EN5MP7520 | DATASHEET

OPTO ENGINEERING

Fixed focal 5 Megapixel lens, focal length 75 mm, *f*/N 2.0 - 22, C-mount

KEY ADVANTAGES

High resolution
Designed for high resolution cameras up to 5 Megapixel with 2/3" sensor.

Suitable for more complex applications
Ideal to achieve complex vision tasks.

Cost saving solution
High optical performance with reasonable cost.

Robust design
Designed for use in machine vision applications.

EN5MP series is a series of high resolution fixed focal length lenses designed for use in machine vision applications.

SPECIFICATIONS

Optical specifications		
Focal length	(mm)	75
Magnification[1]	(x)	0.089
Image circle	(mm)	11.0
Max sensor size		2/3"
WD range[2]	(m)	0.9 - inf
f/N		2.0 - 22
Back focal length	(mm)	13.76
Distortion on 1/3"[3]	(%)	0.03
Distortion on 1/2"[3]	(%)	0.04
Distortion on 2/3"[3]	(%)	0.02
Iris control		Manual
Focus Control		Manual

Mechanical specifications		
Mount		C
Filter thread		M40.5 x 0.5
Length[4]	(mm)	71.7
Outer Diameter	(mm)	45.0
Mass	(g)	223

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

[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

ANGLE OF VIEW

Sensors	Diagonal (°)
1/3" (4.8 x 3.6 mm x mm)	4.6
1/2" (6.4 x 4.8 mm x mm)	6.1
2/3" (8.5 x 7.1 mm x mm)	8.4

FIELD OF VIEW AT MINIMUM WORKING DISTANCE

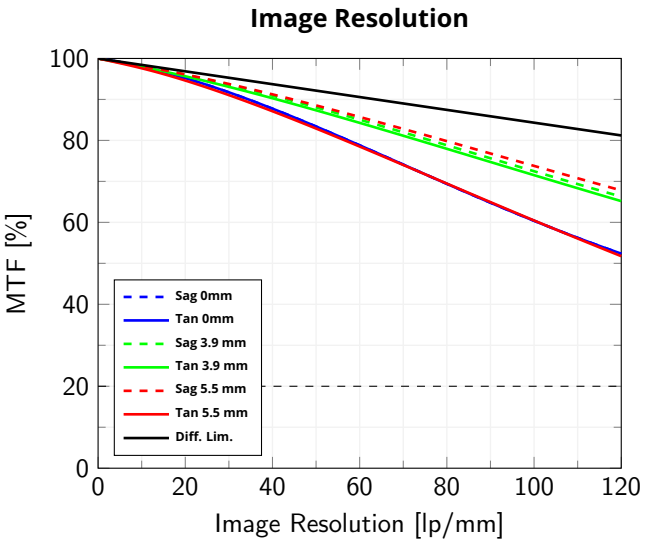
Sensors	(mm x mm)
1/3" (4.8 x 3.6 mm x mm)	53.75 x 40.31
1/2" (6.4 x 4.8 mm x mm)	71.67 x 53.75
2/3" (8.5 x 7.1 mm x mm)	95.18 x 79.40

COMPATIBLE PRODUCTS

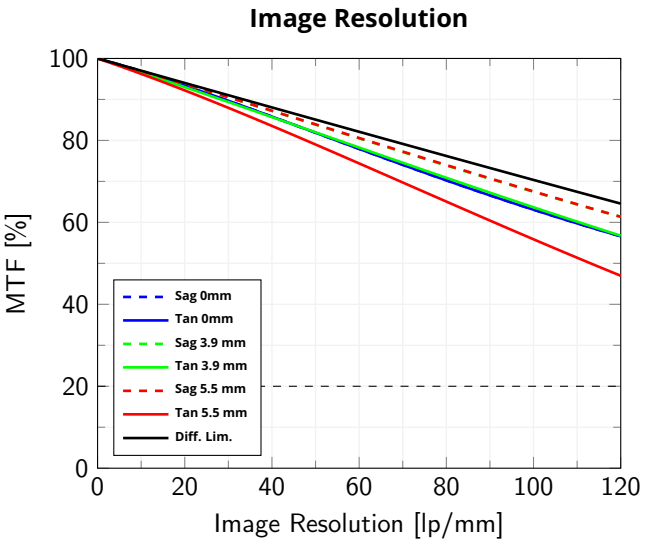
Full list of compatible products available *here*.

