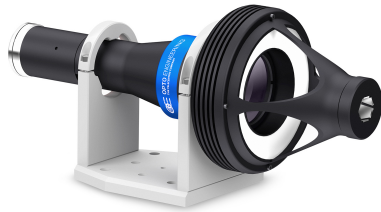


# PCMP3M | DATASHEET

## Micro polyview lens for 1.1" sensors



### SPECIFICATIONS

#### Optical specifications

Image circle	(mm)	10.4
Min sensor size		1.1"
Working distance with min object size <sup>1</sup>	(mm)	5
Working distance with max object size <sup>1</sup>	(mm)	1.5
Viewing angle	(°)	37
$wf/N^2$		11

#### Electrical specifications

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

#### Mechanical specifications

Mount		C
Length <sup>7</sup>	(mm)	301.3
Width	(mm)	119.0
height	(mm)	139.5
Mass	(g)	1577

### 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

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

### FIELD OF VIEW

<b>Diameter x Height</b>	(mm x mm)
Minimum	2.5 x 6.0
Maximum	10.0 x 1.0

### COMPATIBLE PRODUCTS

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

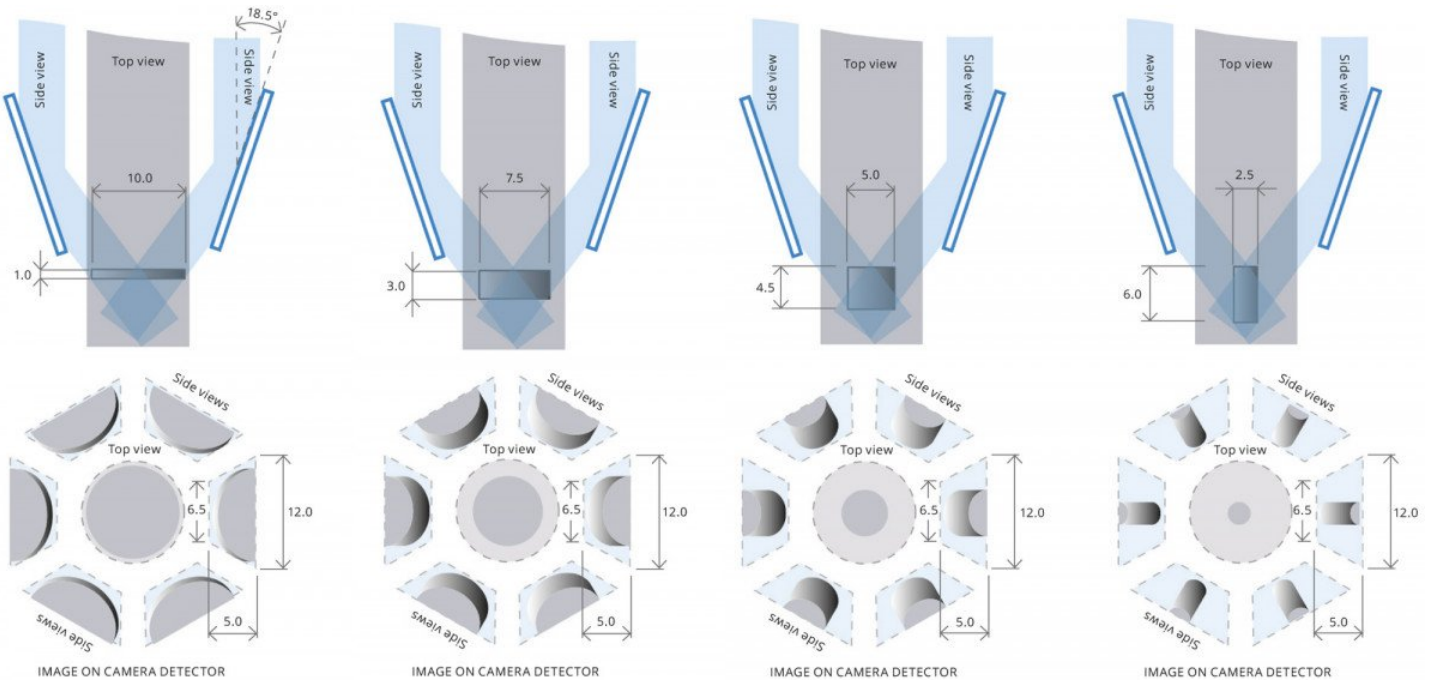


A wide selection of innovative machine vision components.

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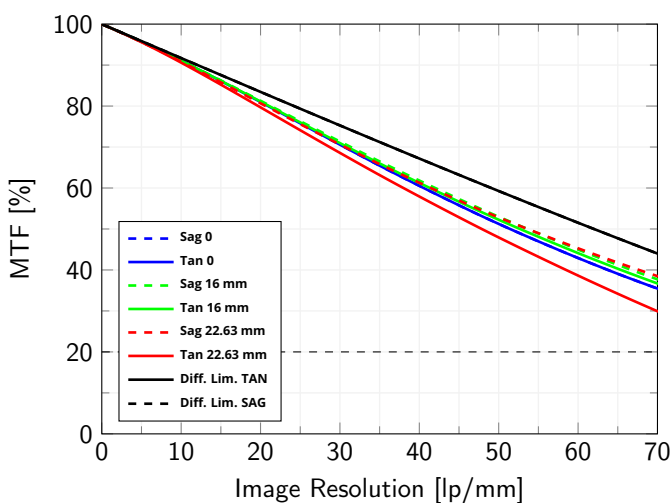
### WORKING PRINCIPLE AND FOV OF PCMP LENSES

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

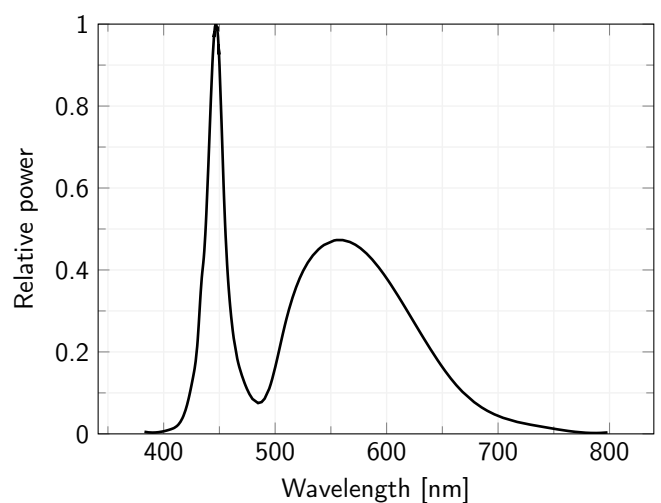
#### Image Resolution



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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