EN2MP0324 | DATASHEET

OPTO ENGINEERING

Fixed focal 2 Megapixel lens, focal length 3.5 mm, ƒ/N 2.4 - close, C-mount

KEY ADVANTAGES

Suitable for wide range of applications
Designed to satisfy simple vision tasks.

Wide product range
Covers the most popular focal lengths used in factory automation.

High quality / price ratio
High performance with reasonable cost.

Locking screws
Locking screws for fixing focus and iris.

EN2MP Series is a series of fixed focal length lenses designed for use in factory automation. Its high quality to price ratio allows simple vision tasks to be achieved easily and efficiently.

RT - Third party product selected by Opto Engineering®.

All technical specifications are provided as declared by the original manufacturer.

SPECIFICATIONS

Optical specifications		
Focal length	(mm)	3.5
Magnification[1]	(x)	0.022
Image circle	(mm)	9.0
Max sensor size		1/1.8"
WD range[2]	(m)	0.15 - inf
ƒ/N		2.4 - close
Back focal length	(mm)	8.57
Distortion on 1/3"[3]	(%)	5.8
Distortion on 1/2"[3]	(%)	4.1
Distortion on 1/1.8"[3]	(%)	-
Iris control		Manual
Focus Control		Manual

Mechanical specifications		
Mount		C
Filter thread		M40.5 x 0.5
Length[4]	(mm)	37.7
Outer Diameter	(mm)	42.0
Mass	(g)	70
Set screw thread		M1.7

Environment		
Operating temperature range	(°C)	-10-+50

ANGLE OF VIEW

Sensors	Diagonal (°)
1/3" (4.8 x 3.6 mm x mm)	84.2
1/2" (6.4 x 4.8 mm x mm)	99.6
1/1.8" (7.1 x 5.3 mm x mm)	104.5
2/3" (8.5 x 7.1 mm x mm)	-

FIELD OF VIEW AT MINIMUM WORKING DISTANCE

Sensors	(mm x mm)
1/3" (4.8 x 3.6 mm x mm)	218.18 x 163.64
1/2" (6.4 x 4.8 mm x mm)	290.91 x 218.18
1/1.8" (7.1 x 5.3 mm x mm)	323.64 x 242.27
2/3" (8.5 x 7.1 mm x mm)	- x -

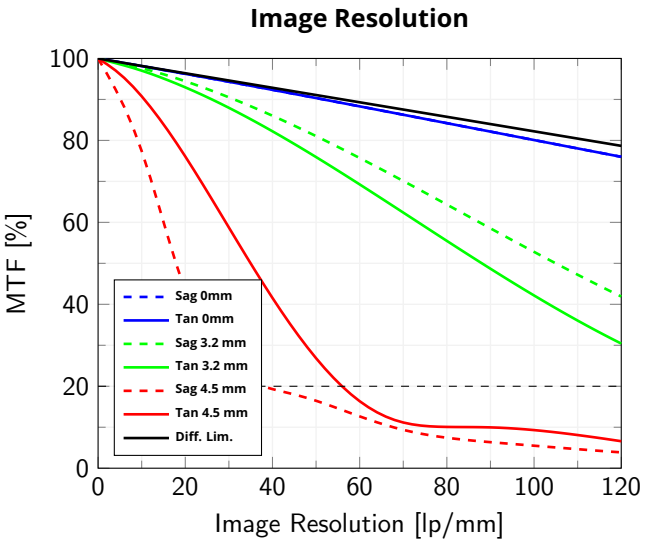
[1] Calculated at minimum working distance
[2] Working distance: distance between the front end of the mechanics and the object
[3] Value calculated at the corner point of the sensor diagonal. For distortion graphs see below
[4] Measured from the front end of the machanics to the camera flange at infinite focusing

