

PCMP012 | DATASHEET

Micro polyview lens for 1/2" sensors



SPECIFICATIONS

Optical specifications

Image circle	(mm)	4.8
Min sensor size		1/2"
Working distance with min object size ¹	(mm)	5
Working distance with max object size ¹	(mm)	1.5
Viewing angle	(°)	37
wf/N^2		8

Electrical specifications

Light color		white, 6000 K
Number of LEDs		12
Supply Voltage ^{3,4}	(V)	24
Current ⁴	(mA)	450
Power consumption ⁴	(W)	10.8
Typical pulse voltage ⁵	(V)	35
Max pulse current ^{3,5}	(mA)	1000
Peak power consumption ⁵	(W)	35
Max pulse duration ⁵	(ms)	1
Max duty-cycle ⁵	(%)	10
Estimated MTBF ⁶	(hours)	> 50000
Cable length	(m)	1.5
Connector		flying leads

Mechanical specifications

Mount		C
Length ⁷	(mm)	242.3
Width	(mm)	119.0
height	(mm)	139.5
Mass	(g)	1485

KEY ADVANTAGES

Small parts lateral imaging

Inspection of objects whose size ranges from 1 to 10 mm.

Measurement capability

Top and lateral views show the same magnification.

High field depth

Top and Lateral views are imaged without significant defocusing.

PCMP optics are multi-image lenses designed to completely measure and inspect objects whose dimensions range from 1 to 10 mm, such as electronic components, solder paste and micro-mechanical components.

Environment

Operating temperature	(°C)	0-40
Storage temperature	(°C)	0-50
Operating relative humidity	(%)	20-85, non condensing
Installation		Indoor use only

Eye safety

Risk group (CEI EN 62471:2010) Risk Group 2

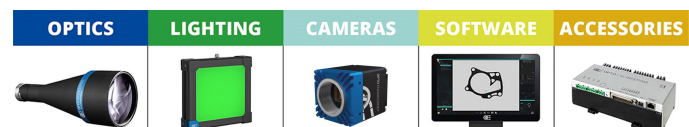
- ¹ Working distance: distance between the front end of the mechanics and the object
- ² Working f/N : the real f/N of a lens in operating conditions.
- ³ Tolerance $\pm 2\%$
- ⁴ Continuous mode
- ⁵ Pulsed mode
- ⁶ Drop to 50% intensity @ 25°C.
- ⁷ Measured from the front end of the mechanics to the camera flange.

