

# EN5MP1216 | DATASHEET

## Fixed focal 5 Megapixel lens, focal length 12 mm, $f/N$ 1.6 - 22, C-mount



### SPECIFICATIONS

#### Optical specifications

Focal length	(mm)	12
Magnification <sup>1</sup>	(x)	0.107
Image circle	(mm)	11.0
Max sensor size		2/3"
WD range <sup>2</sup>	(m)	0.1 - inf
$f/N$		1.6 - 22
Back focal length	(mm)	12.42
Distortion on 1/3" <sup>3</sup>	(%)	0.38
Distortion on 1/2" <sup>3</sup>	(%)	0.53
Distortion on 2/3" <sup>3</sup>	(%)	0.35
Iris control		Manual
Focus Control		Manual

#### Mechanical specifications

Mount		C
Filter thread		M37.5 x 0.5
Length <sup>4</sup>	(mm)	58.5
Outer Diameter	(mm)	43.3
Mass	(g)	178
Set screw thread		M2 x 4

#### Environment

Operating temperature range	(°C)	-10-+50
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### 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.

### ANGLE OF VIEW

Sensors	Diagonal (°)
1/3" (4.8 x 3.6 mm x mm)	27.7
1/2" (6.4 x 4.8 mm x mm)	36.4
2/3" (8.5 x 7.1 mm x mm)	48.6

### FIELD OF VIEW AT MINIMUM WORKING DISTANCE

Sensors	(mm x mm)
1/3" (4.8 x 3.6 mm x mm)	44.86 x 33.64
1/2" (6.4 x 4.8 mm x mm)	59.81 x 44.86
2/3" (8.5 x 7.1 mm x mm)	79.44 x 66.26

<sup>1</sup> Calculated at minimum working distance

<sup>2</sup> Working distance: distance between the front end of the mechanics and the object

<sup>3</sup> Value calculated at the corner point of the sensor diagonal. For distortion graphs see below

<sup>4</sup> Measured from the front end of the mechanics to the camera flange at infinite focusing

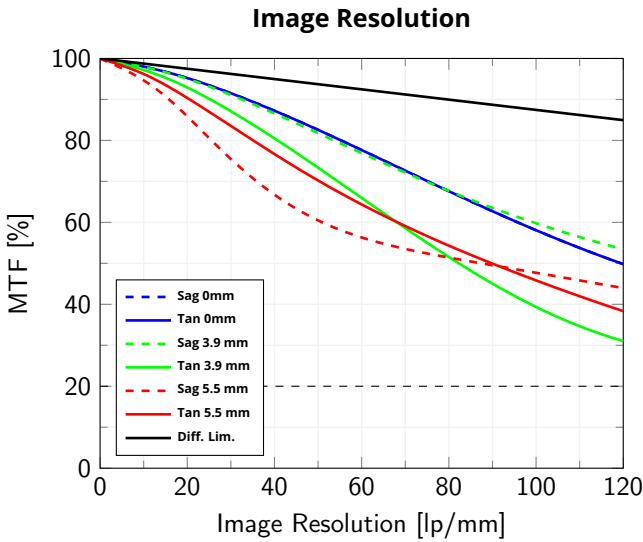
### COMPATIBLE PRODUCTS

Full list of compatible products available [here](#).

