PCBPN013-WG | DATASHEET

OPTO ENGINEERING

Boroscopic probe for 1/3" detectors, probe diameter 7 mm, with illuminator

REACH DOSSIER | RoHS | CE | UKCA | PATENTED

KEY ADVANTAGES

Inspection of cavities from inside
Hidden internal features and defects are clearly viewed

High resolution
The catadioptric design enables the detection of tiny defects over a very wide view angle

Flaw detection
Coarse deformations revealed using direct illumination

Surface defect enhancement
Mixing direct and indirect illumination makes it possible to emphasize tiny and scarcely visible defects.

Small diameter inspection
Now down to 5.5 mm

PCBP probes are used to inspect holed objects such as engine parts, containers and tubes whose hidden features can only be controlled by introducing a probe into the cavity.

SPECIFICATIONS

Optical specifications

Image circle	(mm)	3.4
Max sensor size		1/3" [a]
Viewing angle	(°)	65
wf/N[1]		30
Focusing		Manual
Light color		white

Electrical specifications

Supply voltage[2]	(V)	24
Current [3]	(mA)	150
Power consumption[3]	(W)	3.5
Typical pulse voltage[4]	(V)	16
Max pulse current[5]	(mA)	2800
Peak power consumption	(W)	45
Max pulse duration	(ms)	1
Max duty cycle	(%)	1

Mechanical specifications

Mount		C
Phase adjustment		No
Probe length	(mm)	57.6
Total length[6]	(mm)	81.1
Probe diameter	(mm)	7
Mass	(g)	85

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 1

[1] working f/N: the real f/N of a lens in operating conditions.
[3] Tolerance ± 2 %
[3] Used in continuous (not pulsed) mode
[4] Constant voltage power supply
[5] Constant current power supply
[6] Measured from the front end of the mechanics to the camera flange.

[a] Recommended use of a 1/2" sensor as the image may be decentered

FIELD OF VIEW

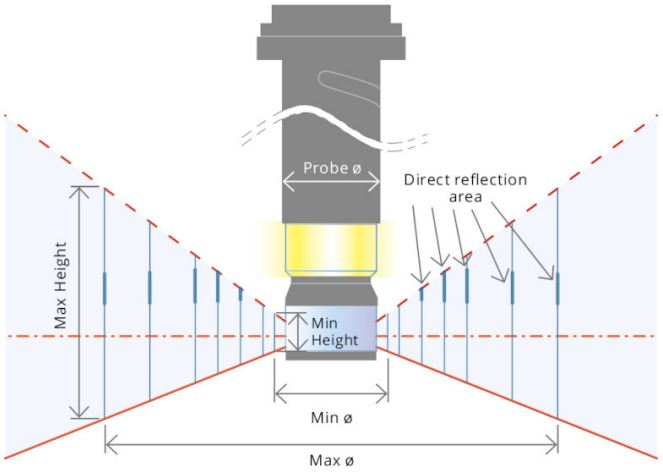
Diameter x Height	(mm x mm)
Minimum	8.0 x 4.4
Maximum	25.0 x 15.0

COMPATIBLE PRODUCTS

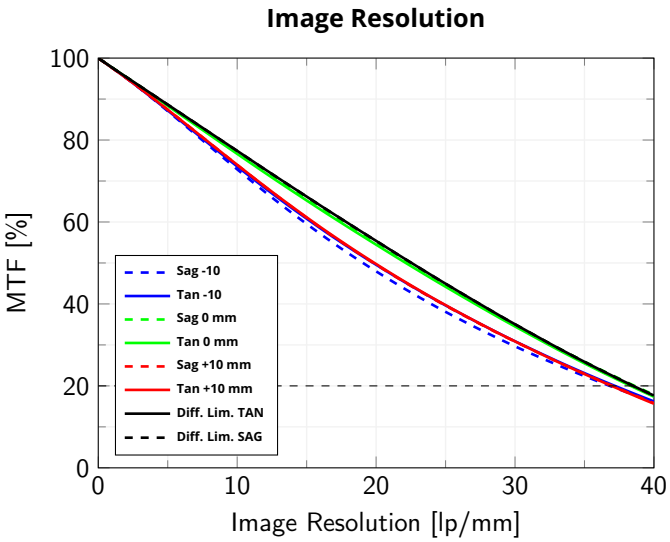
Full list of compatible products available *here*.

A wide selection of innovative machine vision components.

WORKING PRINCIPLE AND FOV OF PCBP LENSES



DATA WITH CAVITY DIAMETER OF 40MM



Modulation Transfer Function (MTF) vs. Image Resolution, wavelength range 486 nm - 656 nm. Fields in legend are represented as distance from the center of the boroscope tip

ILLUMINATOR CONNECTION