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**TECHSPEC® 10mm FL f/4, Blue Series IR-Cut M12 Lens**



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**General**

Blue Series **Product Family:**

M12 Imaging Lens **Type:**

Yes **IR Cut Filter:**

IR-Cut Filter      **Special Type of Lens:**

## Physical & Mechanical Properties

Fixed      **Iris Option:**

17.00      **Length (mm):**

14      **Maximum Diameter (mm):**

14      **Outer Diameter (mm):**

5      **Weight (g):**

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
27.1°

**Field of View at Max Sensor Format:**  
Horizontal: 71.8mm - 27.1°  
Vertical: 53.8mm - 20.5°  
Diagonal: 89.9mm - 33.6°

**Horizontal Field of View, 1/3" Sensor:**  
71.8mm - 27.1°

**Horizontal Field of View, 1/4" Sensor:**  
53.8mm - 20.5°

6.00      **Maximum Image Circle (mm):**

0.0079      **Numerical Aperture NA, Object Side:**

5(4)      **Number of Elements (Groups):**

400 - 700      **Wavelength Range (nm):**

10.00      **Focal Length FL (mm):**

150 - ∞      **Working Distance (mm):**

f/4      **Aperture (f#):**

-0.25 @ Full Field      **Distortion (%):**

6.6 - 6.3      **Back Focal Length BFL (mm):**

M4 MgF<sub>2</sub> @ 550nm      **Coating Specification:**

8.45      **Entrance Pupil Position (mm):**

8.24      **Object Space Principal Plane (mm):**

-3.29      **Image Space Principal Plane (mm):**

-0.25      **Maximum Distortion (%):**

-3.08      **Exit Pupil Position (mm):**

VS (IR-Cut Filter)      **Lens Wavelength Range:**

## Sensor

1/3"      **Maximum Sensor Format:**

1.40      **Pixel Size (μm):**

## Threading & Mounting

N/A      **Filter Thread:**

S-Mount (M12 x 0.5)      **Mount:**

## Regulatory Compliance

**RoHS 2015:**  
Compliant

## Product Details

- Up to 1/2", S-Mount Lens
- Up to 5 MegaPixels, 1.4µm Pixel Size Sensors
- High Resolution Board Camera Lens Optimized for Close WD
- 2mm to 35mm Focal Length
- [Ruggedized Designs](#) Also Available

TECHSPEC® Blue Series M12 Lenses feature high resolution performance, along with the same great versatility of our [TECHSPEC® Green Series M12 Lenses](#). Each lens consists of several precision glass elements mounted in a compact, aluminum housing. These lenses can connect to C-Mount cameras using the M12 x0.5 Adapter for C-Mount Cameras ([#53-675](#)) or the M12 x0.5 C-Mount Adapter with Rubber O-Ring ([#59-241](#)) for vibration-sensitive environments. TECHSPEC® Blue Series M12 Lenses are ideal for automotive, industrial, and medical imaging application. Prescription data is available by submitting a [Request for Prescription Form](#).

**Note:** Compatible [TECHSPEC® M12 Imaging Lens Accessories](#) available.

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

Focal Length	A	B	C*	D
2.0mm	18.0mm	21.7mm	2.26mm	4.75mm
3.0mm	14.0mm	17.1mm	4.8 - 4.7mm	5.8mm
4.0mm	14.0mm	19.7mm	6.1 - 6.0mm	4.4mm
5.0mm	14.0mm	14.6mm	4.0 - 3.9mm	3.7mm
6.0mm	14.0mm	14.1mm	6.9 - 6.8mm	4.5mm
8.0mm	14.0mm	12.3mm	8.8 - 8.6mm	3.7mm
10.0mm	14.0mm	17.0mm	6.6 - 6.3mm	3.7mm
12.5mm	15.0mm	22.9mm	10.1 - 9.7mm	4.8mm
17.5mm	14.0mm	20.7mm	5.8 - 4.9mm	7.6mm
25.0mm	18.0mm	30.0mm	8.5 - 6.5mm	11.5mm
35.0mm	18.0mm	29.5mm	18.72 - 14.0mm	14.5mm

\*Specified for Optimized Working Distance of 150 - 250mm.