

**TECHSPEC® 50mm DG Series Fixed Focal Length Lens**



50mm Focal Length, #54-690

Stock **#54-690** **11 In Stock**

⊖ 1 ⊕ A\$885.<sup>00</sup>

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Volume Pricing

Qty 1-49	A\$885.00 each
Qty 50+	A\$698.00 each
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**General**

DG Series **Product Family:**

Fixed Focal Length Lens **Type:**

Traditional Double-Gauss Style Lens **Imaging Lens Type:**

**Physical & Mechanical Properties**

Variable **Iris Option:**

50.10	<b>Length (mm):</b>
40	<b>Maximum Diameter (mm):</b>
40	<b>Outer Diameter (mm):</b>
174	<b>Weight (g):</b>
4	<b>Maximum Rear Protrusion (mm):</b>

## Optical Properties

78.7mm - 19.3°	<b>Horizontal Field of View @ Max Sensor Format:</b>
Horizontal: 77mm - 19.4° Vertical: 57.8mm - 14.6° Diagonal: 96.1mm - 24°	<b>Field of View at Max Sensor Format:</b>
78.7mm - 19.3°	<b>Horizontal Field of View, 4/3" Sensor:</b>
64.6mm - 15.9°	<b>Horizontal Field of View, 1.1" Sensor:</b>
58.2mm - 14.4°	<b>Horizontal Field of View, 1" Sensor:</b>
40.1mm - 9.9°	<b>Horizontal Field of View, 2/3" Sensor:</b>
32.8mm - 8.1°	<b>Horizontal Field of View, 1/1.8" Sensor:</b>
29.1mm - 7.2°	<b>Horizontal Field of View, 1/2" Sensor:</b>
26.4mm - 6.6°	<b>Horizontal Field of View, 1/2.5" Sensor:</b>
21.9mm - 5.4°	<b>Horizontal Field of View, 1/3" Sensor:</b>
16.4mm - 4.1°	<b>Horizontal Field of View, 1/4" Sensor:</b>
21.60	<b>Maximum Image Circle (mm):</b>
0.0227	<b>Numerical Aperture NA, Object Side:</b>
6 (4)	<b>Number of Elements (Groups):</b>
50.00	<b>Focal Length FL (mm):</b>
240 - ∞	<b>Working Distance (mm):</b>
f/4 - f/18	<b>Aperture (f/#):</b>
λ/4 MgF <sub>2</sub>	<b>Coating:</b>
λ/4 MgF <sub>2</sub>	<b>Coating Specification:</b>
36.29	<b>Entrance Pupil Position (mm):</b>
33.95	<b>Object Space Principal Plane (mm):</b>
-20.32	<b>Image Space Principal Plane (mm):</b>
1.01	<b>Maximum Distortion (%):</b>
-18.07	<b>Exit Pupil Position (mm):</b>
VS	<b>Lens Wavelength Range:</b>

## Sensor

4/3"	<b>Maximum Sensor Format:</b>
2.74	<b>Pixel Size (μm):</b>

## Threading & Mounting

M39.0 x 0.50 (Female)	<b>Filter Thread:</b>
C-Mount	<b>Mount:</b>

## Environmental & Durability Factors

Storage Temperature (°C):

-20 to +60

## Regulatory Compliance

RoHS 2015:

Compliant

REACH 201:

Compliant

Certificate of Conformance:

[View](#)

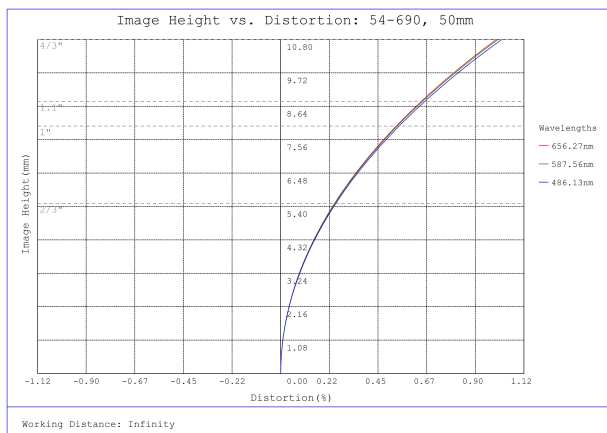
## Product Details

- Up to 4/3", C-Mount Lens
- Up to 9 MegaPixels, 2.8µm Pixel Size Sensors
- Double Gauss (DG) Lens with low distortion and high performance
- 18mm to 75mm Focal Length

