# TECHSPEC® COMPACT FIXED FOCAL LENGTH LENSES

- **Industry Leading Price to Performance Ratio**
- **Supports up to ⅔" Sensors**
- **Large Maximum Aperture**
- **Designed for True Factory Automation**
- **Ruggedized Housing**
- **Low Lens-to-Lens Variation**

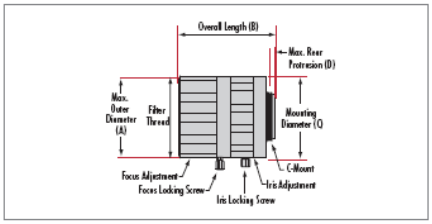
Designed for use in machine vision applications, our TECHSPEC® Compact Fixed Focal Length lenses are ideal for use in factory automation, inspection or qualification. These lenses have been optically designed with the working distance and resolution requirements of factory automation and inspection in mind. Featuring large maximum apertures, these high performance lenses can be used in even the most restrictive lighting conditions. Each lens has a broadband anti-reflection coating, which increases transmission by up to 12 percent over the standard $MgF_2$ coating on competitive lenses.

The TECHSPEC® Compact Fixed Focal Length lenses feature locking iris and focus adjustment with recessed set screws to prevent unintentional lens adjustments. The lens housing is ruggedized and robust, yet compact enough for space-restrictive applications. Each lens is manufactured to a high tolerance, resulting in high levels of imaging performance and low lens-to-lens variation, assuring simple installation into multiple systems.

Combining high optical performance, industrial features and small package size, these lenses represent a new standard in factory automation optics. **Volume discounts available.**


NEW

| Focal Length | A | B | C | D |
|---|---|---|---|---|
| 8.5mm | 35.0mm | 34.5mm | 32.0mm | 0mm |
| 12mm | 32.0mm | 27.9mm | 32.0mm | 0.5mm |
| 16mm | 33.0mm | 37.5mm | 33.0mm | 1.0mm |
| 25mm | 31.0mm | 31.2mm | 31.0mm | 1.3mm |
| 35mm | 33.0mm | 36.1mm | 33.0mm | 0mm |




## COMPACT FIXED FOCAL LENGTH LENSES

*Horizontal

| Focal Length | Max Sensor Format | FOV* Range on ⅔" Sensor | FOV* Range on ½" Sensor | FOV* Range on ⅓" Sensor | Working Distance | Aperture (f/#) | Filter Thread |
|---|---|---|---|---|---|---|---|
| 8.5mm | ⅔" | 213mm - 60.8° | 155mm - 43.8° | 116.1mm - 33.1° | 200mm - ∞ | F1.3 - F16 | M25.5 x 0.5mm |
| 12mm | ⅔" | 152mm - 41.4° | 110.5mm - 30.3° | 82.8mm - 22.6° | 200mm - ∞ | F1.8 - F16 | M25.5 x 0.5mm |
| 16mm | ⅔" | 77.6mm - 31° | 56.2mm - 22.5° | 42.3mm - 16.9° | 100mm - ∞ | F1.4 - F16 | M25.5 x 0.5mm |
| 25mm | ⅔" | 43.4mm - 20.7° | 31.2mm - 14.6° | 23.7mm - 11.3° | 100mm - ∞ | F1.4 - F17 | M25.5 x 0.5mm |
| 35mm | ⅔" | 48.2mm - 14.4° | 35.0mm - 10.4° | 26.3mm - 7.8° | 165mm - ∞ | F1.65 - F22 | M25.5 x 0.5mm |

## RESOLUTION AND CONTRAST COMPARISON OF COMPACT FIXED FOCAL LENGTH LENSES

High levels of optical performance are critical for successful imaging solutions. Edmund Optics® has taken care to maintain optical performance across the entire image plane. Resolution and contrast typically deteriorate at the corners an images, thus both the center and corners of an image must be considered when comparing overall lens performance.

Shown below are comparisons of our TECHSPEC® Compact Fixed Focal Length Lens at the center and the corner of the images to the performance of various competitor lenses. Edmund Optics® lenses show a 30% increase in contrast over the closest competitor at the center of the image. Additionally, Edmund Optics® lenses show over twice the contrast in the corner making our Compact Fixed Focal Length Lens ideal from the most simple to the most complex applications. All tests are done with a 16mm lens at f/2 on a 1.3MP, ½" sensor camera and 1.5" field of view.

**Ronch Ruling Comparison**
Ronchi Rulings are targets with high frequency black and white lines, and are used to test a lens' ability to reproduce contrast. High contrast and edge sharpness are critical for measurement and detection algorithms, especially in high resolution applications.