A wide selection of innovative machine vision components.

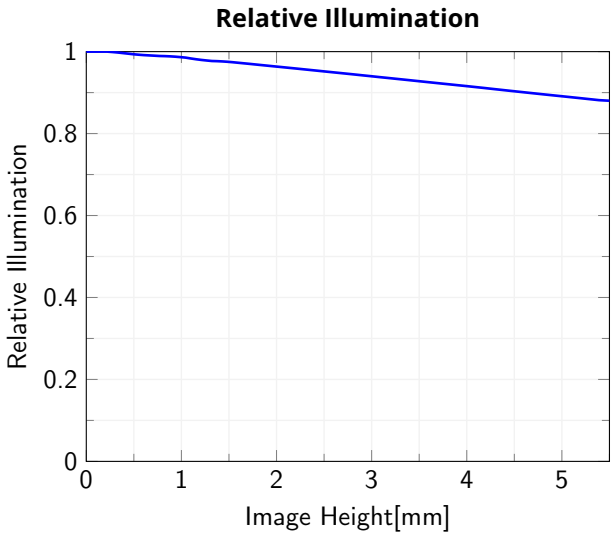
DATA AT INFINITE WORKING DISTANCE



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

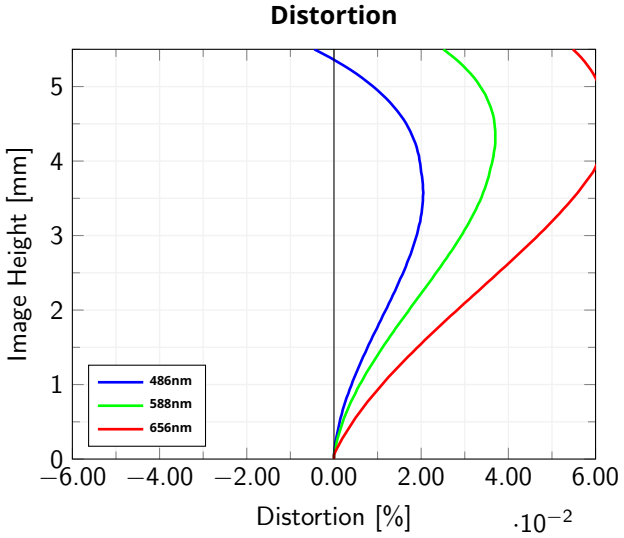
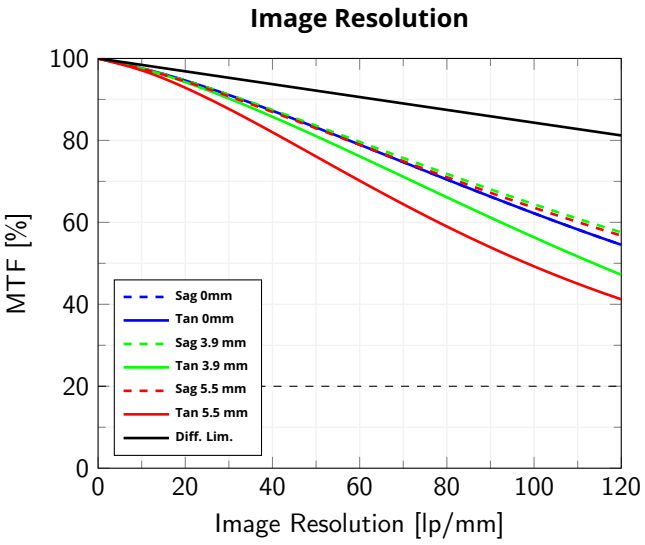
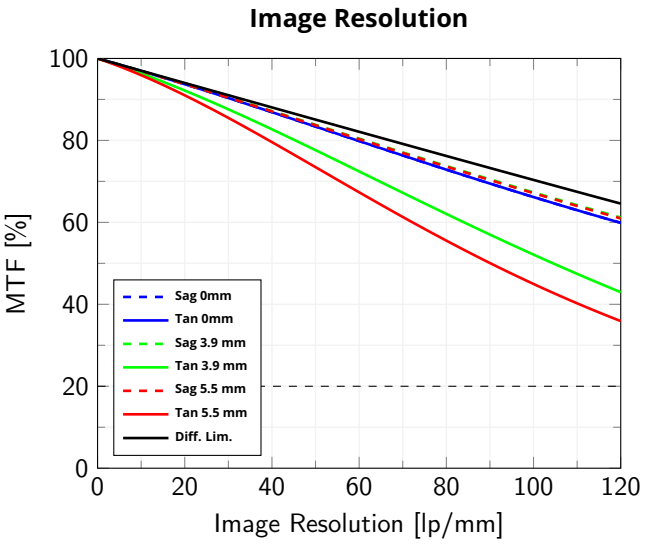


