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TECHSPEC® 8mm FL, Liquid Lens M12 Lens

TECHSPEC® Liquid Lens M12 Imaging Lenses

+1

Stock **#37-522** **4 In Stock**

- 1 + **£352**.00

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Note: This item requires accessories for use | Learn More

Product Downloads

General

Product Family:
LL M12 Series

Note:
Separate driver not included. Electronic development kit #28-773 recommended. When using a Maxim driver board (#12-247, #12-248, or #17-172) the

jumper at ST2 **must** be removed before use to ensure optimal performance and product lifetime. Watch this **video** for more information.

Type:
M12 Imaging Lens

Integrated Liquid Lens Model:
Corning® Varioptic® A-39N0

IR Cut Filter:
No

Special Type of Lens:
Liquid Lens Focusable

Physical & Mechanical Properties

Iris Option:
Fixed

Length (mm):
28.40

Maximum Diameter (mm):
18

Outer Diameter (mm):
23

Maximum Rear Protrusion (mm):
4.79

Flange Distance (mm):
14.025

Optical Properties

Horizontal Field of View @ Max Sensor Format:
140.1mm - 46.1°

Field of View at Max Sensor Format:
Horizontal: 139.8mm - 46°
Vertical: 102mm - 34.4°
Diagonal: 181.4mm - 57.8°

Horizontal Field of View, 1/2" Sensor:
140.1mm - 46.1°

Horizontal Field of View, 1/2.5" Sensor:
125.53mm - 41.8°

Horizontal Field of View, 1/3" Sensor:
102.3mm - 34.5°

Horizontal Field of View, 1/4" Sensor:
75.6mm - 25.8°

Maximum Image Circle (mm):
8.00

Numerical Aperture NA, Object Side:
0.0102

Number of Elements (Groups):
7(6)

Wavelength Range (nm):
400 - 700

Focal Length FL (mm):
8.00

Working Distance (mm):
150 - ∞

Aperture (f/#):
f/2.4

Distortion (%):
-9.51 @ Full Field

Coating Specification:
λ/4 MgF_2 @ 550nm

Entrance Pupil Position (mm):
13.56

Object Space Principal Plane (mm):
19.92

Image Space Principal Plane (mm):
1.93

Maximum Distortion (%):
-9.51

Exit Pupil Position (mm):
-28.40

Lens Wavelength Range:
VIS

Sensor

Maximum Sensor Format:
1/2"

Pixel Size (µm):

2.74

Threading & Mounting

Filter Thread:

N/A

Mount:

S-Mount (M12 x 0.5)

Regulatory Compliance

Certificate of Conformance:

View

Product Details

- Up to 1/1.8", S-Mount Lens
- Up to 5 MegaPixels, 2.8µm Pixel Size Sensors
- Liquid Lens Provides Quick Autofocus
- 6mm to 16mm Focal Length

TECHSPEC® Liquid Lens M12 Lenses feature a high-resolution f/2.4 optical design with an integrated liquid lens, allowing for fast electronic focus, superior image performance, and a quick autofocus solution. When combined with appropriate camera and software, the focus tunable liquid lens provides the active focus control needed to achieve an autofocus solution. The high light throughput f/2.4 aperture is ideal for high-speed machine vision applications. TECHSPEC® Liquid Lens M12 Lenses incorporates a 2-piece housing design for easy access and replacement of the included liquid lens. The liquid lens can also be rotated 180° inside the imaging lens for quickly accessing the liquid lens control cable.

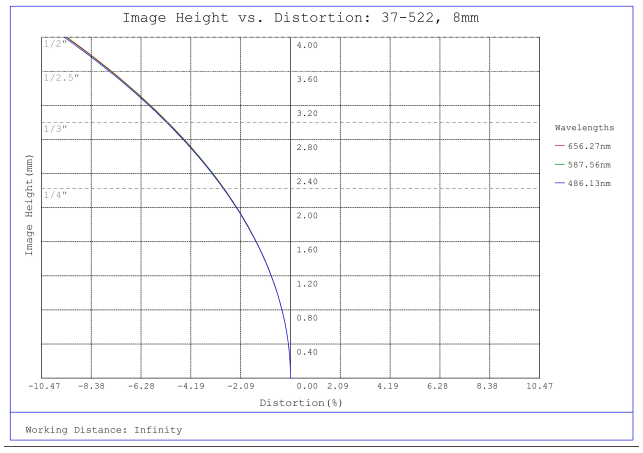
These lenses won the **2nd place 2019 Inspect Award**.

