

Process photometer ZPM



The process photometer ZPM measures the transmission of optical transparent materials like silica, glass, crystal, or plastics plates.

The influence of ambient light is minimized by using a modulation technique. This is of special importance for the measurement of scattering samples.

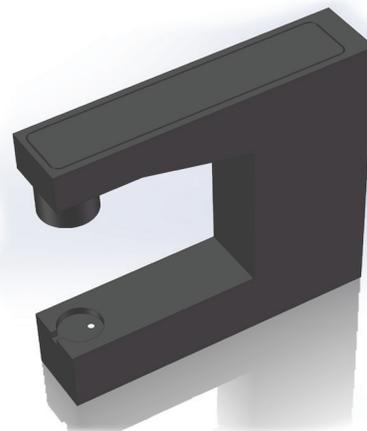
Yoke photometers measure at a fixed wavelength between 254 nm and 980 nm or with selectable wavelengths, for example, red (630 nm), green (520 nm), and blue (470 nm) for ZPM RGB. Our range includes more than 30 wavelengths; thus, the photometer can be optimally adapted to the application.

Transmission data are steadily shown on the display. Measuring data can be read by a computer or PLC (optionally) manually or after being triggered.

The device under test can be adjusted and fixed using the optional alignment table. We also manufacture individual yoke photometers for scattering samples or custom sizes. You can take advantage of the modular base unit and our in-house CAD-CAM production.

APPLICATIONS

- Transmission measurements
- Materials testing
- Process control
- Material tests for laser beam welding



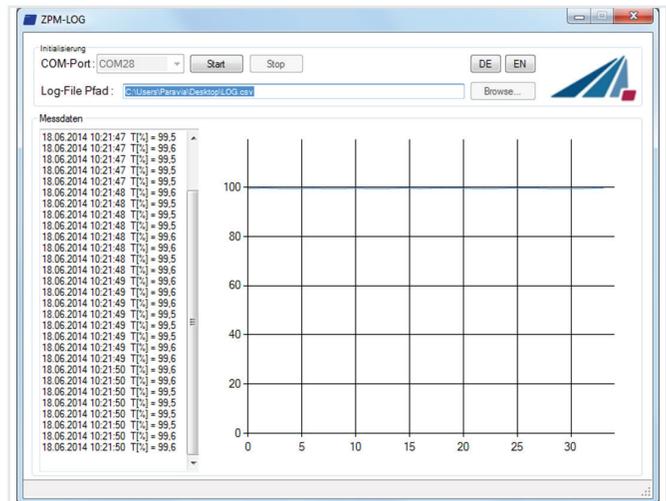
TECHNICAL DATA

Measuring range	0 to 100% transmission
Resolution	0,01%, changeable to 0,1%
ADC	24 bit
Calibration	100% or reference filter
Sampling rate	55 Hz to 0,6 Hz, adjustable
Averaging	1 - 20, moving average
Display	graphical, 128 x 64 px
Dimensions, display unit	185 x 251 x 100 mm
Dimensions, photometer	160 x 110 x 30 mm
Weight	~ 3 kg
Mains	100 - 240 V, 50/60 Hz, 30 W
Cable	2m, opt. up to 10 m
Lamp lifetime	typical 20.000 h
Operating temperature	10 to 40 °C
Humidity	<80%, non-condensing
Output signal, opt.	4 - 20 mA, 0-10 V
Relay contact, opt.	2 x 250 V, 1 A
Interface	USB