Image Field Height vs. Distortion, from the optical axis to the maximum image height

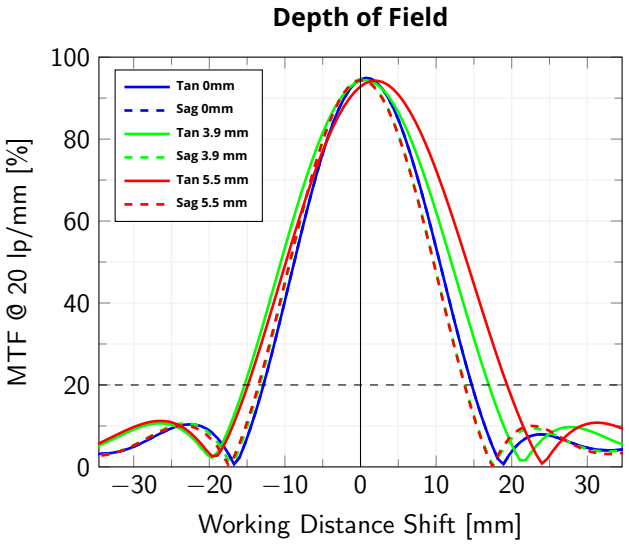
DATA AT MINIMUM WORKING DISTANCE



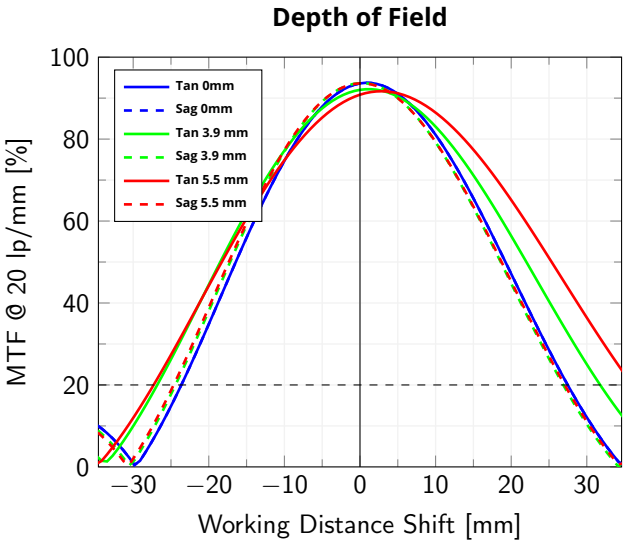
Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at minimum working distance and maximum aperture



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, $f/4$