

# TECHSPEC® 17.5mm FL f/5.6, Rugged Blue Series IR-Cut M12 Lens



Stock #25-076 **14 In Stock**

1 £80<sup>.00</sup>

**ADD TO CART**

TECHSPEC® Rugged Blue Series M12 Lenses



Volume Pricing	
Qty 1-49	£80.00 each
Qty 50+	£64.00 each
Need More?	<a href="#">Request Quote</a>

Prices shown are exclusive of VAT/local taxes

Product Downloads

- Zemax
- EO Spec Sheet

## General

<b>Product Family:</b> Rugged Blue Series	<b>Type:</b> M12 Imaging Lens
<b>IR Cut Filter:</b> Yes	<b>Special Type of Lens:</b> IR-Cut Filter

## Physical & Mechanical Properties

<b>Iris Option:</b> Fixed	<b>Length (mm):</b> 20.70
<b>Maximum Diameter (mm):</b> 14	<b>Outer Diameter (mm):</b> 14
<b>Weight (g):</b> 7	

## Optical Properties

<b>Horizontal Field of View @ Max Sensor Format:</b> 50.7mm - 20.6°	<b>Field of View at Max Sensor Format:</b> Horizontal: 57.0mm - 23.1° Vertical : 38mm - 15.6° Diagonal: 63.3mm - 25.6°
<b>Horizontal Field of View, 1.2" Sensor:</b> 50.7mm - 20.6°	<b>Horizontal Field of View, 1/1.8" Sensor:</b> 57.0mm - 23.1°
<b>Horizontal Field of View, 1/2.5" Sensor:</b> 45.9mm - 18.7°	<b>Horizontal Field of View, 1/3" Sensor:</b> 38.0mm - 15.6°
<b>Horizontal Field of View, 1/4" Sensor:</b> 28.5mm - 11.7°	<b>Maximum Image Circle (mm):</b> 9.00
<b>Numerical Aperture NA, Object Side:</b> 0.0096	<b>Number of Elements (Groups):</b> 6(5)

<b>Wavelength Range (nm):</b>	400 - 700	<b>Focal Length FL (mm):</b>	17.50
<b>Working Distance (mm):</b>	150 - ∞	<b>Aperture (f/#):</b>	f/5.6
<b>Distortion (%):</b>	0.76 @ Full Field	<b>Back Focal Length BFL (mm):</b>	5.8 - 4.9
<b>Coating Specification:</b>	λ/4 MgF <sub>2</sub> @ 550nm	<b>Entrance Pupil Position (mm):</b>	13.01
<b>Object Space Principal Plane (mm):</b>	5.57	<b>Image Space Principal Plane (mm):</b>	-12.71
<b>Maximum Distortion (%):</b>	0.76	<b>Exit Pupil Position (mm):</b>	-7.49
<b>Lens Wavelength Range:</b>	VIS		

## Sensor

<b>Maximum Sensor Format:</b>	1/1.8"	<b>Pixel Size (μm):</b>	1.40
-------------------------------	--------	-------------------------	------

## Threading & Mounting

<b>Filter Thread:</b>	N/A	<b>Mount:</b>	S-Mount (M12 x 0.5)
-----------------------	-----	---------------	---------------------

## Environmental & Durability Factors

<b>Type of Ruggedization:</b>	Stabilized (Robust Mechanics for Shock and Vibration)
-------------------------------	---

## Regulatory Compliance

<b>Certificate of Conformance:</b>	<a href="#">View</a>
------------------------------------	----------------------

## Product Details

- Up to ½", S-Mount Lens
- Up to 5 MegaPixels, 1.4μm Pixel Size Sensors
- Ruggedized Designs (50g Shock) of our Blue Series Lens with Individual Optics Glued in Place
- 2mm to 25mm Focal Length
- **Non-Ruggedized Designs** Also Available

TECHSPEC® Rugged Blue Series M12 Lenses have **stabilized ruggedization**, protecting the lens from damage, while reducing pixel shift and maintaining optical pointing stability after shock and vibration. Each lens consists of several precision glass optics that are glued in place inside a compact, aluminum housing. Gluing the glass optics prevents even the smallest movements that often cause pixel shift. Object to image mapping is maintained even after heavy shock and vibration; if the center of the object maps onto the center pixel, it will always map to that same center pixel. TECHSPEC Rugged Blue Series M12 Lenses are ideal for calibrated imaging applications such as measurement and gauging, 3D stereo vision, robotics and sensing, autonomous vehicles, and object tracking. These lenses are available in a variety of f/# options ranging from f/2.5 to f/8.

Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application needs.

- **Blue Series M12 Lenses:** High resolution finite conjugate designs optimized for machine vision working distances.
- Rugged Blue Series M12 Lenses: **Stabilized ruggedization** versions of our Blue Series M12 Lenses, utilizing the same optics.
- **Green Series M12 Lenses:** Finite conjugate designs optimized for machine vision working distances.
- **Red Series M12 Lenses:** Infinite conjugate designs optimized for high resolution performance out to infinity.
- **HEO Series M12 Lenses:** Harsh Environment Optics (HEO) sealed versions of our Red Series M12 Lenses.
- **Liquid Lens M12 Lenses:** Integrated liquid lens for fast electronic focus.

## Technical Information

## Accessories

**Note:** Compatible accessories for individual stock numbers may vary. If unsure about which accessories work with your products, please contact us [here](#).

	Title	Compare	Stock Number	Price	Buy
<a href="#">MORE+</a>	M12 Lock Nut, 10 Pack		<a href="#">#16-788</a>	<b>£92.80</b> <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>
<a href="#">MORE+</a>	M12 Lock Nut		<a href="#">#64-102</a>	<b>£13.20</b> <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>
<a href="#">MORE+</a>	M12 Lens Holder for Camera Boards		<a href="#">#66-382</a>	<b>£10.00</b> <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>
<a href="#">MORE+</a>	C-Mount to M12 Lens Adapter w/Oring		<a href="#">#59-241</a>	<b>£37.40</b> <a href="#">Request Quote</a>	3 In Stock <input type="text" value="1"/>
<a href="#">MORE+</a>	C-Mount to M12 Lens Adapter		<a href="#">#53-675</a>	<b>£26.20</b> <a href="#">Request Quote</a>	20+ In Stock <input type="text" value="1"/>

## Related Products



C, S, and T-Mount Extensions Tubes



#63-975 - 16mm, S-Mount Ring Mount, 1/4-20 Tapped Hole  
**£52.00**

Qty

## Frequently Purchased Together



#24-468 - 17.5mm FL f/5.6, Blue Series IR-Cut M12 Lens  
**£66.00**

Qty

## Resources

**Media Type**

- Application Note
- Video
- Trending in Optics
- Published Article
- FAQ
- Glossary
- Technical Tool

**APPLICATION NOTE**  
**Anti-Reflection (AR) Coatings**

**APPLICATION NOTE**  
**An Introduction to Optical Coatings**

**VIDEO**  
**Wavelength and f#**

**APPLICATION NOTE**  
**Understanding Focal Length and Field of View**

**APPLICATION NOTE**  
**Introduction to Modulation Transfer Function**

**VIDEO**  
**LIGHT TALK - EPISODE 5: Ruggedized Imaging**

[View More](#)