COMPATIBLE PRODUCTS

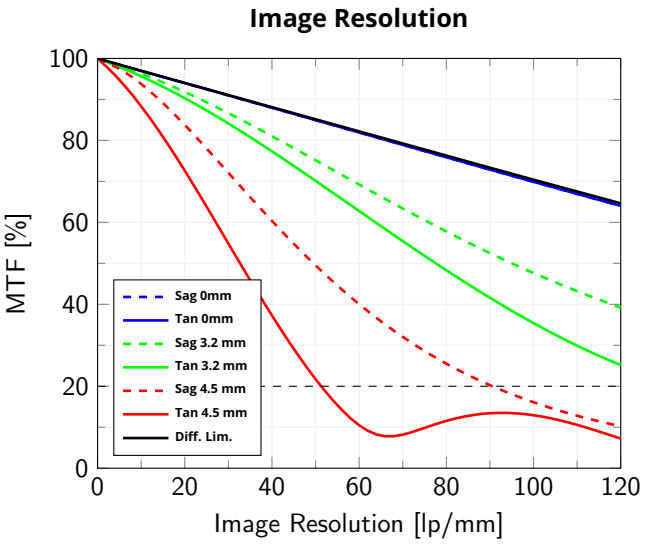
Full list of compatible products available *here*.

A wide selection of innovative machine vision components.

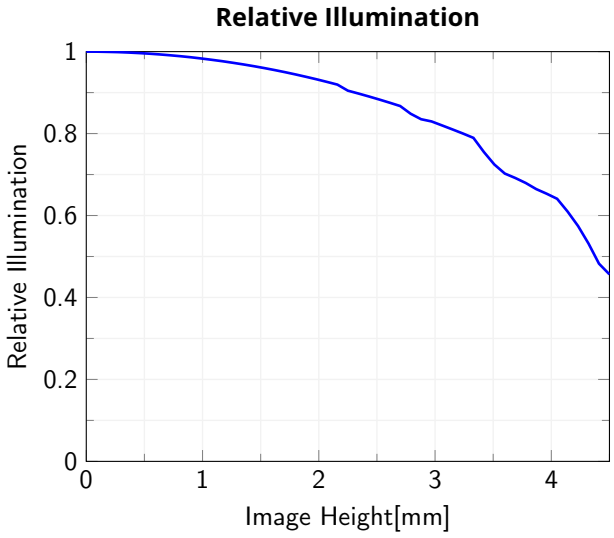
DATA AT INFINITE WORKING DISTANCE



Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at infinite working distance and maximum aperture



Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at infinite working distance at $f/4$



Relative illumination vs. Image Field Height, from the optical axis to the maximum image height at maximum aperture

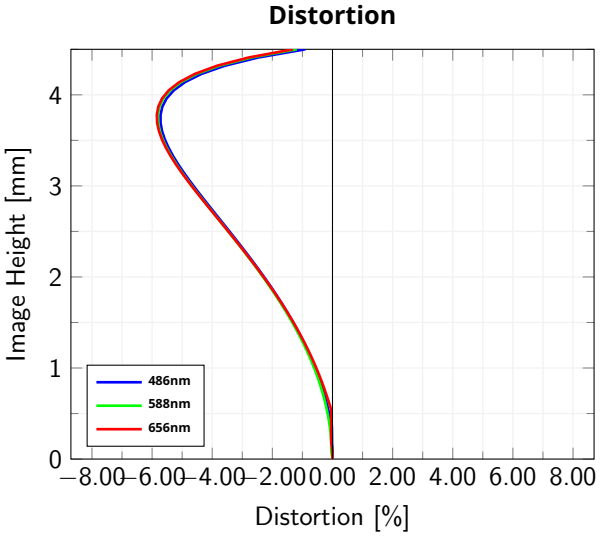
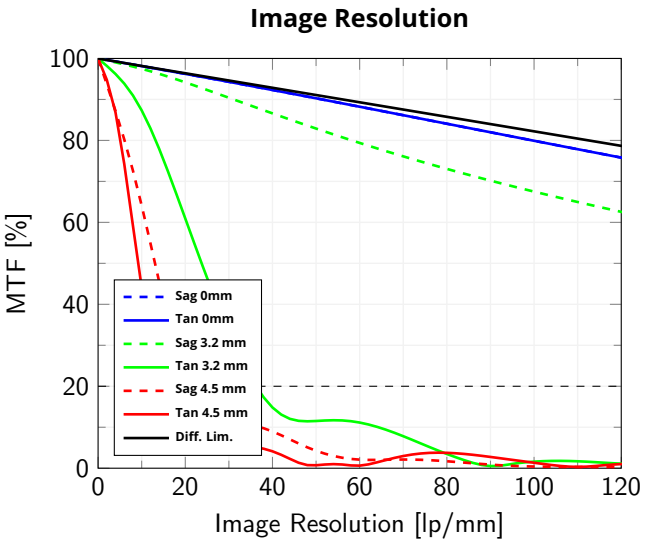
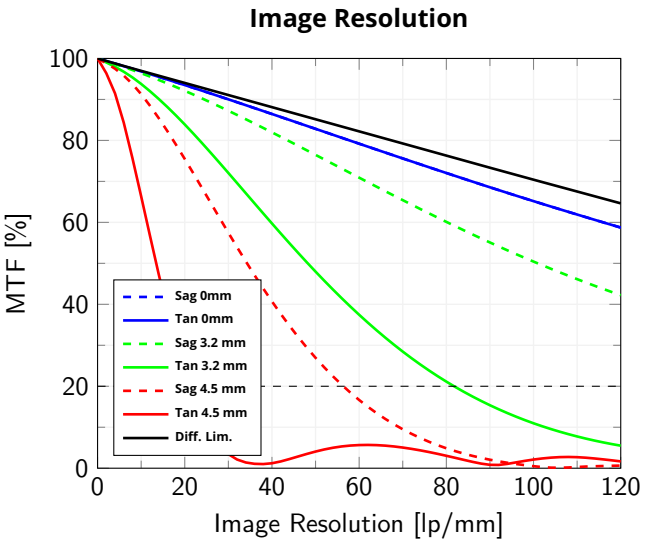


