PCPW023 | DATASHEET

OPTO ENGINEERING

Polyview lens for 2/3” sensors

REACH DOSSIER

KEY ADVANTAGES

Just one camera
No need for multiple cameras placed around and over the object

Wide viewing angle
45° object sides view makes otherwise hidden features visible

Complete surface inspection
Both inner and outer object surfaces can be imaged in one shot

Very high resolution
Even the tiniest defects can be detected.

PCPW optics provide eight different views of the side and top surfaces of an object. The wide view angle (45°) enables the inspection of the side features of an object (for example the threads of a screw or a nut) otherwise impossible to acquire with a single camera.

SPECIFICATIONS

Optical specifications		
Image circle	(mm)	6.6
Max sensor size		2/3”
Working distance with min object size[1]	(mm)	40
Working distance with max object size[1]	(mm)	20
Viewing angle	(°)	45
wf/N[2]		8

Mechanical specifications		
Mount		C
Length[3]	(mm)	236.1
Front diameter	(mm)	117.0
Mass	(g)	914

[1] Working distance: distance between the front end of the mechanics and the object
[2] The design working f-number (wf/N) is specified. The working f-number could be changed using the variable iris.
[3] Measured from the front end of the mechanics to the camera flange.

FIELD OF VIEW

Diameter x Height	(mm x mm)
Minimum	30.0 x 20.0
Maximum	50.0 x 5.0

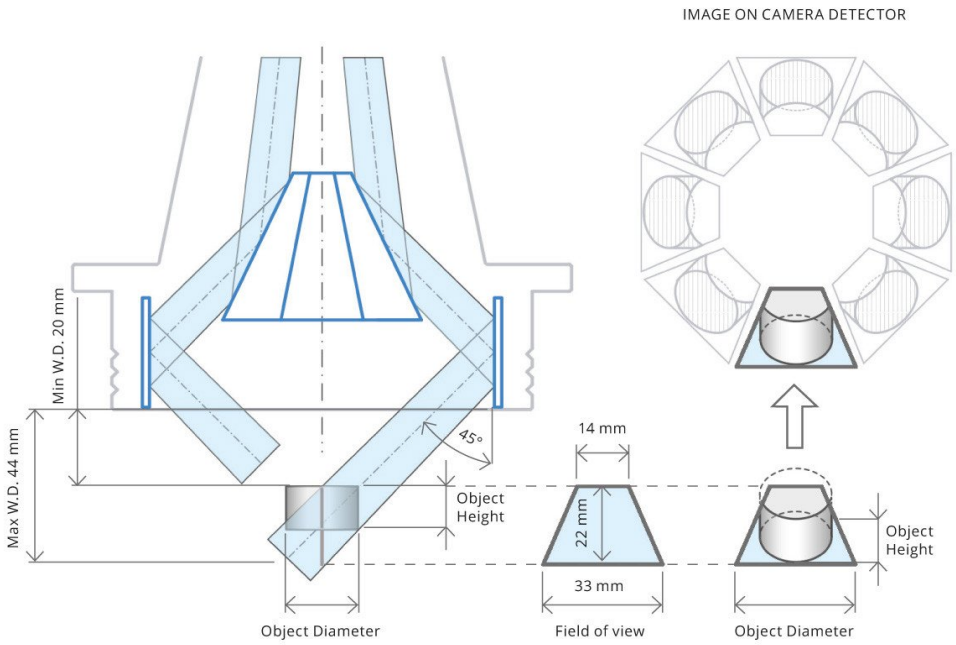
COMPATIBLE PRODUCTS

Full list of compatible products available *here*.

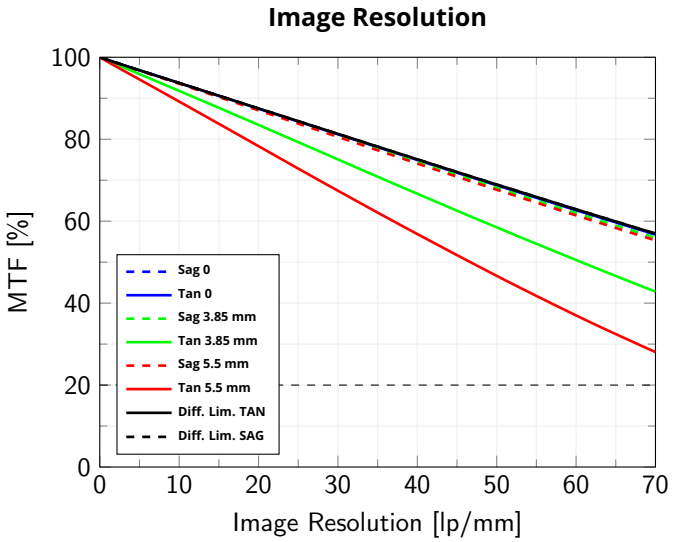
A wide selection of innovative machine vision components.

WORKING PRINCIPLE AND FOV OF PCMP LENSES

Eight different trapezoidal fields of view are obtained: all the object features included in such a trapezoid will be imaged on the corresponding image portion.



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 image at wf/8

VIGNETTING

When using LTRN050x45 ring LED illuminator in combination with PCPW0xx optics some vignetting occurs (up to 16% of the total FOV). Image on camera detector will appear as depicted in the schematics. Use the adapter provided with PCPW0xx to securely clamp LTRN050x45.

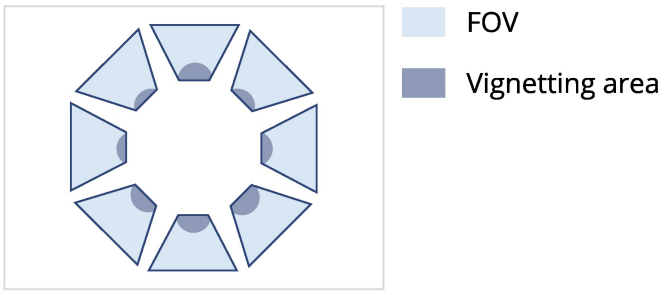


IMAGE ON CAMERA DETECTOR