

TECHSPEC[®] 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens



12mm FL HPi Series Fixed Focal Length Lens



Stock **#36-768** 4 In Stock

-

1

+

£500^{.00}

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Volume Pricing	
Qty 1+	£500.00 each
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Product Downloads

General

HRi Series

Series:

Fixed Focal Length Lens

Type:

Physical & Mechanical Properties

Iris Option:

Fixed	
39.20	Length (mm):
33	Maximum Diameter (mm):
33	Outer Diameter (mm):
57	Weight (g):
1.63	Maximum Rear Protrusion (mm):

Optical Properties

90.2mm - 42.0°	Horizontal Field of View @ Max Sensor Format:
Horizontal: 90.1mm - 42° Vertical: 66.8mm - 31.9° Diagonal: 114.2mm - 51.8°	Field of View at Max Sensor Format:
90.2mm - 42.0°	Horizontal Field of View, 2/3" Sensor:
73.1mm - 34.7°	Horizontal Field of View, 1/1.8" Sensor:
64.8mm - 30.9°	Horizontal Field of View, 1/2" Sensor:
58.6mm - 28.1°	Horizontal Field of View, 1/2.5" Sensor:
48.3mm - 23.3°	Horizontal Field of View, 1/3" Sensor:
36.1mm - 17.5°	Horizontal Field of View, 1/4" Sensor:
11.00	Maximum Image Circle (mm):
0.0061	Numerical Aperture NA, Object Side:
10 (6)	Number of Elements (Groups):
12.00	Focal Length FL (mm):
100 - ∞	Working Distance (mm):
f/8	Aperture (f/#):
425 - 675nm BBAR	Coating:
425 - 675nm BBAR	Coating Specification:
17.6	Entrance Pupil Position (mm):
26.32	Object Space Principal Plane (mm):
2.81	Image Space Principal Plane (mm):
-3.28	Maximum Distortion (%):
-31.25	Exit Pupil Position (mm):
1000 - ∞	Optimized Working Distance (mm):
VIS	Lens Wavelength Range:

Sensor

2/3"	Maximum Sensor Format:
1.85	Pixel Size (μm):

Threading & Mounting

M30.5 x0.50 (Female)	Filter Thread:
C-Mount	Mount:

Environmental & Durability Factors

-20 to +60

Industrial (Fixed Aperture with Simplified Mechanics)

Certificate of Conformance:

View

- 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

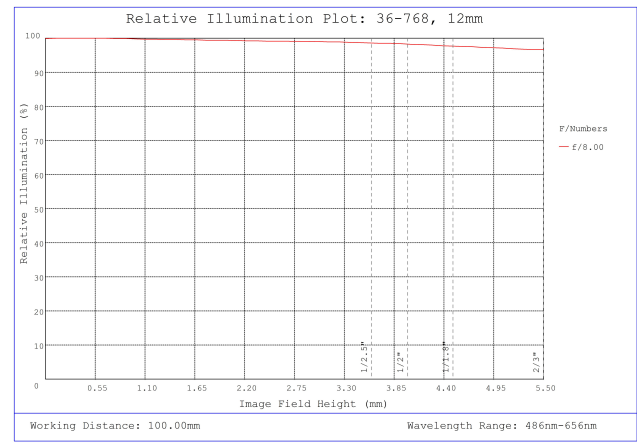
Edmund Optics has created a family of high performance optical designs (the HR Series family) and developed three customized optomechanical solutions targeted for specific applications. These lens sub-families utilize the same optics as the HR Series Lenses, providing the same optical performance in 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.
- **HR Series:** All optics glued in place and a locking C-clamp focus ring. **Stabilized Ruggedization** for reduced pixel shift and improved focus stability.

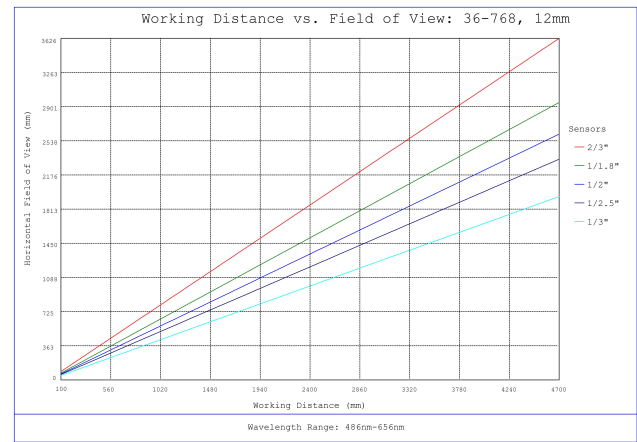
The graph shows the relationship between Image Height (mm) on the y-axis and Distortion (%) on the x-axis for a 36-768, 12mm lens at infinity working distance. The y-axis ranges from 0.55 to 5.50 mm, and the x-axis ranges from -3.64 to 3.64%. Three curves are plotted for different wavelengths: 656.27nm (red), 587.56nm (green), and 486.13nm (blue). All three curves are nearly identical, showing a non-linear relationship where distortion increases as image height increases. The curves start at approximately (-3.64, 5.50) and end at (0.00, 0.55).

