

# NEW

# Preciso Lens Series

From Close Focus to Infinity



## Navitar's Vision for the Future of 4K/8K Imaging

The Preciso 16mm lens is the first in a series that delivers uncompromised image capture for challenging applications using large format, high resolution sensors. This versatile lens maintains high contrast, high resolution over the full conjugate range, while maintaining high MTF and low distortion. Navitar's Preciso Series bridges the current gap between close focus lenses optimized for general MV applications, and high resolution, HDR grade objectives used for emerging "look up" applications in AI, robotics, security, and autonomous vehicles.

This lens Supports Sony IMX series sensors with 2.45µm pixel and Sony's newest 4th generation sensors with 2.74 µm pixel.

## INDUSTRY LEADING FEATURES



- Bi-aspheric design with ultra-low dispersion glass maximizes MTF and reduces distortion
- Optimized for 1" sensors and supports up to 1.1" sensors
- High resolution across focal distances of 100mm-Infinity
- Chromatic Correction from 435nm-700nm
- Internal focus mechanism
- Low chief ray angle
- Convenient c-mount design, compatible with existing cameras



APPLICATION	LOOK DOWN	LOOK UP
Agriculture	Inspect produce defects	Monitor the entire orchard
Displays	Smartphone inspection	Smart TV Inspection
Machine Vision	Critical part inspection	Large part capture / 3D Imaging
Autonomy/Robotics	Robotic arm guidance	Pedestrian identification
Surveillance	Facial / Iris Recognition	License plate recognition
AR/VR	3D gesture capture	VR cameras and image stitching

## SPECIFICATIONS

	10mm	16mm	25mm	35mm	50mm	100mm
Focal Length	10mm	16mm	25mm	35mm	50mm	100mm
F-Number	1.8-22 (Iris)	1.8-22 (Iris)	1.8-22 (Iris)	1.8-22 (Iris)	1.8-22 (Iris)	1.8-22 (Iris)
Max Image Circle	18.0mm (1.1" Sensor)	18.0mm (1.1" Sensor)	18.0mm (1.1" Sensor)	18.0mm (1.1" Sensor)	18.0mm (1.1" Sensor)	18.0mm (1.1" Sensor)
Wavelength Correction	435nm-700nm	435nm-700nm	435nm-700nm	435nm-700nm	435nm-700nm	435nm-700nm
Min / Max Object Distance	50mm / ∞	100mm / ∞	150mm / ∞	200mm / ∞	250mm / ∞	300mm / ∞
Focus Method	Internal Focus	Internal Focus	Internal Focus	Internal Focus	Internal Focus	Internal Focus
TV Distortion [100mm, ∞]	[1%, 0.1%]	[1%, 0.1%]	[1%, 0.1%]	[1%, 0.1%]	[1%, 0.1%]	[1%, 0.1%]
MTF		See Graphs				
Relative Illum. (2/3", 1", 1.1")		[85%, 62%, 53%]				
Chief Ray Angle	<5°	<5°	<5°	<5°	<5°	<5°
Barrel Length		96.0mm				
Max Barrel Diameter		46.0mm				

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From Close Focus to Infinity



## SPECIFICATIONS

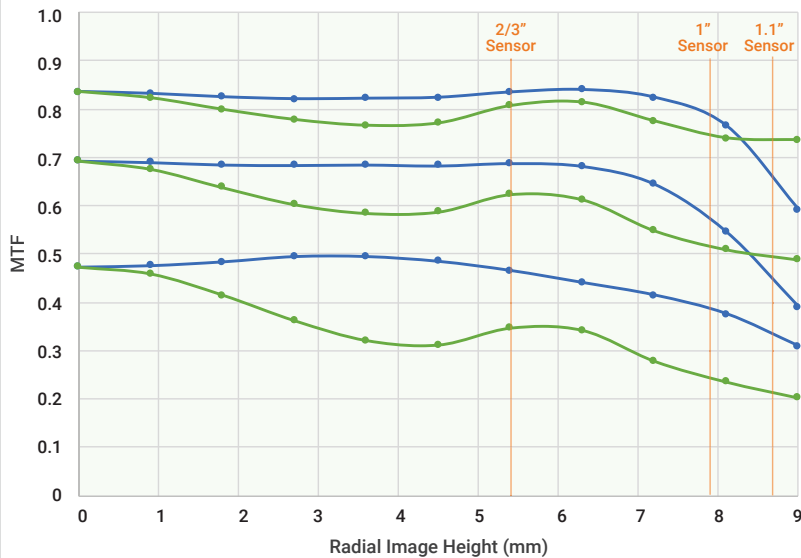
Focal Length	16mm
F-Number	1.8-22 (Iris)
Max Image Circle	18.0mm (1.1" Sensor)
Wavelength Correction	435nm-700nm
Min / Max Object Distance	100mm / ∞
Focus Method	Internal Focus
TV Distortion [100mm, ∞]	[1%, 0.1%]
MTF	See Graphs
Relative Illum. (2/3", 1", 1.1")	[85%, 62%, 53%]
Chief Ray Angle	<5°
Barrel Length	96.0mm
Max Barrel Diameter	46.0mm

## KEY

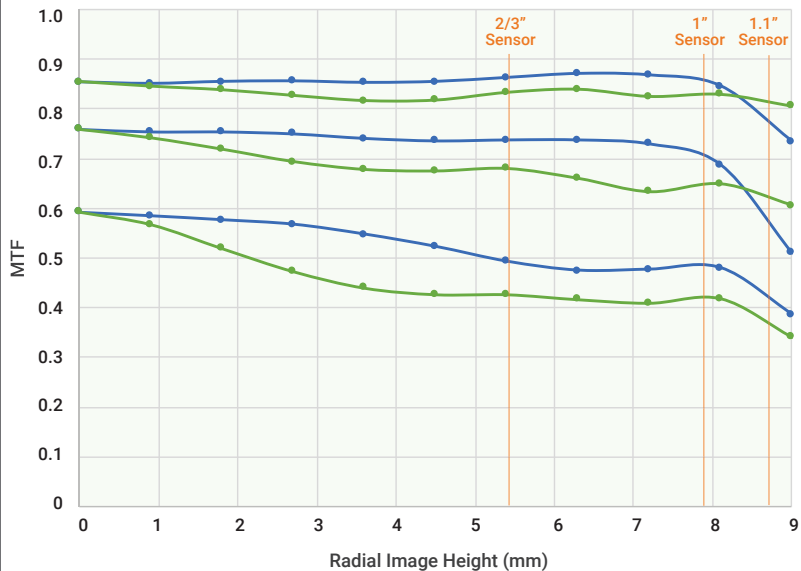
50 LP/MM (sagittal)	1/4 Nyquist (2.45μm pixel)
50 LP/MM (tangential)	
100 LP/MM (sagittal)	1/2 Nyquist (2.45μm pixel)
100 LP/MM (tangential)	
200 LP/MM (sagittal)	Nyquist (2.45μm pixel)
200 LP/MM (tangential)	

Nyquist Frequency is the limit of what a sensor can resolve.

Navitar 16mm MTF vs. Field (Infinity Focus)



Navitar 16mm MTF vs. Field (300mm Working Distance)



Navitar 16mm MTF vs. Field (100mm Working Distance)

