

C1 white light sensor

Miniaturised sensors for sophisticated applications.



→OPM←

Optische Präzisionsmesstechnik

See the difference!

C1 white light sensor

The miniaturised sensor for non-contacting measurement of technical surfaces, unaffected of surface roughness, reflectivity and material colour. Ideally suited for measurements on sensitive, soft or liquid surfaces, roughness measurements and integration into OEM applications.

- ▶ Miniaturised sensor, ideally suited for harsh and cramped situations
 - ▶ High resolution, accurate and fast sensor, without edge artefacts and shadowing
 - ▶ Entirely passive sensor head without any moving parts, robust, free of maintenance, long-lived
 - ▶ Determination of flatness, altitude or position
 - ▶ Calculation of properties like roughness, area or volume
- Universal application, e.g. in
- ▶ micro mechanics, electrical engineering, optics industry
 - ▶ plastics and paper industry
 - ▶ inspection on thick film, hybrid or PCB boards and semiconductor industry
 - ▶ stylus replacement in roughness measurement applications

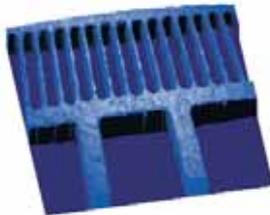
C1 sensor specification

Principle of Operation	Spectroscopic evaluation of the dominant wavelength, introduced by the axial colour of the object lens illuminated by white light
Dimensions	Sensor controller 260 x 180 x 80 mm Sensor \varnothing 12 mm x 110 mm, including fibre connector
Measurement range	300 μ m (500 μ m with reduced specs)
Resolution	25 nm
Straightness deviation	\leq 0.5 % over the measurement range of 300 μ m
Reproducibility	$\sigma \leq$ 10 nm (50 measurements on a step standard of 200 μ m)
Stand-off	4 mm
Light source	Tungsten halogen lamp, 55 W
Light guide	Multimode fibre 50/125, standard length 2 m, up to 10 m on request
Measurement spot diameter	5 μ m
Maximum surface tilt	$90^\circ \pm 25^\circ$ on a mirror, more on scattering surfaces
Measurement frequency	30 Hz to 1500 Hz, dependent on the reflectivity of the surface, selectable by software. 100 Hz, 200 Hz, 500 Hz, 1000 Hz on the stand-alone unit.
Data transmission	RS232, 1500 samples/s in real-time
Weight	Sensor approx. 30 g Sensor controller approx. 4.0 kg
Options	Analogue output: profile, reflection 0 to 10 V

Specifications subject to change.



Cutting edge



Micromechanical part



Artificial leather



Coin



Optische Präzisionsmesstechnik

OPM
Optische Präzisionsmesstechnik GmbH
Nobelstraße 7
76275 Ettlingen/Germany

Telephone +49(0)7243/529942
Telefax +49(0)7243/524480
info@opm-messtechnik.de
www.opm-messtechnik.de