See all 6 Products in Family

TECHSPEC® 100mm, f/5.6 Athermal Lens

Stock **#16-850** CONTACT US

- 1 + **€1.730**.00

ADD TO CART

Volume Pricing	
Qty 1+	**€1.730,00** each
Need More?	Request Quote

Prices shown are exclusive of VAT/local taxes

Product Downloads

General

Series:
Athermal Series

Type:
Fixed Focal Length Lens - Athermal

Physical & Mechanical Properties

Iris Option:
Fixed

Length (mm):
94.90

Maximum Diameter (mm):
40.0

Outer Diameter (mm):
40

Optical Properties

Field of View at Max Sensor Format:
Horizontal: 8.01°
Vertical: 6.03°
Diagonal: 9.96°

Horizontal Field of View, 1.1" Sensor:
8.01°

Horizontal Field of View, 1" Sensor:
7.29°

Horizontal Field of View, 2/3" Sensor:
5.03°

Horizontal Field of View, 1/1.8" Sensor:
4.12°

Horizontal Field of View, 1/2" Sensor:
3.67°

Maximum Image Circle (mm):
19.30

Numerical Aperture NA, Object Side:
0.002

Number of Elements (Groups):
7 (3)

Focal Length FL (mm):
100.00

Primary Magnification PMAG:
0.000X - 0.026X

Working Distance (mm):
4000 - ∞

Aperture (f/#):
f/5.6

Entrance Pupil Position (mm):
10.85

Object Space Principal Plane (mm):
-51.57

Image Space Principal Plane (mm):
-20.08

Maximum Distortion (%):
1.21

Exit Pupil Position (mm):
-21.381

Lens Wavelength Range:
VIS

Sensor

Maximum Sensor Format:
1.2"

Pixel Size (µm):
2.74

Threading & Mounting

Filter Thread:
M35.5 x 0.50 (Female)

Mount:
C-Mount

Environmental & Durability Factors

Operating Temperature (°C):
-10 to +50

Type of Ruggedization:
Athermal

Regulatory Compliance

Certificate of Conformance:
View

Product Details

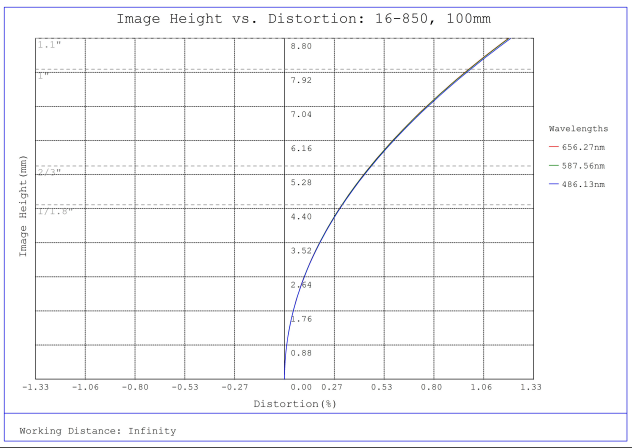
- Designed to Maintain High Resolution Over a Wide Temperature Range
- Ruggedized for Shock and Vibration Environments
- Large Sensor Coverage up to 1.1”
- Optothermal Stability from **Passive Athermalization**
- **2022 Silver VSD Innovators Award Winner** and 2022 Inspect Award Winner

TECHSPEC® Athermal Imaging Lenses provide optothermal stability in a ruggedized lens housing, making them ideal for harsh environments. These lenses utilize **passive athermalization** to mitigate the effects of thermal defocus in applications that are prone to temperature fluctuations. Additionally, these lenses are ruggedized to protect against lens damage and minimize pixel shift after shock and vibration. Along with being ruggedized to protect against lens damage and minimize pixel shift after shock and vibration, these lenses are thermally compensated and best used with camera mounts made from aluminum. TECHSPEC® Athermal Imaging Lenses feature C-Mount threading and full coverage of sensors up to 1.1”.

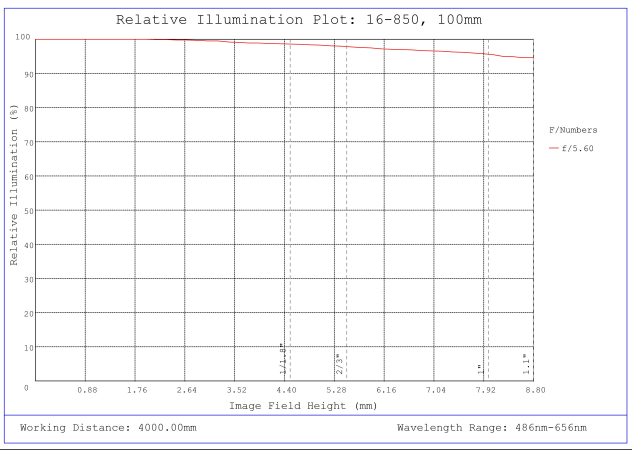
These lenses won the **2022 Silver VSD Innovators Award** and the 2022 Inspect Award.