Note: Driver and software are required for operation and must be purchased separately unless camera in use has liquid lens control capability. Various drivers and software are included in the Electronics Development Kit (**#28-773**). Individual drivers can also be purchased separately if software is not needed (**#12-247** or **#12-248**).

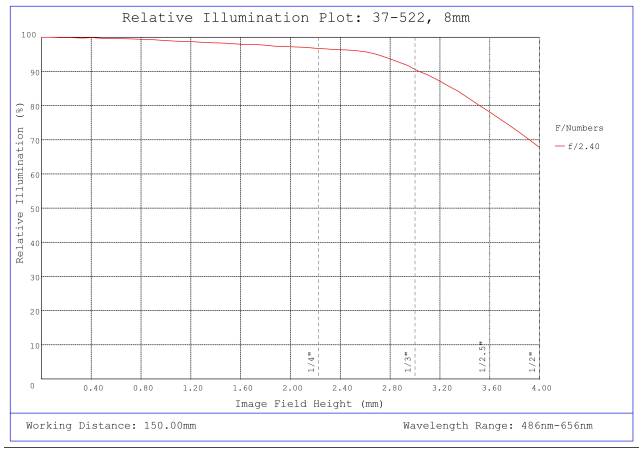
Edmund Optics has created multiple product families of our TECHSPEC® M12 S-Mount Lenses, which are designed to provide high resolution. These high performance lenses feature precision glass designs in a metal housing and have optimized specifications between each product family to meet your application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

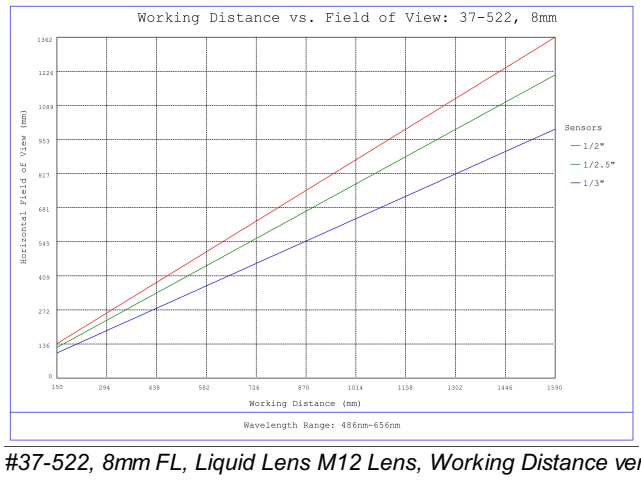
Technical Information



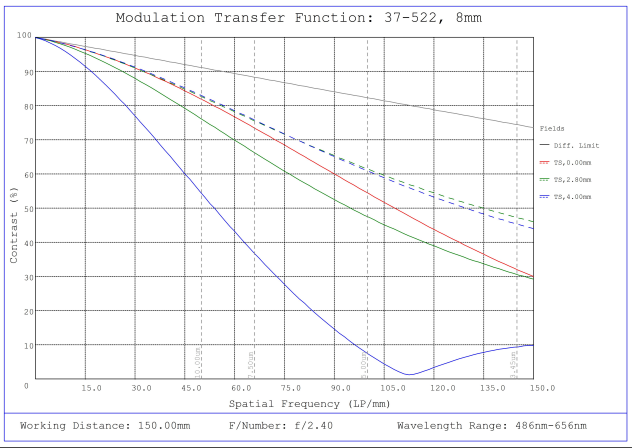
#37-522, 8mm FL, Liquid Lens M12 Lens, Distortion Plot