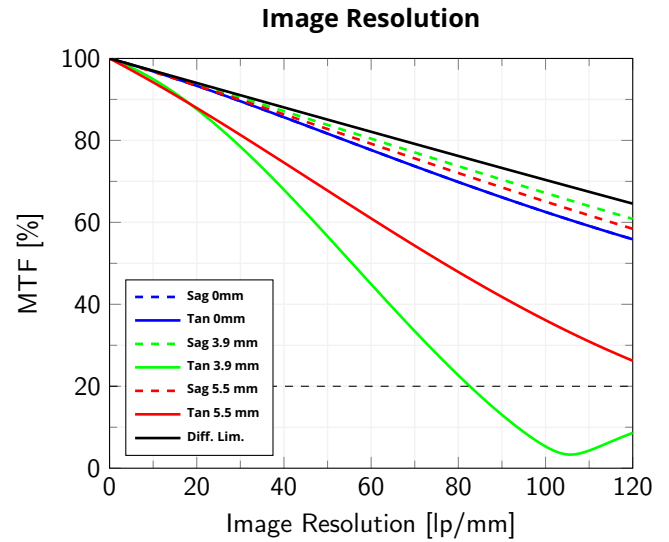


A wide selection of innovative machine vision components.

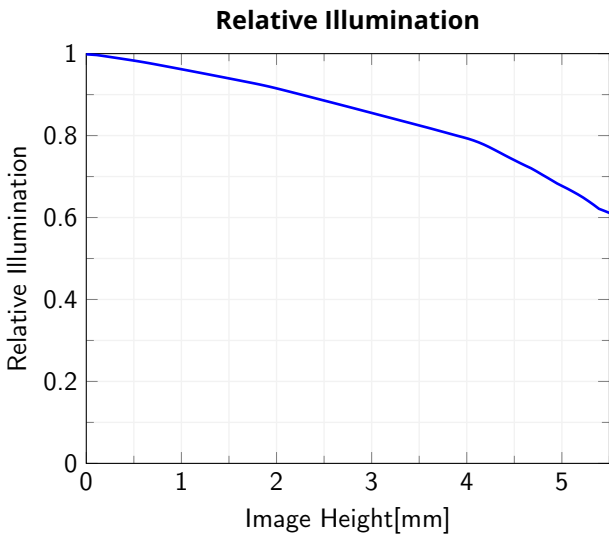
DATA AT INFINITE WORKING DISTANCE



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

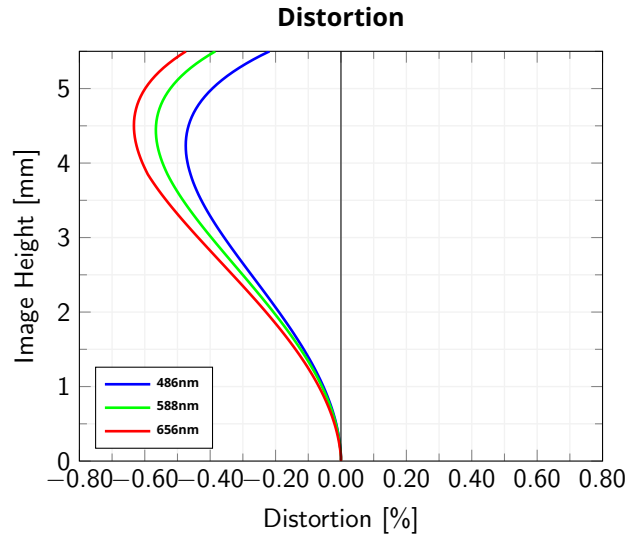
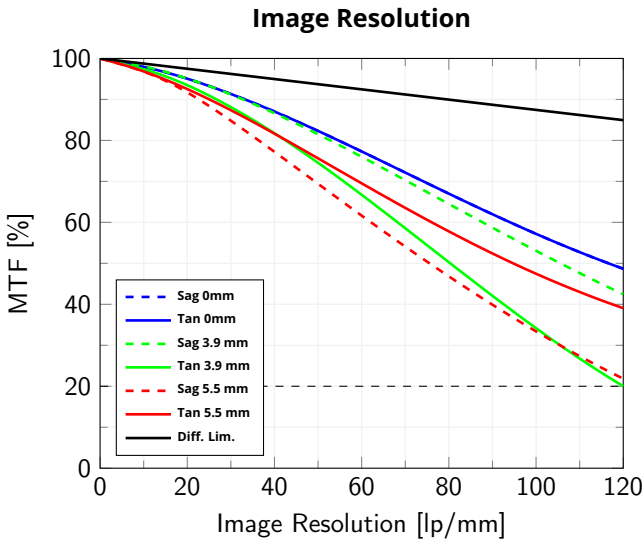


