PRECITEC

CHROCODILE® MINI

Precise quality control through optical inspection

DISTANCE

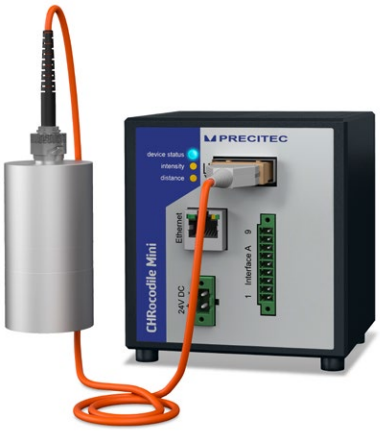
THICKNESS

TOPOGRAPHY

Our new sensor CHRocodile Mini performs non-contact distance and thickness measurements in proven accuracy. Thus, the device is perfectly customized for applications like determination of positions and dimensions (e.g.for microelectronic components), topography, profile and roughness measurements (e.g. for tool surfaces) and thickness measurements of glass or plastic coatings.

The CHRocodile Mini offers great flexibility in a small space. The exceptionally compact control unit and the optical probe are connected by an optical fiber. This makes it possible to spatially separate the optical probe from the control unit. Furthermore, the probe does not contain any moving parts or electronic components that could influence the accuracy of the measurement as heat sources.

Thanks to its compact dimensions and economical price, the CHRocodile Mini is the ideal alternative to conventional laser triangulation sensors. A second product variant with the same dimensions, the CHRocodile Mini+, comes with a larger set of interfaces (Encoder, Analog Out, Digital In/Out). This makes it even easier to integrate the device into any kind of inspection machine.



EFFICIENT

- Cost-efficient solution
- State-of-the-art chromatic confocal technology
- Measurement on all surfaces
- No shadowing due to coaxial measurement

VERSATILE

- Optical probe and controller are separate
- Maintenance free and robust
- Small footprint

USER-FRIENDLY & SAFE

- Insensitive to heat and pollution
- Light weight
- Low power consumption

CHRocodile
if time matters...

TECHNICAL SPECIFICATIONS OF CHROCODILE MINI/MINI+

	CHRocodile Mini	CHRocodile Mini+
Measured value	Distance, thickness	
Number of distance peaks	2 (optional upgrade to 4)	
Measuring rate	Up to 4 kHz (optional upgrade to 10 kHz)	
Chromatic measuring range	Depends on used optical probe	
Number of measuring channels	1	
Synchronization with external devices	Trigger input, synchronizing output	Trigger input, synchronizing output, 3 encoder inputs
Interface	Ethernet, RS-422/RS-232	Ethernet, RS-422/RS-232, 2 x analog (-10 V to +10 V, 16-Bit)
Transfer rate	Ethernet (100 Mbit), RS-422 (up to 10 MBaud), RS-232 (up to 921600 Baud)	
Light source	LED	
Operating temperature	0°C up to + 50°C	
Dimension (w x h x d)	95 mm x 106 mm x 95 mm	
Weight	500 g	550 g
Supply voltage	24 VDC ±10% (with separate power supply 100 – 240 VAC, 50 – 60 Hz)	
Rated power	4 W	
Item number	5101528	5101526

TECHNICAL SPECIFICATIONS OF OPTICAL PROBE

	probe 600 µm	probe 1.1 mm	probe 4 mm	probe 10 mm
Measuring range	600 µm	1.1 mm	4 mm	10 mm
Extended Measuring range [1]	650 µm	2.1 mm	8 mm	19 mm
Working distance [2]	6.5 mm ±0.2 mm	15 mm ±0.5 mm	37.5 ±0.9 mm	69 ±1.7 mm
Thickness measuring range [3]	900 µm	up to 1.6 mm	up to 6 mm	up to 15 mm
Axial resolution	25 nm	45 nm	180 nm	400 nm
Linearity	220 nm	0.4 µm	1.4 µm	4 µm
Lateral resolution	3 µm	5 µm	8 µm	16 µm
Measurement angle to surface [4]	± 30°– 85°	± 25°– 85°	± 20°– 85°	± 14°– 85°
Dimensions (outside)	d = 19 mm, l = 127 mm	d =26 mm, l = 70 mm	d = 36 mm, l = 67 mm	d = 40 mm, l = 75.5 mm
Weight	72 g	85 g	162 g	209 g
Item number	5102073	5104157	5101122	5101568

[1] Reduced accuracy in extended measuring range | [2] Bottom of optical probe to middle of measuring range | [3] Refractive index n =1.5 on transparent material | [4] Decreasing accuracy for large incident angles. Low (high) number represents maximum slope angle on reflective (diffuse) surfaces.

Precitec 3D Metrology - measure more precisely with light.

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