

TECHSPEC® 50mm DG Series Fixed Focal Length Lens



50mm Focal Length, #54-690

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

⊖ 1 ⊕ **\$\$801⁰⁰**

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Volume Pricing	
Qty 1-49	\$\$801.00 each
Qty 50+	\$\$632.00 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	Length (mm):
40	Maximum Diameter (mm):
40	Outer Diameter (mm):
174	Weight (g):
4	Maximum Rear Protrusion (mm):

Optical Properties

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

Sensor

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

Threading & Mounting

M39.0 x0.50 (Female)	Filter Thread:
C-Mount	Mount:

Environmental & Durability Factors

Storage Temperature (°C):

-20 to +60

Regulatory Compliance

RoHS 2015:

Compliant

REACH 201:

Compliant

Certificate of Conformance:

[View](#)

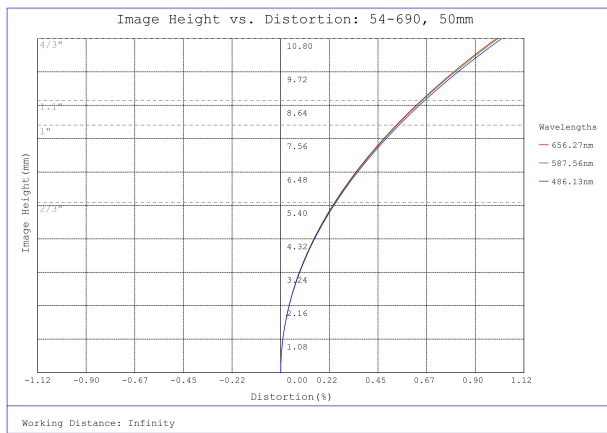
Product Details

- 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

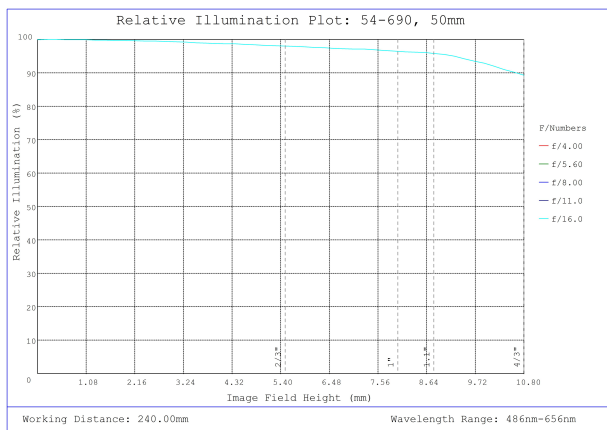
TECHSPEC® DG Series Fixed Focal Length Lenses utilize a Double Gauss design to provide high-performance, low distortion, compact size, and exceptional value, while exceeding the performance of typically available fixed focal length lenses. These lenses feature a mechanical design that allows the focusing 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.

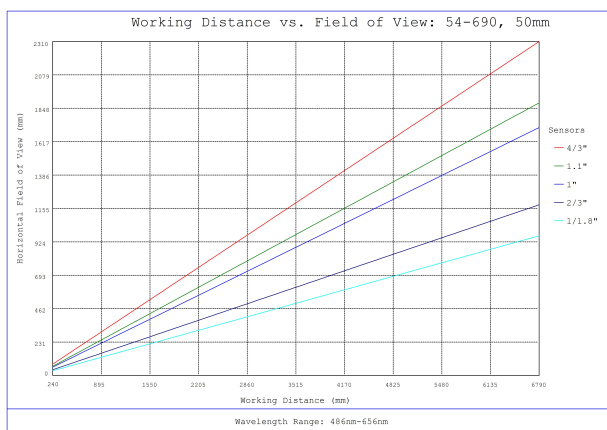
Technical Information



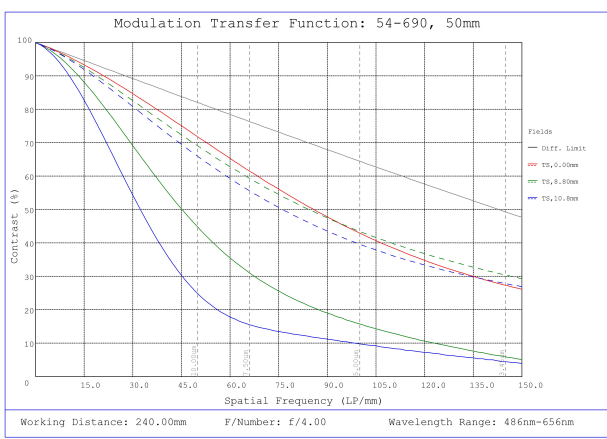
#54-690, 50mm DG Series Fixed Focal Length Lens, Distortion Plot



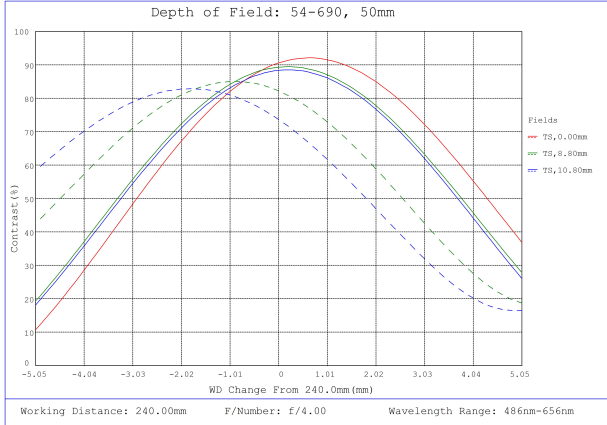
#54-690, 50mm DG Series Fixed Focal Length Lens, Relative Illumination Plot



#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