

CHROCODILE® MINI

Precise quality control via optical inspection

Our new sensor CHRcodile 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 CHRcodile 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 CHRcodile Mini is the ideal alternative to conventional laser triangulation sensors. A second product variant with the same dimensions, the CHRcodile 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.



DISTANCE

THICKNESS

TOPOGRAPHY

EFFICIENT

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

VERSATILE

- ▶ Simple to integrate
- ▶ 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



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 4 mm	probe 10 mm
measuring range	600 µm	4 mm	10 mm
extended Measuring range ¹⁾	650 µm	8 mm	19 mm
working distance ²⁾	6.5 mm ±0.2 mm	37.5 ±0.9 mm	69 ±1.7 mm
thickness measuring range ³⁾	900µm	up to 6 mm	up to 15 mm
axial resolution	25 nm	180 nm	400 nm
linearity	220 nm	1.4 µm	4 µm
lateral resolution	3 µm	8 µm	16 µm
measurement angle to surface ⁴⁾	90°± 30°	90°± 20°	90°± 14°
dimensions (outside) [mm]	d = 19 mm, l = 127 mm	d = 36 mm, l = 67 mm	d = 40 mm, l = 75.5 mm
weight	72 g	162 g	209 g
item number	5102073	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 | Selected CHRocodile Mini sets (control unit, optical probe, optical fiber) are available at the webshop.

The given data was generated for a typical application and may be different given other circumstances. Furthermore misprints, changes and/or innovations may lead to differences in the listed measurements, technical data and features. Therefore all information is non-binding and technical data, measurements as well as features are not guaranteed.

Precitec 3D Metrology - measure more precisely with light.