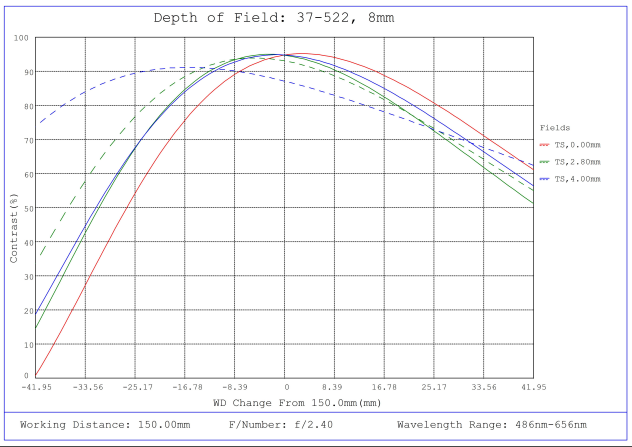
#37-522, 8mm FL, Liquid Lens M12 Lens, Relative Illumination Plot



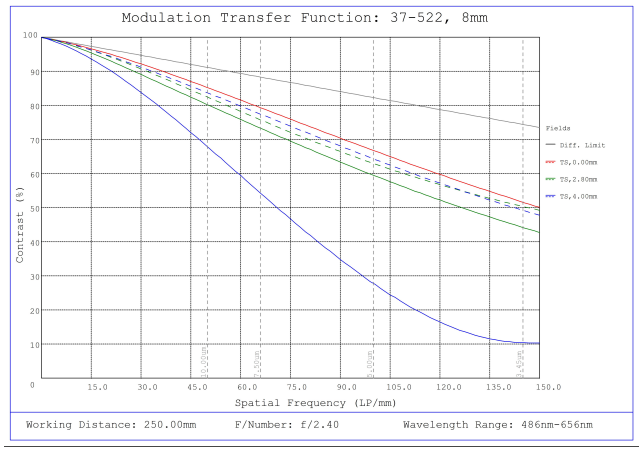
#37-522, 8mm FL, Liquid Lens M12 Lens, Working Distance versus Field of View Plot



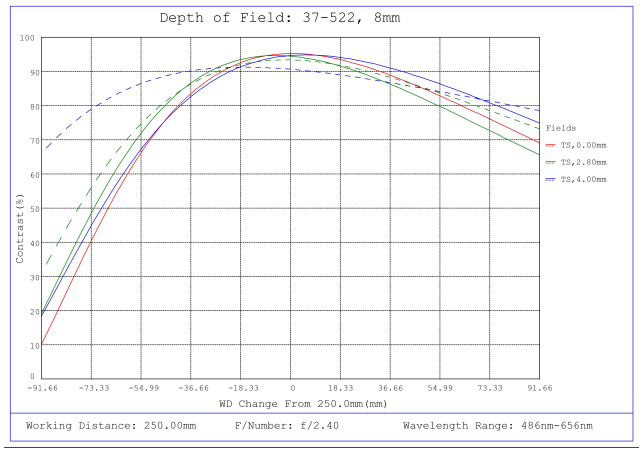
#37-522, 8mm FL, Liquid Lens M12 Lens, Modulated Transfer Function (MTF) Plot, 150mm Working Distance, f2.4



#37-522, 8mm FL, Liquid Lens M12 Lens, Depth of Field Plot, 150mm Working Distance, f2.4



#37-522, 8mm FL, Liquid Lens M12 Lens, Modulated Transfer Function (MTF) Plot, 250mm Working Distance, f2.4



#37-522, 8mm FL, Liquid Lens M12 Lens, Depth of Field Plot, 250mm Working Distance, f2.4

#37-522, 8mm FL, Liquid Lens M12 Lens, Modulated Transfer Function (MTF) Plot, 400mm Working Distance, f2.4

#37-522, 8mm FL, Liquid Lens M12 Lens, Depth of Field Plot, 400mm Working Distance, f2.4

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