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**TECHSPEC® 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens**



8.5mm Cw Series Fixed Focal Length Lens



Stock #15-626 **17 In Stock**

⊖ 1 ⊕ C\$641<sup>20</sup>

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**General**

Cw Series **Product Family:**

C-Mount compatible with O-ring 25mm ID x 2mm **Note:**

Fixed Focal Length Lens **Type:**

**Physical & Mechanical Properties**

Fixed	<b>Iris Option:</b>
38.98	<b>Length (mm):</b>
37.77	<b>Maximum Diameter (mm):</b>
37.77	<b>Outer Diameter (mm):</b>
0.6	<b>Maximum Rear Protrusion (mm):</b>

## Optical Properties

<b>Field of View at Max Sensor Format:</b>	
Horizontal: 60.65°	
Vertical: 45.0°	
Diagonal: 77.0°	
60.6°	<b>Horizontal Field of View, 2/3" Sensor:</b>
49.2°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
43.6°	<b>Horizontal Field of View, 1/2" Sensor:</b>
39.4°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
32.6°	<b>Horizontal Field of View, 1/3" Sensor:</b>
24.4°	<b>Horizontal Field of View, 1/4" Sensor:</b>
11.00	<b>Maximum Image Circle (mm):</b>
0.0200	<b>Numerical Aperture NA, Object Side:</b>
6 (5)	<b>Number of Elements (Groups):</b>
8.50	<b>Focal Length FL (mm):</b>
100 - ∞	<b>Working Distance (mm):</b>
f/1.8	<b>Aperture (f/#):</b>
425 - 675nm BBAR	<b>Coating Specification:</b>
12.86	<b>Entrance Pupil Position (mm):</b>
18.72	<b>Object Space Principal Plane (mm):</b>
6.67	<b>Image Space Principal Plane (mm):</b>
-18.51	<b>Maximum Distortion (%):</b>
-12.12	<b>Exit Pupil Position (mm):</b>
VIS	<b>Lens Wavelength Range:</b>

## Sensor

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

## Threading & Mounting

M30.5 x 0.50 (Female)	<b>Filter Thread:</b>
C-Mount	<b>Mount:</b>

## Environmental & Durability Factors

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

## Product Details

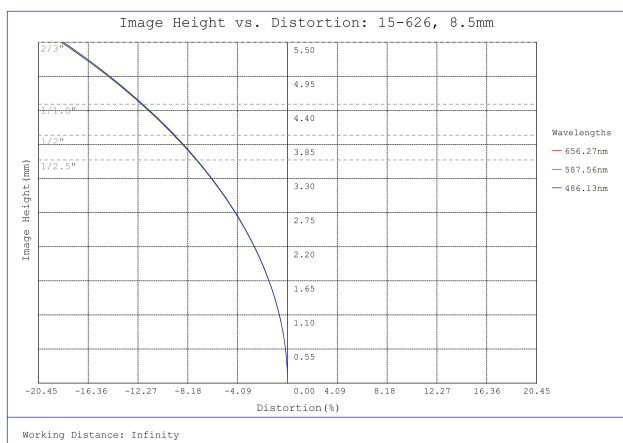
- Up to 2/3", C-Mount Lens
- Waterproof (Cw) Versions of C Series Fixed Focal Length Lenses
- Meets IEC Ingress Protection Ratings of IPX7 and IPX9K
- Designed to Eliminate the Need for a Protective Lens Cover

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.

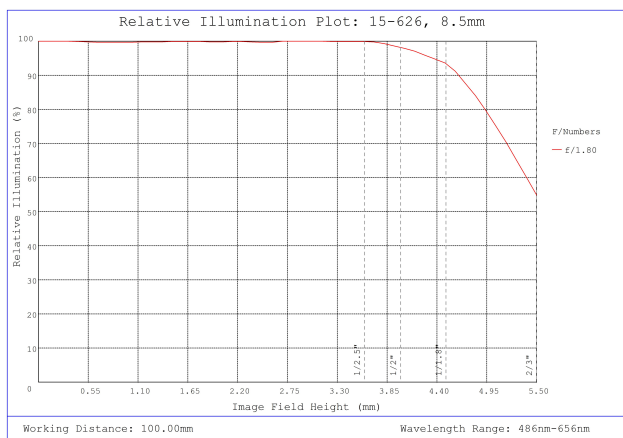
Edmund Optics has created a family of high performance optical designs (the C Series family) and developed 6 customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the C Series lenses providing the same optical performance in a variety 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](#).
- **Ci 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.