Note: Passive Athermalization is introduced in the application note **here.**

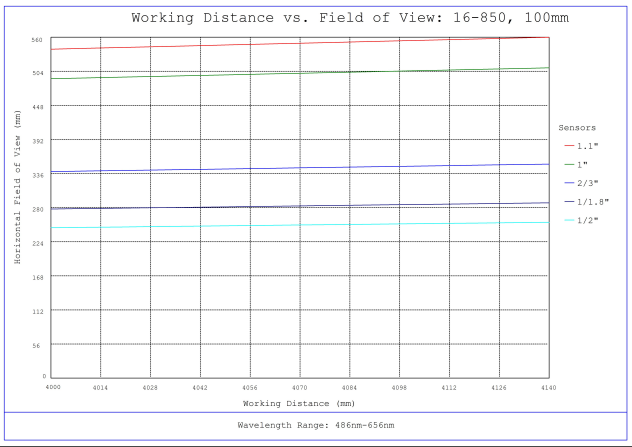
Technical Information



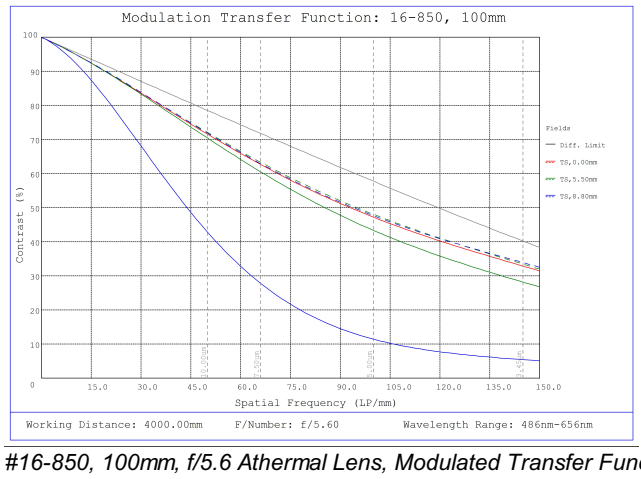
#16-850, 100mm, f/5.6 Athermal Lens, Distortion Plot



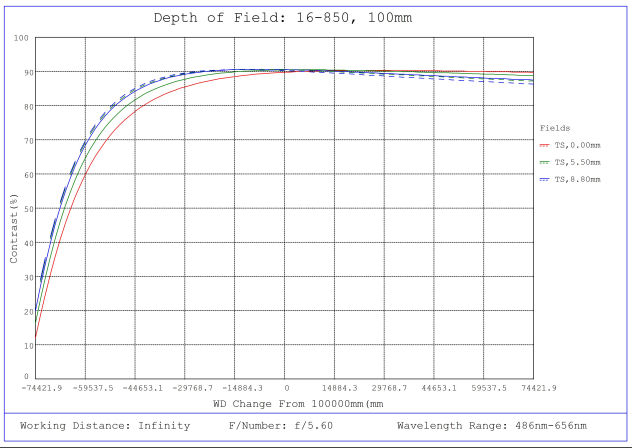
#16-850, 100mm, f/5.6 Athermal Lens, Relative Illumination Plot



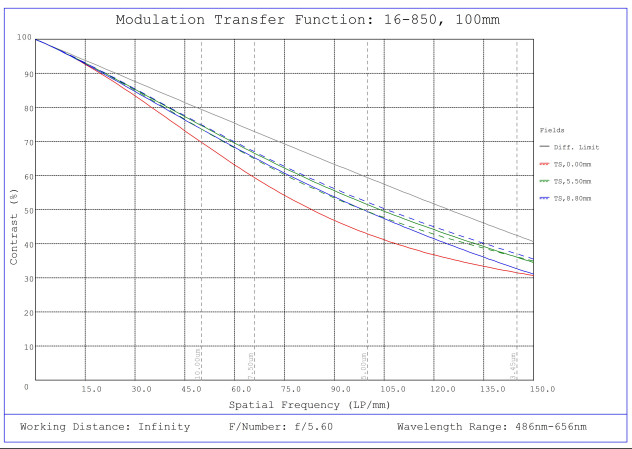
#16-850, 100mm, f/5.6 Athermal Lens, Working Distance versus Field of View Plot



#16-850, 100mm, f/5.6 Athermal Lens, Modulated Transfer Function (MTF) Plot, 4000mm Working Distance, f5.6



#16-850, 100mm, f/5.6 Athermal Lens, Depth of Field Plot, 100000mm Working Distance, f5.6



#16-850, 100mm, f/5.6 Athermal Lens, Modulated Transfer Function (MTF) Plot, Working Distance: Infinity, f5.6

Compatible Cameras

;