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**TECHSPEC® 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens**



8.5mm f/1.4, 2/3" HPI Series Fixed Focal Length Lens, #37-746



Stock **#36-746** **16 In Stock**

⊖ 1 ⊕ **€875<sup>00</sup>**

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| Volume Pricing |                               |
|----------------|-------------------------------|
| Qty 1+         | €875.00 each                  |
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**General**

HRi Series **Series:**

Fixed Focal Length Lens **Type:**

High Performance Lens with Fixed Apertures and Compact Form Factor **Imaging Lens Type:**

## Physical & Mechanical Properties

|       |                                      |
|-------|--------------------------------------|
| Fixed | <b>Iris Option:</b>                  |
| 44.57 | <b>Length (mm):</b>                  |
| 40    | <b>Maximum Diameter (mm):</b>        |
| 40    | <b>Outer Diameter (mm):</b>          |
| 84    | <b>Weight (g):</b>                   |
| 1.31  | <b>Maximum Rear Protrusion (mm):</b> |

## Optical Properties

**Horizontal Field of View @ Max Sensor Format:**  
101.4mm - 56.8°

**Field of View at Max Sensor Format:**  
Horizontal: 101.4mm - 56.8°  
Vertical: 74.2mm - 43.5°  
Diagonal: 130.5mm - 68.9°

**Horizontal Field of View, 2/3" Sensor:**  
101.4mm - 56.8°

**Horizontal Field of View, 1/1.8" Sensor:**  
81.5mm - 47.2°

**Horizontal Field of View, 1/2" Sensor:**  
71.9mm - 42.2°

**Horizontal Field of View, 1/2.5" Sensor:**  
64.8mm - 38.4°

**Horizontal Field of View, 1/3" Sensor:**  
53.2mm - 32.0°

**Horizontal Field of View, 1/4" Sensor:**  
39.6mm - 24.1°

**Maximum Image Circle (mm):**  
11.00

**Numerical Aperture NA, Object Side:**  
0.032

**Number of Elements (Groups):**  
9 (8)

**Focal Length FL (mm):**  
8.50

**Working Distance (mm):**  
75 - ∞

**Aperture (f/#):**  
f/1.4

**Coating:**  
425 - 675nm BBAR

**Coating Specification:**  
425 - 675nm BBAR

**Entrance Pupil Position (mm):**  
18.85

**Object Space Principal Plane (mm):**  
25.03

**Image Space Principal Plane (mm):**  
4.70

**Maximum Distortion (%):**  
-5.6

**Exit Pupil Position (mm):**  
-17.93

**Optimized Working Distance (mm):**  
75 - ∞

**Lens Wavelength Range:**  
VIS

## Sensor

**Maximum Sensor Format:**  
2/3"

**Pixel Size (µm):**  
1.85

## Threading & Mounting

**Filter Thread:**  
M58 x 0.75 (Male)

**Filter Thread Adapter:**

Front Thread:  
M40 x 0.5 (Male)

Mount:  
C-Mount

### Environmental & Durability Factors

Storage Temperature (°C):  
-20 to +60

Type of Ruggedization:  
Industrial (Fixed Aperture with Simplified Mechanics)

### Regulatory Compliance

Certificate of Conformance:  
[View](#)

## Product Details

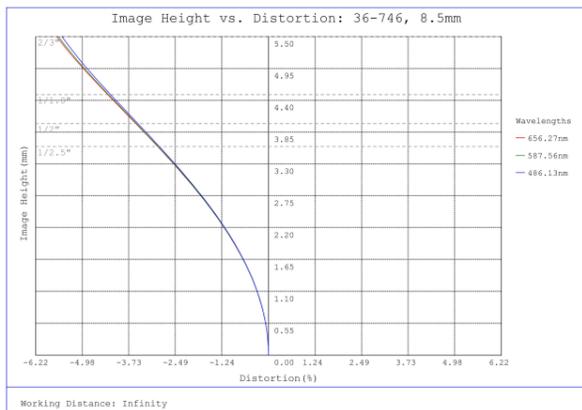
- 2/3", C-Mount Lens
- Up to 10 MegaPixels, 1.85µm Pixel Size Sensors
- Instrumentation (HRi) Versions of our HR Series Lenses with Streamlined Mechanical Designs and Fixed Apertures
- 8.5mm to 12mm Focal Length
- **Ruggedized (HRr) Designs** Also Available

TECHSPEC® HRi Series Fixed Focal Length Lenses are a streamlined version of our HR Series Lenses. There are multiple options available for each focal length to accommodate a variety of optimized working distance ranges. Designed for high volume imaging applications, HRi series lenses feature simplified focus mechanics and a fixed aperture. TECHSPEC HRi Series Fixed Focal Length Lenses are available in a variety of f/# options, making them ideal for applications that require reduced size, cost, and lockable focus imaging solutions. Call for OEM Quantity Pricing.

