

## confocalDT IFS2404-4 Confocal chromatic sensor

- Precise distance measurement
- Compact sensor design
- Excellent price-performance ratio



Model	IFS2404-4	
Measuring range	4 mm	
Start of measuring range	approx.	14.7 mm
Resolution	static <sup>[1]</sup>	80 nm
	dynamic <sup>[2]</sup>	250 nm
Linearity <sup>[3]</sup>	Displacement and distance	$\leq \pm 1.2 \mu\text{m}$
	Thickness	$\leq \pm 2.4 \mu\text{m}$
Light spot diameter	10 $\mu\text{m}$	
Maximum measuring angle <sup>[4]</sup>	$\pm 12^\circ$	
Numerical aperture (NA)	0.20	
Min. target thickness <sup>[5]</sup>	0.2 mm	
Target material	reflective, diffuse as well as transparent surfaces (e.g. glass)	
Connection	pluggable sensor cable via FC socket with a 20 $\mu\text{m}$ core, type C2404-X	
Mounting	Radial clamping (mounting adapter see accessories)	
Temperature range	Storage	-20 ... +70 °C
	Operation	+5 ... 70 °C
Shock (DIN EN 60068-2-27)	15 g/ 6 ms	
Vibration (DIN EN 60068-2-6)	2 g / 10 Hz ... 500 Hz	
Protection class (DIN EN 60529)	IP65 (front)	
Material	Aluminum housing, glass lenses	
Weight <sup>[6]</sup>	20 g	

<sup>[1]</sup> Average from 512 values at 1 kHz, in the mid of the measuring range onto optical flat

<sup>[2]</sup> RMS noise related to the mid of the measuring range (1 kHz)

<sup>[3]</sup> All data at constant ambient temperature (25 ± 1 °C). Measured on plane-parallel test glass. Acceptance report is enclosed with delivery

<sup>[4]</sup> Maximum sensor measuring angle up to which a usable signal can be achieved on reflective surfaces, with accuracy decreasing toward the limit values

<sup>[5]</sup> Glass sheet with refractive index  $n = 1.5$  throughout the entire measuring range. In the mid of the measuring range, also thinner layers can be measured.

<sup>[6]</sup> Sensor weight without optical fiber