Image Height (mm)	Distortion (%)
5.50	-3.64
4.95	-3.12
4.40	-2.60
3.85	-2.08
3.30	-1.56
2.75	-1.04
2.20	-0.52
1.65	-0.00
1.10	0.00
0.55	0.00

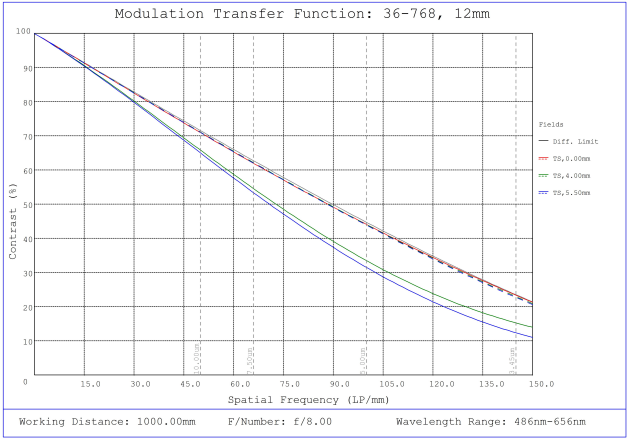
#36-768, 12mm f/8, 1000mm- ∞ Primary WD, HRi Series Fixed Focal Length Lens, Distortion Plot



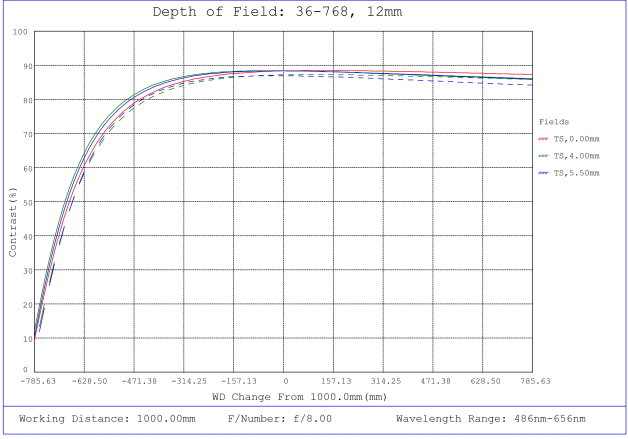
#36-768, 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Relative Illumination Plot



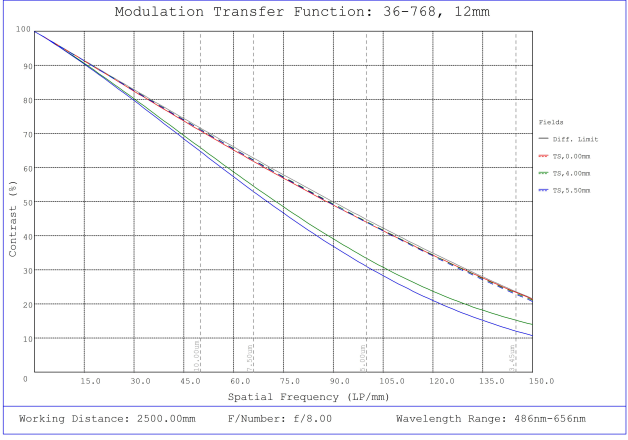
#36-768, 12mm f/8, 1000mm- ∞ Primary WD, HRi Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



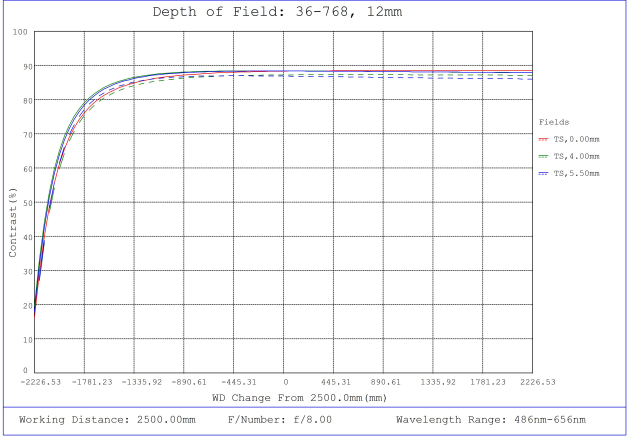
#36-768, 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 1000mm Working Distance, f8



#36-768, 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Depth of Field Plot, 1000mm Working Distance, f8



#36-768, 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 2500mm Working Distance, f8



#36-768, 12mm f/8, 1000mm-∞ Primary WD, HRi Series Fixed Focal Length Lens, Depth of Field Plot, 2500mm Working Distance, f8

Compatible Cameras