

# PCMP023 | DATASHEET

# Micro polyview lens for 2/3" sensors





## **SPECIFICATIONS**

#### **Optical specifications**

Image circle	(mm)	6.6
Min sensor size		2/3"
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 <sup>2</sup>		8

#### **Electrical specifications**

Light color		white, 6000 K
Number of LEDs		12
Supply Voltage <sup>3</sup>	(V)	24
Current <sup>4</sup>	(mA)	750
Power consumption	(W)	18
Estimated MTBF <sup>5</sup>	(hours)	> 50000
Cable length	(m)	1.5
Connector		flying leads

#### **Mechanical specifications**

Mount		C
Length <sup>6</sup>	(mm)	262.0
Width	(mm)	119.0
height	(mm)	139.5
Mass	(g)	1532

## **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 micromechanical 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)	Exempt
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<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> With constant driving voltage

<sup>5</sup> Drop to 50% intensity @ 25°C

<sup>6</sup> 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**



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

LED SPECTRUM



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