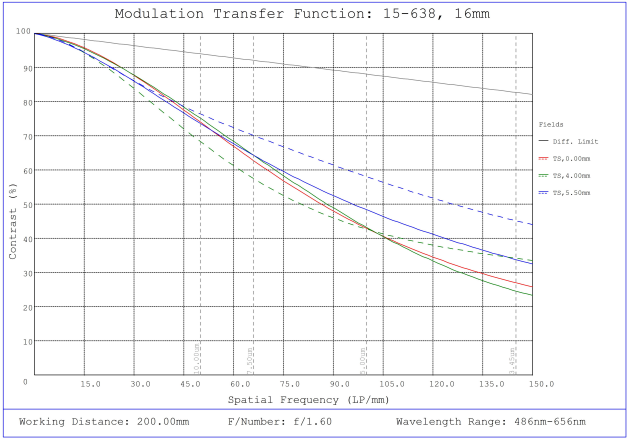
#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Distortion Plot



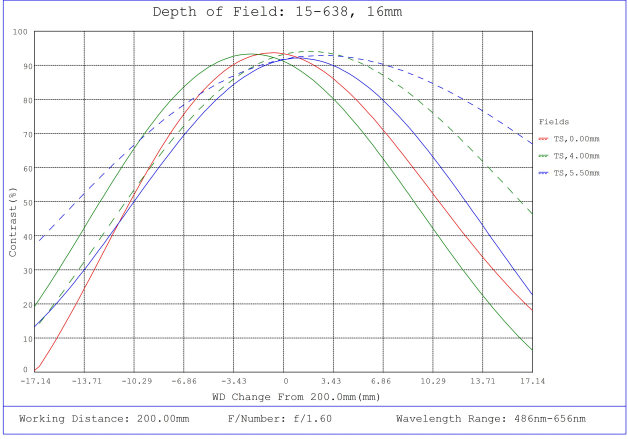
#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



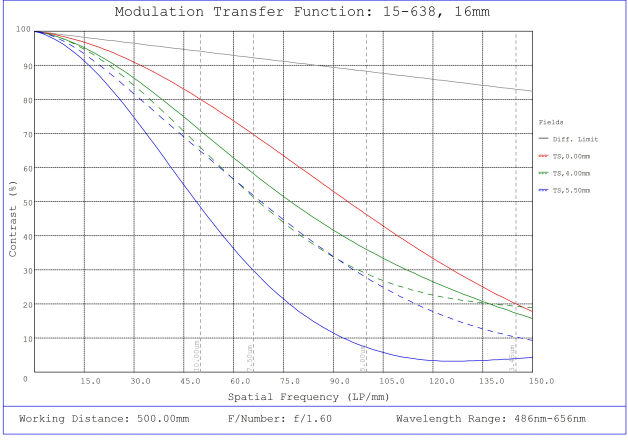
#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



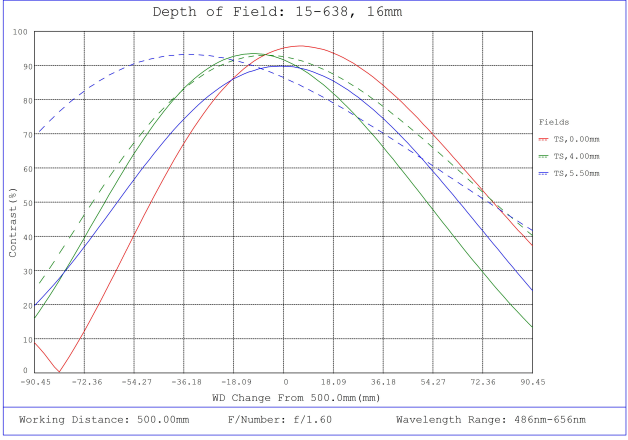
#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f1.6



#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f1.6



#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.6



#15-638, 16mm, f/1.6 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.6