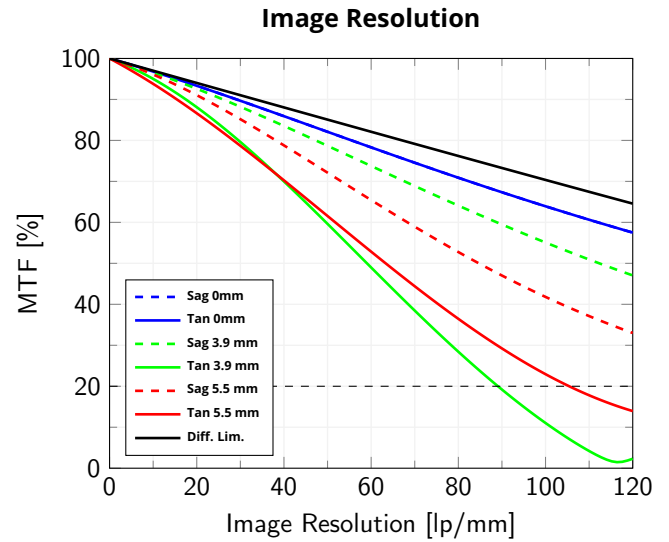
Image Field Height vs. Distortion, from the optical axis to the maximum image height

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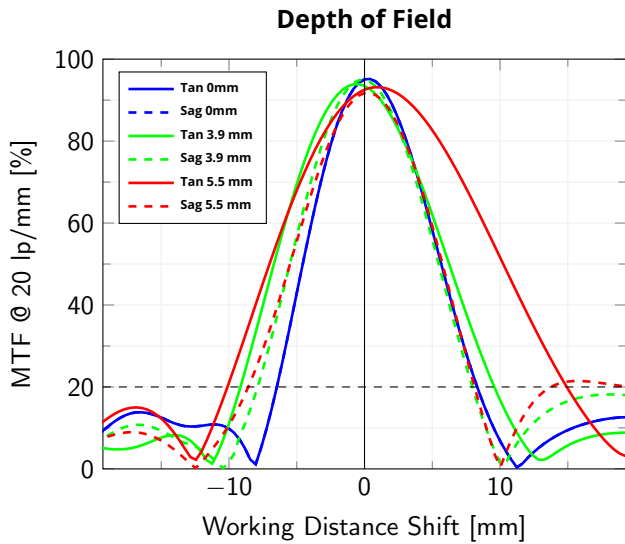
DATA AT MINIMUM WORKING DISTANCE



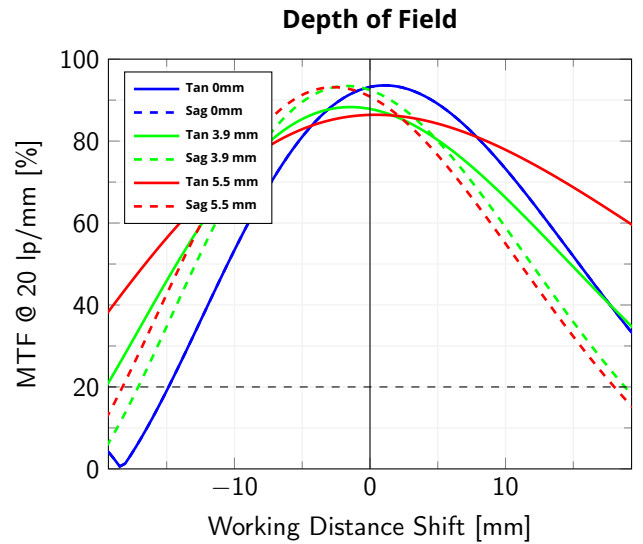
Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm, at minimum working distance and maximum aperture



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,  $f/4$

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