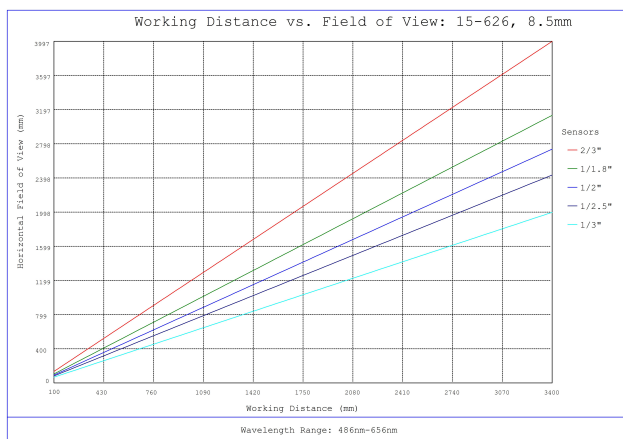
## Technical Information



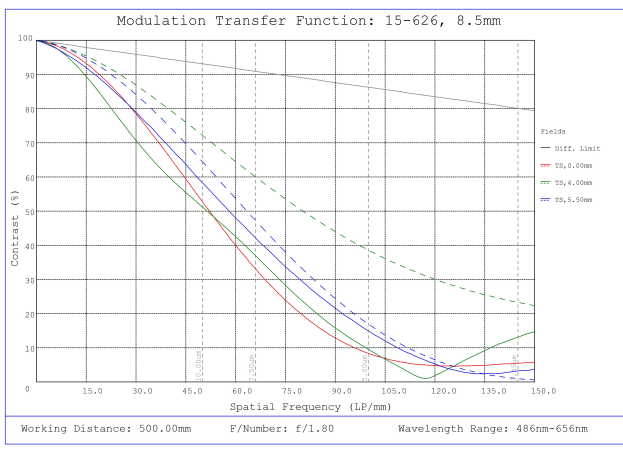
#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Distortion Plot



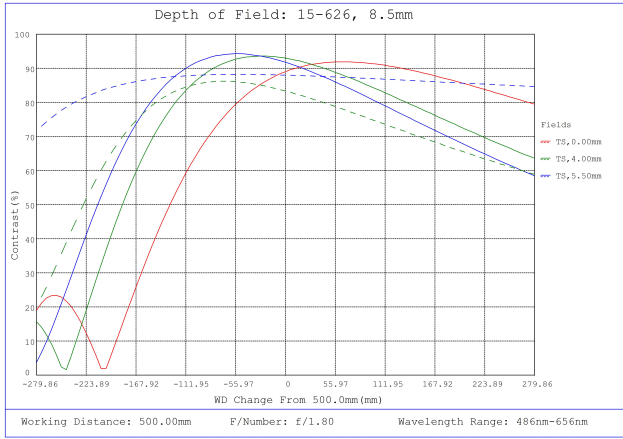
#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Relative Illumination Plot



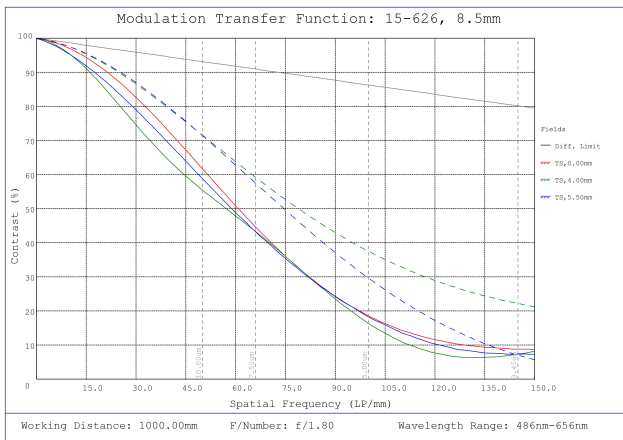
#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



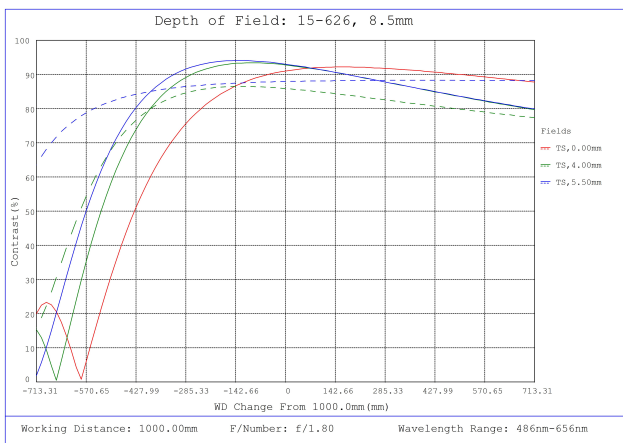
#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.8



#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.8



#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f1.8



#15-626, 8.5mm, f/1.8 Cw Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f1.8