

confocalDT IFS2402-0,5 Confocal chromatic sensor

- Miniature sensor design (\varnothing 4 mm)
- Nanometer resolution for precise measurements
- Large measuring angle for curved surfaces



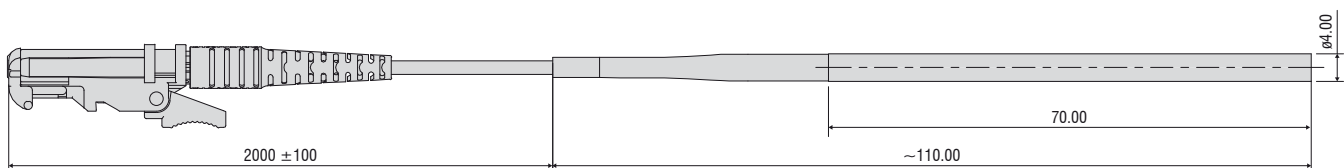
Model	IFS2402-0.5	
Measuring range	0.5 mm	
Start of measuring range	approx.	1.7 mm
Resolution	static ¹⁾	16 nm
	dynamic ²⁾	48 nm
Linearity ³⁾	Displacement and distance	$< \pm 0.2 \mu\text{m}$
Light spot diameter	10 μm	
Max. tilt angle ⁴⁾	$\pm 18^\circ$	
Numerical aperture (NA)	0.40	
Connection	integrated optical fiber 2 m with E2000/APC connector; extension up to 50 m; bending radius: static 30 mm, dynamic 40 mm	
Mounting	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 in XY axis, 1000 shocks each	
Vibration (DIN EN 60068-2-6)	2 g / 20 ... 500 Hz in XY axis, 10 cycles each	
Protection class (DIN EN 60529)	IP64 (front)	
Material	Stainless steel housing, glass lenses	
Weight	approx. 186 g (incl. optical fiber)	

¹⁾ Average from 512 values at 1 kHz, near to the mid of the measuring range onto optical flat

²⁾ RMS noise relates to mid of measuring range (1 kHz)

³⁾ All data at constant ambient temperature ($25 \pm 1^\circ\text{C}$) against optical flat; specifications can change when measuring different objects.

⁴⁾ Maximum sensor tilt angle that produces a usable signal on reflecting surfaces. The accuracy decreases when approaching the limit values.



Dimensions in mm,
not to scale.