



*CHRocodile, the new generation of optical sensors by Precitec Optronik, sets new standards in the measurement of distance and thickness regarding speed and precision.*

## CHROMATIC SENSOR

The chromatic coded principle utilises the chromatic length aberration of specialised lens to measure distance and thickness. Due to the independence of surface properties merely all materials can be measured by the sensor. The coaxial set-up enables measurement on structures with high aspect ratio in spite of shading. The measurement range of the sensor stretches from some micrometers up to millimeters with corresponding resolution.

Typical applications of the sensor are topographic measurement systems as well as inline use. The passive sensor probe is connected via an optical fiber to ensure the operation in problematic or hazardous environment like strong electromagnetic fields, vacuum or explosive areas.



## WHITE LIGHT INTERFEROMETER

Beside the chromatic coded principle the sensor also works as a white light interferometer. It is possible to measure transparent film thickness between  $2\ \mu\text{m}$  and  $250\ \mu\text{m}$  optical thickness of single and multiple layers like functional coatings, varnish or adhesive foil.





Sensor	CHRcodile E
Operating modes	Chromatic mode / interferometer
Measurement rate	32 - 4000 Hz
Linearity	Better than $\pm 0,1 \%$
Lightsource	Halogen lamp
Display	Distance, thickness and intensity
Interface	RS 232, USB and analog (16 bit)
Synchronization with ext. devices	Trigger in, clock out, 3 encoder inputs
Operating temperature	+5°C bis +50°C
Dimension w x h x d	260 mm x 115 mm x 310 mm
Weight	4,5 kg
Length of fibre cable	2 - 20 m, flexible steel coated cable available

## *Xenon light for high measuring rates even on weakly reflecting surfaces!*



Sensor	CHRcodile X
Operating modes	Chromatic mode / interferometer
Measurement rate	100 - 14000 Hz
Linearity	Better than $\pm 0,1 \%$
Lightsource	Xenon short arc lamp
Display	Distance, thickness and intensity
Interface	Trigger in, clock out, 3 encoder inputs
Synchronisation with ext. devices	RS 232, USB, Ethernet and analog (16 bit)
Operating temperature	+5°C bis +50°C
Dimension w x h x d	360 mm x 145 mm x 380 mm
Weight	10 kg
Length of fibre cable	2 - 20 m, flexible steel coated cable available

## APPLICATIONS

- High precision distance measurement
- Topography measurement on microstructured parts
- Glass thickness measurement
- Non contact thickness measurement on transparent thinfilms
- Simultaneous film thickness measurement on multilayer systems
- Quality control and inline process control

## CUSTOMERS

- Glass industry
- Printing industry
- Automotive
- Plastics
- Semiconductor

[www.chrocodile.de](http://www.chrocodile.de)

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