

## confocalDT IFS2407-6

### High-precision confocal chromatic sensor

- Ideal for fast, highly precise measurements on demanding surfaces
- High light intensity even with dark/poorly reflective surfaces
- Large measuring angle



Model		IFS2407-6
Measuring range		6 mm
Start of measuring range	approx.	32 mm
Resolution	Static <sup>[1]</sup>	15 nm
	Dynamic <sup>[2]</sup>	90 nm
Linearity <sup>[3]</sup>	Displacement and distance	≤ ±1.0 μm
	Thickness	≤ ±2.0 μm
Light spot diameter		14 μm
Maximum measuring angle <sup>[4]</sup>		±23°
Numerical aperture (NA)		0.45
Min. target thickness <sup>[5]</sup>		0.3 mm
Connection		Pluggable fiber optic cable via FC socket, standard length 3 m; extension up to 50 m; bending radius: static 30 mm, dynamic 40 mm
Mounting		Radial clamping (mounting adapter see accessories)
Temperature range	Storage	-20 °C... +70 °C
	Operation	+5 °C... +70 °C
Shock (DIN EN 60068-2-27)		15 g / 6 ms in XY axis, 1000 shocks each
Vibration (DIN EN 60068-2-6)		2g/ 20 ... 500 Hz in XY axis, 10 cycles each
Protection class (DIN EN 60529)		IP64 (front)
Material		Aluminum housing, glass lenses
Weight <sup>[6]</sup>		Approx. 350 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 relates to mid of measuring range (1 kHz)

<sup>[3]</sup> All data at constant ambient temperature (25 ± 1 °C) against optical flat; specifications can change when measuring different materials.

<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

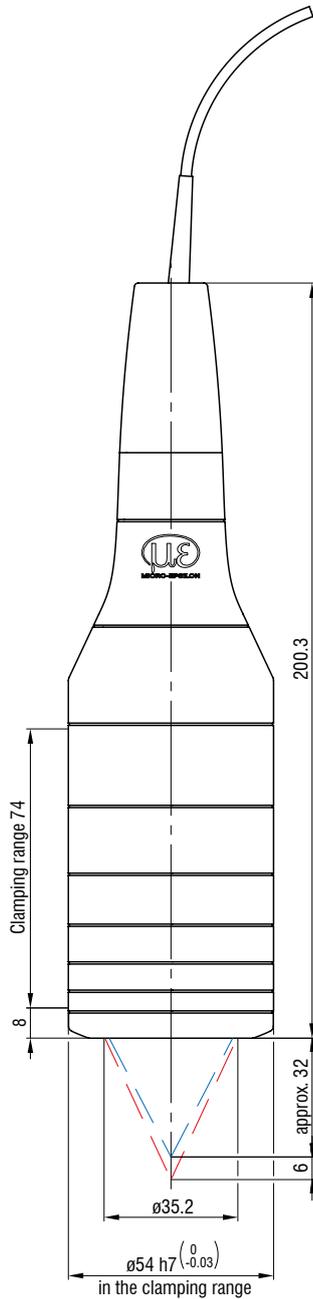
<sup>[5]</sup> Glass sheet with refractive index n = 1.5 throughout the entire measuring range. In the mid of the measuring range, also thinner layers can be measured.

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

**confocalDT IFS2407-6**  
High-precision confocal chromatic sensor



Dimensions:



Dimensions in mm, not to scale.