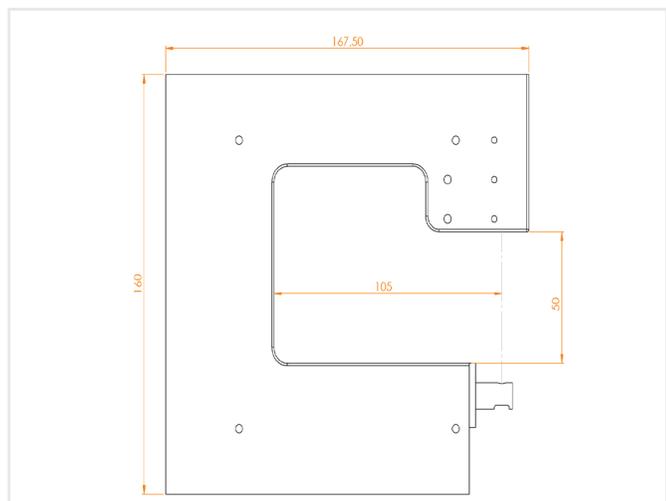
AVAILABLE WAVELENGTH

UVC	245 nm, 254 nm, 265 nm
	280 nm
UVB	290 nm, 300 nm, 310 nm
UVA	320 nm, 350 nm, 365 nm
VIS	395 nm, 405 nm, 445 nm
	455 nm, 470 nm, 505 nm
	520 nm, 590 nm, 630 nm
	690 nm, 720 nm, 780 nm
	Standard light A, 3500 K
NIR	820 nm, 850 nm, 880 nm
	940 nm, 950 nm, 980 nm
RGB	470 nm & 520 nm & 630 nm

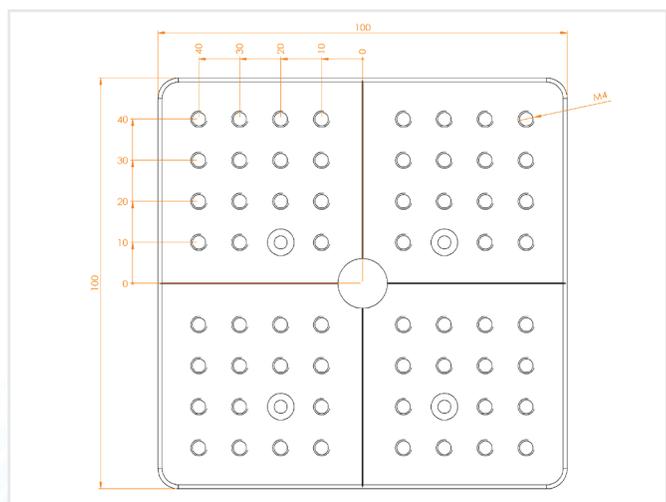
Further wavelengths on request.



Software (records and saves transmission measurements)



Dimensions standard photometer-head (without option)



Dimensions alignment table

ATTACHMENTS & OPTIONS

The process photometers are modular expandable and thus optimal for different applications.

We gladly support you with your individual configuration.

TRANSMISSION REFERENCE



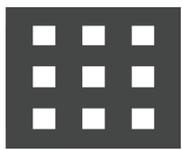
The transmission reference is an optical filter of known transmission for quality assurance. Delivered with manufacturer's certificate of calibration.

CONTACT RELAIS



Potential-free relay contacts with adjustable switching thresholds are available for process monitoring. Also included: trigger input

ALIGNMENT TABLE



The alignment table with M4 threads allows reversible positioning of the device under test. Visible markings show the measurement point.

PLC OUTPUT (0-10 V or 4-20 mA)



The transmission signal can be measured as a voltage or current signal - for inline measurements.

BASE PLATE



The base plate holds the photometer yoke on a table. Normal screwable brackets will be omitted.

CUSTOMIZED MOUNTS



For scattering samples we recommend adapted mounts due to position dependency of the measurement results.

DOUBLE-BEAM OPTION



For inline applications, the drift caused by aging or temperature fluctuations can be compensated by a reference diode. The compensation works from a drift of ~1%.

PART NUMBERS

Yoke Photometer ZPM-XXX	833000
Yoke Photometer ZPM-RGB	833100
Alignment table	833002
Customized mount	760001
Base plate	833006
Transmission reference	833010
Output 0 - 10 V	833003
Output 4 - 20 mA	833004
Relay contact, adjustable	833005
Yoke identification	833000e
Double-Beam option	833000d
Cable, each add. m	833000m
Laser protection (Class 1)	760000

YOKE-HEAD IDENTIFICATION



Digital yoke-head identification for the use of different yokes with one display unit.

SCOPE OF DELIVERY

Photometer, display unit, mains cable, USB cable, PC software

Please specify wavelength during ordering.

LASER PROTECTION (CLASS 1)



For transmission measurements, done at laser welding wavelengths, we offer a safety enclosure in order to obtain a safe operation. Only necessary for infrared lasers.