CHROCODILE C

Quality control via optical inspection

DISTANCE

THICKNESS

TOPOGRAPHY

The ultra compact CHRocodile C sensor with its robust and integrated design delivers high-precision distance and thickness measurements. CHRocodile C is specially suited for industrial inline use and easily integrable into any kind of automatic inspection machine.

The extraordinary high dynamic range and the outstanding signal-to-noise ratio of the CHRocodile sensors ensure optimum measuring results on any kind of surface. Thanks to its compact dimensions and economical price, the CHRocodile C is the ideal alternative to conventional laser triangulation sensors.

With several measuring probes that can be easily interchanged by the user, the system can incorporate precise coordinates and thus be adapted to a specific measurement assignment.

EFFICIENT

- Compact design
- Low weight
- Low energy consumption

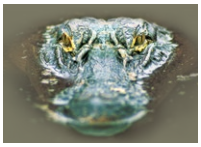
VERSATILE

- Distance and thickness
- Works on all surfaces/materials
- Interchangeable probes
- CHRocodile C HS:
  larger beam spot for higher intensity

USER-FRIENDLY & SAFE

- Maintenance free
- Simple to integrate
- Non-contact

CHRocodile
if time matters...



TECHNICAL SPECIFICATIONS OF CHROCODILE C

Sensor	CHRocodile C	CHRocodile C HS
measured value	distance, thickness	
measuring rate	up to 4000 Hz	
synchronization with external devices	trigger input, synchronizing output, via extension box: 3 encoder inputs	
interface	Ethernet, RS-422, RS-232, via extension box: 2 analogue output	
transfer rate	Ethernet (100 Mbit); RS-422 (up to 10 MBaud); RS-232 (up to 921600 Baud)	
light source	LED	
protection class	IP50	
operating temperature	0°C to + 50°C	
dimension (l x w x h)	99 mm x 65 mm x 47 mm (without probe)	
weight (without probe)	430 g	
supply voltage	24 V	
rated power	4 W	
SDK	DLL written in C, C++; SDK written in C# with .NET framework 4	
item number	5009276	5100742
note/accessories	extension box offering 2 analogue outputs, 3 encoder inputs (order number 5009932)	

TECHNICAL SPECIFICATIONS OF OPTICAL PROBES

	probe 200 µm	probe 500 µm	probe 1 mm	probe 4 mm	probe 10 mm
measuring range	200 µm	500 µm	1 mm	4 mm	10 mm
extended measuring range [1]	400 µm	1 mm	2 mm	8 mm	16 mm
working distance [2] [mm]	4.8 ± 0.5	12.7 ± 0.5	15.5 ± 0.7	37.5 ± 0.9	71.5 ± 3
thickness measuring range [3]	up to 0.3 mm	up to 0.75 mm	up to 1.5 mm	up to 6 mm	up to 15 mm
min. thickness measuring range [3]	20 µm	30 µm	45 µm	140 µm	380 µm
axial resolution	8 nm	20 nm	40 nm	160 nm	400 nm
linearity [4]	150 nm	170 nm	400 nm	1.6 µm	4 µm
lateral resolution CHRocodile C	1.7 µm	2.5 µm	2.5 µm	4 µm	8 µm
lateral resolution CHRocodile C HS	3.4 µm	5 µm	5 µm	8.5 µm	16 µm
measurement angle to surface [5]	± 45°– 85°	± 45°– 85°	± 28°– 85°	± 20°– 85°	± 14°– 85°
dimensions (outside) [mm]	d = 23, l = 23.7	d = 43, l = 56.2	d = 28, l = 17	d = 34, l = 26.6	d = 40, l = 35.3
weight	20 g	250 g	31 g	57 g	86 g
item number	5100306	5010231	5009279	5009280	5009281

[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] Perpendicular measurement on mirror at 20 ° C | [5] Decreasing accuracy for large incident angles. Low (high) number represents maximum slope angle on reflective (diffuse) surfaces

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.