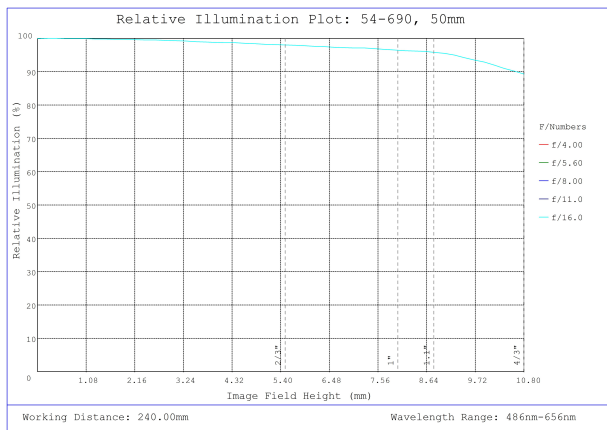
TECHSPEC® DG Series Fixed Focal Length Lenses utilize a Double Gauss design to provide high-performance, low distortion, compact size, and exceptional value, while exceeding the performance of typically available fixed focal length lenses. These lenses feature a mechanical design that allows the focusing movement to be motorized by the user, yields image resolution greater than 100 lp/mm, and have a standard C-Mount. For most applications, the camera-lens combination can be attached to workstations using the 1/4-20 mount provided on the camera. TECHSPEC® DG Series Fixed Focal Length Lenses include focus ring, manual iris, and set screws to facilitate a low profile integration in machine vision applications. Typical applications for the DG Series lenses include machine vision, assembly-line integration, and measurement and image analysis.

**Note:** [Industrial Boom Stands](#) are recommended for building vibration-free workstations.

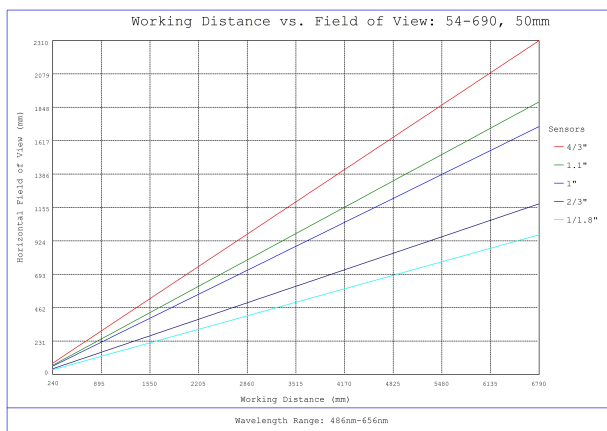
## Technical Information



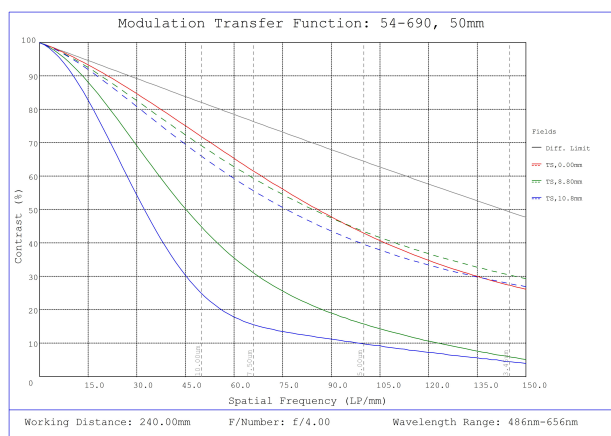
#54-690, 50mm DG Series Fixed Focal Length Lens, Distortion Plot



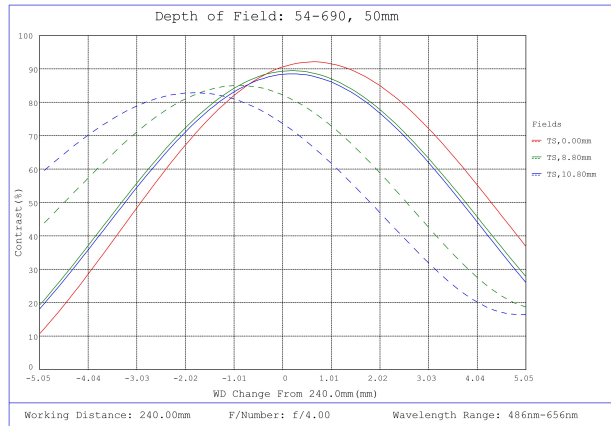
#54-690, 50mm DG Series Fixed Focal Length Lens, Relative Illumination Plot



#54-690, 50mm DG Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



#54-690, 50mm DG Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 240mm Working Distance, f4



#54-690, 50mm DG Series Fixed Focal Length Lens, Depth of Field Plot, 240mm Working Distance, f4

Dimensions							
FL (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Filter Thread (Dia. x Pitch)
18	48.0	32.3	4.6	40.0	-	2.5	M30.5 x 0.5
25	39.0	40.0	5.8	34.7	30.7	2.2	M30.5 x 0.5
35	45.0	50.1	11.6	40.0	42.1	0	M37.0 x 0.75
50	47.5	69.0	10.6	40.0	40.8	0	M39.0 x 0.5
75	54.0	116.2	19.2	46.0	67.7	0	M49.0 x 0.75

## Compatible Cameras