FIELD OF VIEW

Diameter x Height	(mm x mm)
Minimum	2.5 x 6.0
Maximum	10.0 x 1.0

COMPATIBLE PRODUCTS

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

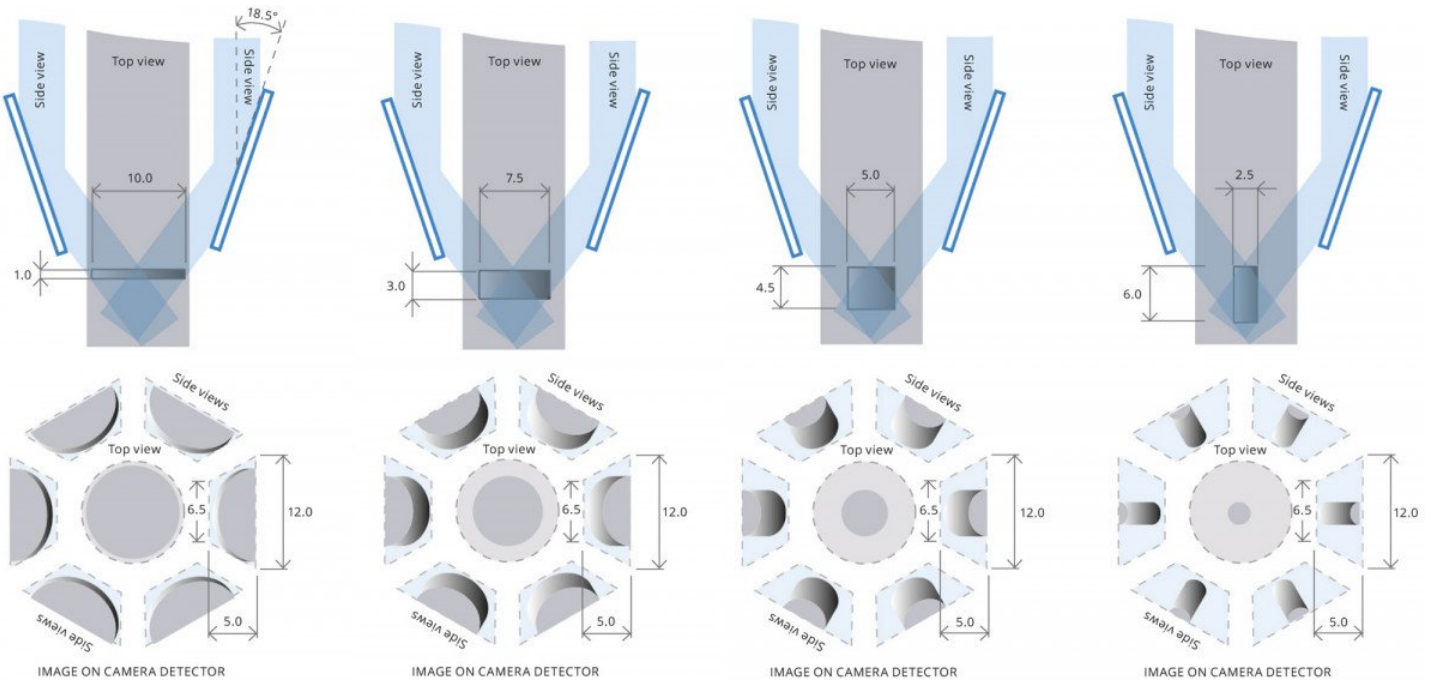


A wide selection of innovative machine vision components.

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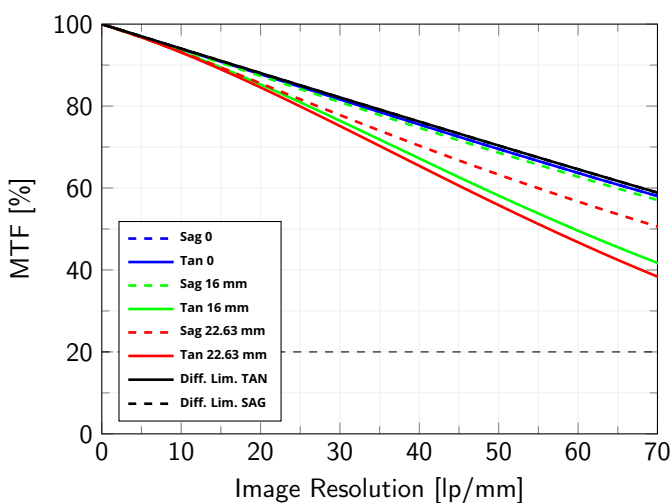
WORKING PRINCIPLE AND FOV OF PCMP LENSES

The top and side views show exactly the same magnification; however the side views appear to be compressed because of the perspective angle. Thanks to telecentric imaging such compression is purely linear and therefore very easy to calibrate.



PERFORMANCE OF THE IMAGING LENS

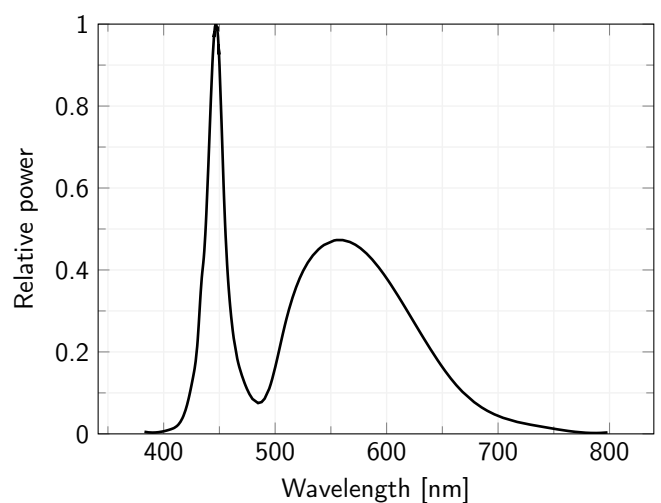
Image Resolution



Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm from the centre to the corner of the field of view

LED SPECTRUM

LED color spectrum



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