

**TECHSPEC® 18mm DG Series Fixed Focal Length Lens**



18mm Focal Length, #54-857

Stock **#54-857 11 In Stock**

⊖ 1 ⊕ **\$\$801<sup>00</sup>**

**ADD TO CART**

Volume Pricing

Qty 1-49	<b>\$\$801.00</b> each
Qty 50+	<b>\$\$632.00</b> 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:**

32.30	Length (mm):
54	Maximum Diameter (mm):
54	Outer Diameter (mm):
116	Weight (g):
3.5	Maximum Rear Protrusion (mm):

## Optical Properties

159.2mm - 38.4°	Horizontal Field of View @ Max Sensor Format:
Horizontal: 159.2mm - 38.5° Vertical: 118.8mm - 29.3° Diagonal: 200.1mm - 47.2°	Field of View at Max Sensor Format:
159.2mm - 38.4°	Horizontal Field of View, 1" Sensor:
108.7mm - 26.8°	Horizontal Field of View, 2/3" Sensor:
88.8mm - 22.0°	Horizontal Field of View, 1/1.8" Sensor:
78.8mm - 19.6°	Horizontal Field of View, 1/2" Sensor:
70.2mm - 17.5°	Horizontal Field of View, 1/2.5" Sensor:
59.2mm - 14.8°	Horizontal Field of View, 1/3" Sensor:
44.4mm - 11.1°	Horizontal Field of View, 1/4" Sensor:
16.00	Maximum Image Circle (mm):
0.0098	Numerical Aperture NA, Object Side:
6 (4)	Number of Elements (Groups):
18.00	Focal Length FL (mm):
210 - ∞	Working Distance (mm):
f/4 - f/12	Aperture (f/#):
N4 MgF <sub>2</sub>	Coating:
N4 MgF <sub>2</sub>	Coating Specification:
12.23	Entrance Pupil Position (mm):
20.45	Object Space Principal Plane (mm):
-5.66	Image Space Principal Plane (mm):
-0.96	Maximum Distortion (%):
-20.48	Exit Pupil Position (mm):
VS	Lens Wavelength Range:

## Sensor

1"	Maximum Sensor Format:
2.74	Pixel Size (µm):

## Threading & Mounting

M30.5 x 0.50 (Female)	Filter Thread:
C-Mount	Mount:

## Environmental & Durability Factors

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

Compliant

RoHS 2015:

Compliant

REACH 201:

View

Certificate of Conformance:

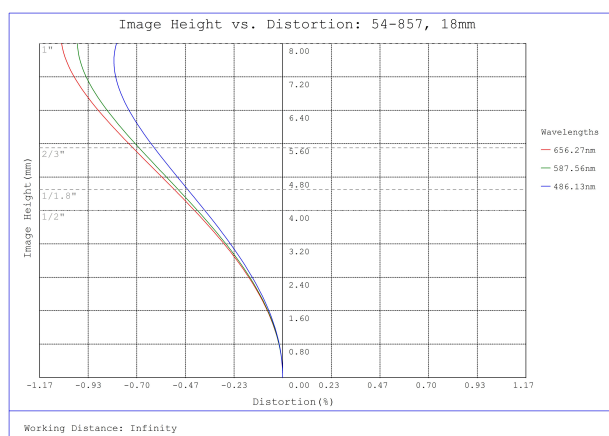
## Product Details

- 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

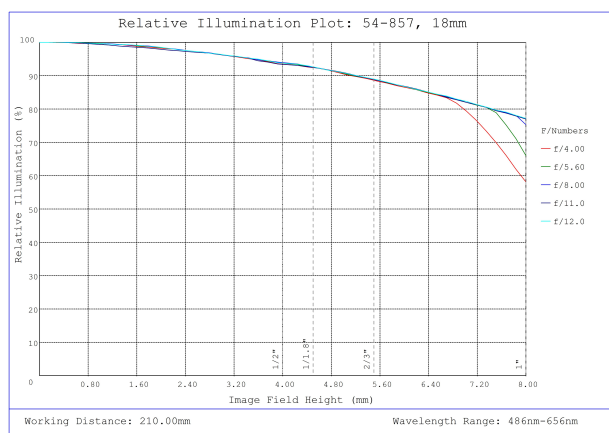
TECHSPEC® DG Series Fixed Focal Length Lenses utilize a Double Gauss design to provide high-performance, low distortion, compact size, and exceptional value, while exceeding the performance of typically available fixed focal length lenses. These lenses feature a mechanical design that allows the focusing 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 ¼-20 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.