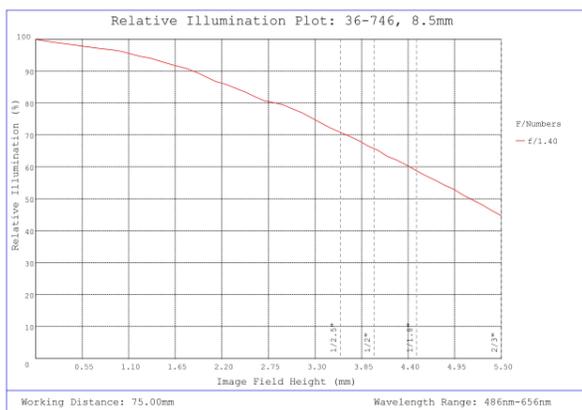
Edmund Optics has created a family of high performance optical designs (the HR Series family) and developed three customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the HR Series Lenses, providing the same optical performance in a variety of optomechanical solutions to meet your application requirements:

- **HR Series:** Features locking cam focus and iris adjustment. This is the most adjustable version of these optical designs and is the typical high quality machine vision lens.
- **HRi Series:** Simplified mechanics featuring fixed apertures with compact housing. **Industrial Ruggedization** for reduced size, cost, and locked focus.
- **HRr Series:** All optics glued in place and a locking C-clamp focus ring. **Stabilized Ruggedization** for reduced pixel shift and improved focus stability.

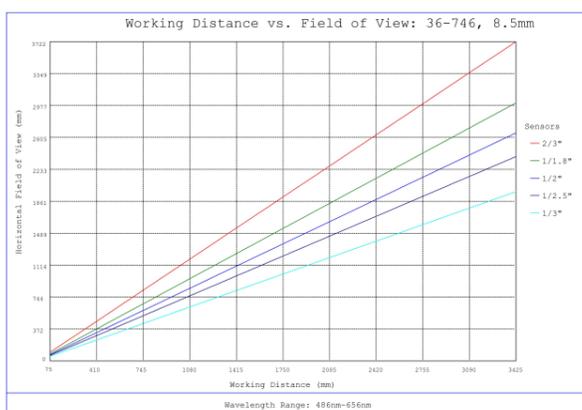
## Technical Information



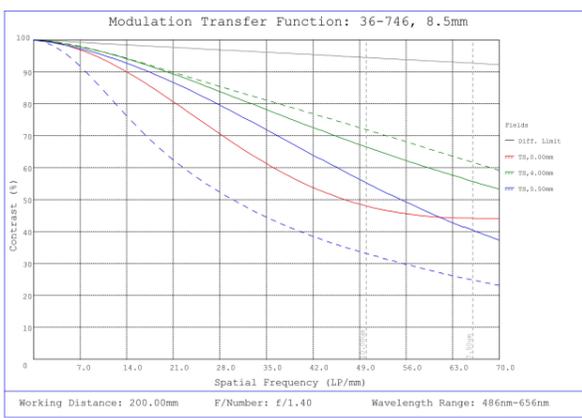
#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Distortion Plot



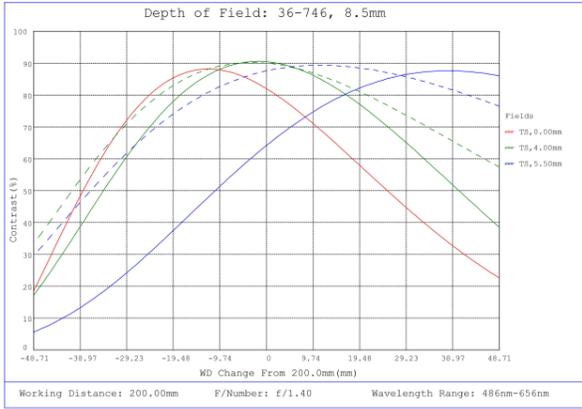
#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Relative Illumination Plot



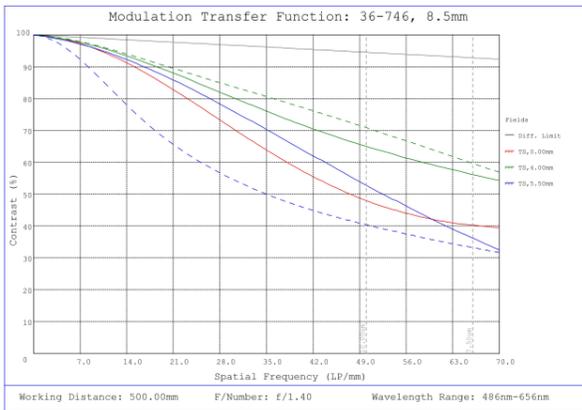
#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



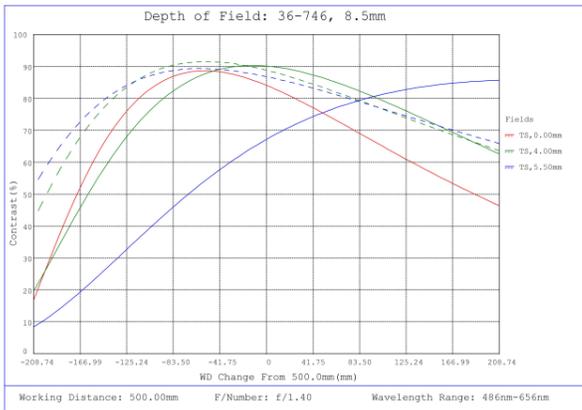
#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 200mm Working Distance, f1.4



#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Depth of Field Plot, 200mm Working Distance, f1.4



#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f1.4



#36-746, 8.5mm f/1.4, 75mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Depth of Field Plot, 500mm Working Distance, f1.4

## Compatible Cameras