Image Field Height vs. Distortion, from the optical axis to the maximum image height

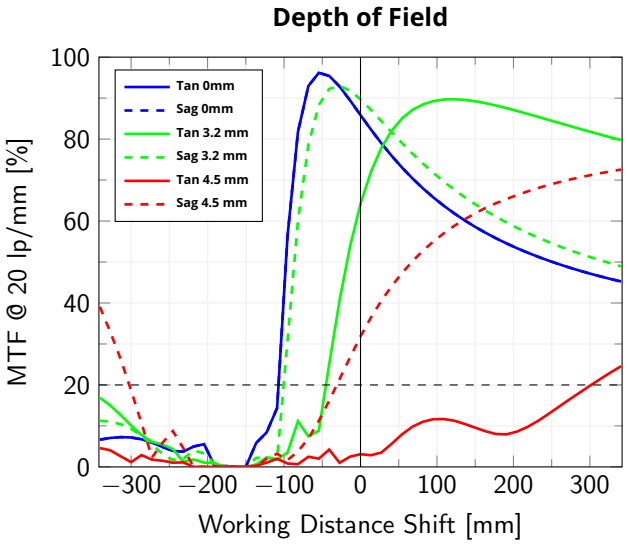
DATA AT MINIMUM WORKING DISTANCE



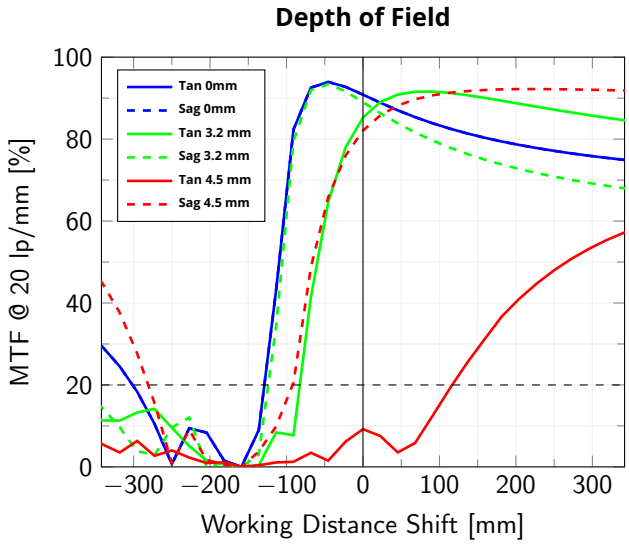
Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at minimum working distance and maximum aperture



Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at minimum working distance at $f/4$



Modulation Transfer Function (MTF) @ 20 lp/mm vs. Working Distance Shift from the best focus at minimum working distance, wavelength range 486 nm - 656 nm, maximum aperture



Modulation Transfer Function (MTF) @ 20 lp/mm vs. Working Distance Shift from the best focus at minimum working distance, wavelength range 486 nm - 656 nm, $f/4$