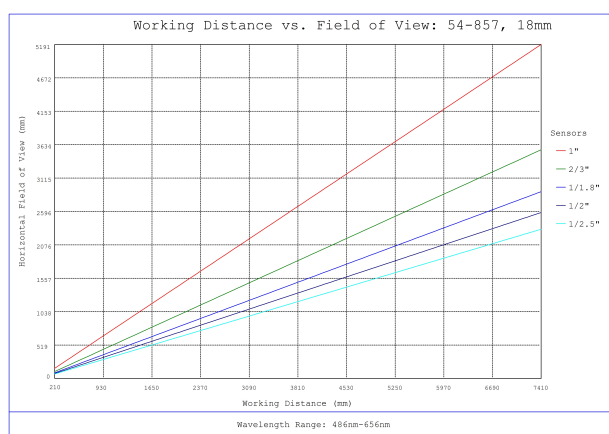
## Technical Information



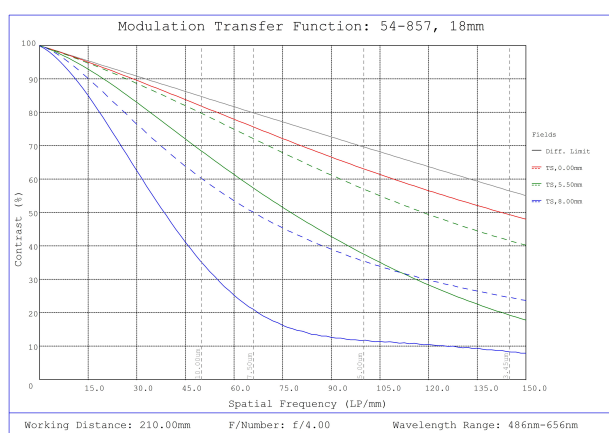
#54-857, 18mm DG Series Fixed Focal Length Lens, Distortion Plot



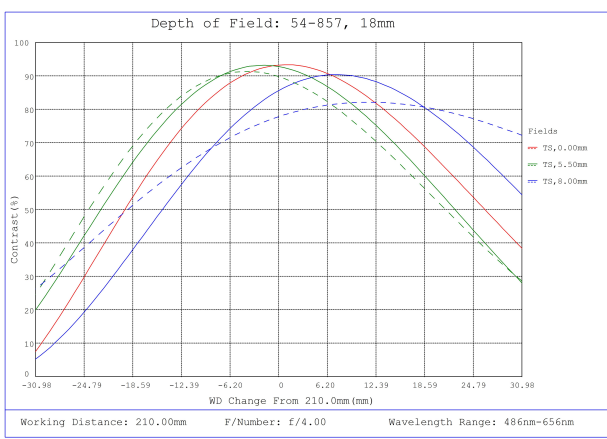
#54-857, 18mm DG Series Fixed Focal Length Lens, Relative Illumination Plot



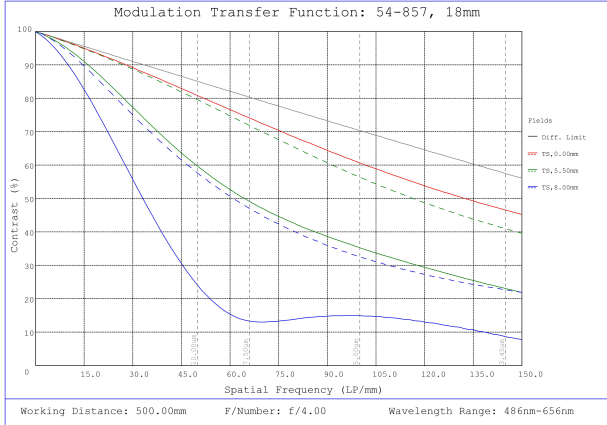
#54-857, 18mm DG Series Fixed Focal Length Lens, Working Distance versus Field of View Plot



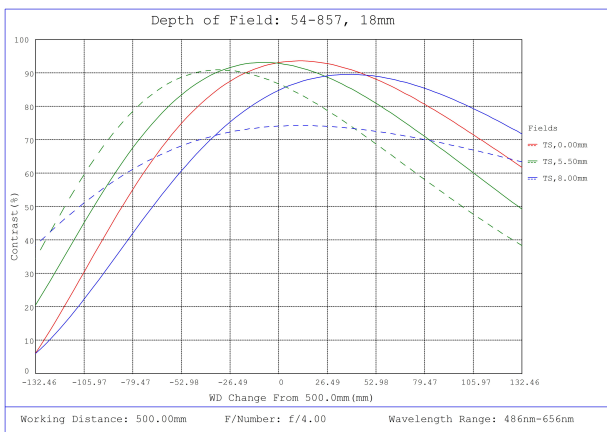
#54-857, 18mm DG Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 210mm Working Distance, f4



#54-857, 18mm DG Series Fixed Focal Length Lens, Depth of Field Plot, 210mm Working Distance, f4



#54-857, 18mm DG Series Fixed Focal Length Lens, Modulated Transfer Function (MTF) Plot, 500mm Working Distance, f4



#54-857, 18mm DG Series Fixed Focal Length Lens, Depth of Field Plot, 500mm 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