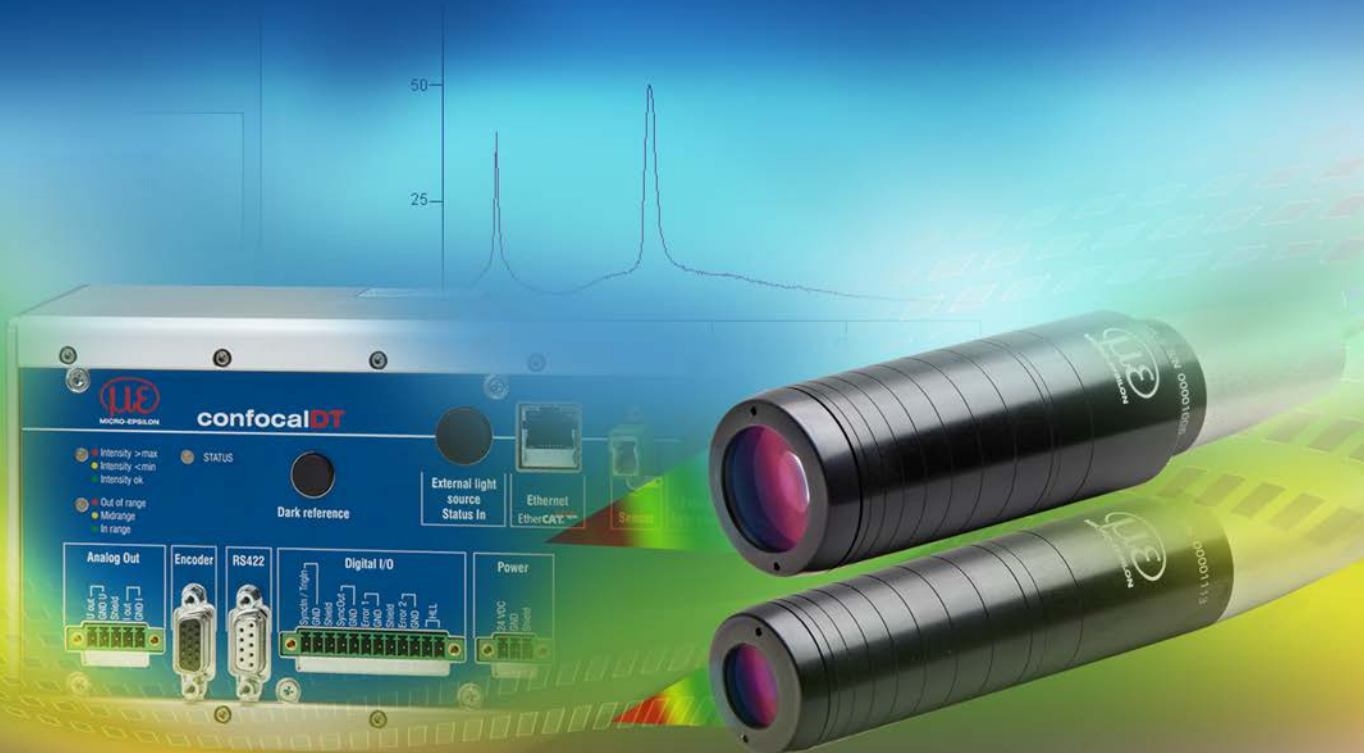




# More Precision

**confocalDT** // Confocal chromatic measurement system



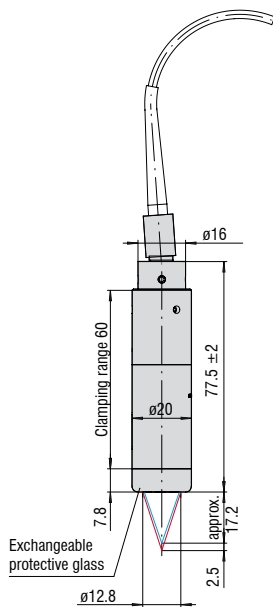


	<b>Sensors with axial or radial beam path</b>
	<b>One-sided thickness measurement</b>
	<b>Distance measurement</b>
	<b>Very small measurement spot size</b>
	<b>Submicrometer resolution</b>
	<b>Optional for vacuum applications</b>

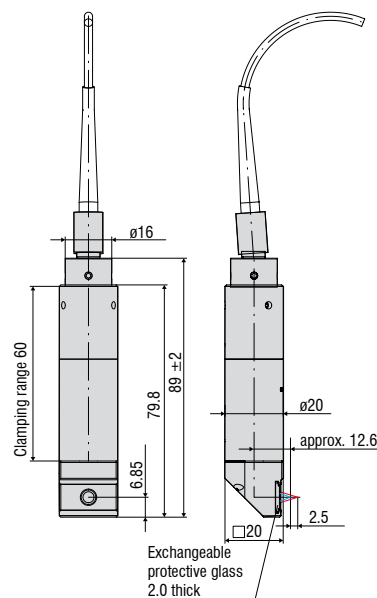
The IFS2406 series stands out due to its compact design and high precision. Due to its axial and radial measuring directions, the confocal sensor is suitable for vacuum applications and is extremely versatile in terms of its use.

As well as distance measurements on reflecting or transparent surfaces, the sensor can also be applied in one-sided thickness measurement of transparent film, plates or layers.

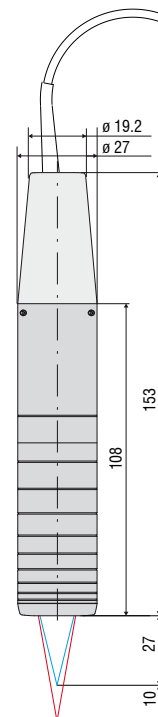
IFS2406-2.5/VAC(001)



IFS2406/90-2.5/VAC(001)



IFS2406-10



Sensor model	IFS 2406-2.5/VAC(001)	IFS 2406/90-2.5/VAC(001)	IFS 2406-10
Measuring range	2.5mm	2.5mm	10mm
Start of measuring range	approx. 17.3mm measured from protective glass frame	12.6mm measured from sensor axis	27mm
Spot diameter	10 $\mu$ m	10 $\mu$ m	15 $\mu$ m
Linearity (displacement and distance measurement)	0.75 $\mu$ m	0.75 $\mu$ m	2.5 $\mu$ m
	$\pm 0.03$ % FSO		$\leq \pm 0.025$ % FSO
Linearity (thickness measurement)	1.5 $\mu$ m		5 $\mu$ m
	$\pm 0.06$ % FSO		$\pm 0.05$ % FSO
Resolution <sup>1)</sup>	24nm	24nm	60nm
Weight (without cable)	105g	130g	128g
Max. tilt <sup>2)</sup>	$\pm 16^\circ$	$\pm 16^\circ$	$\pm 13.5^\circ$
Protection class	IP 40, vacuum compatible		IP 65
Operating temperature	+5°C ... +70°C		
Storage temperature	-20°C ... +70°C		
Sensor cable (fibre optic cable)	length: standard 3m; option up to 50m; bending radius: static 30mm; dynamic 40mm		
Shock	15g, 6ms		
Vibration	2g / 10Hz ... 500Hz		

FSO = Full Scale Output

All data at constant ambient temperature (25 $\pm$ 2°C) against optical flat; specifications can change when measuring different materials.

<sup>1)</sup> Average from 512 values at 1kHz, near to the centre of the measuring range

<sup>2)</sup> Maximum sensor tilt angle that produces a usable signal, near to the centre of the measuring range

## Accessories

### Software

IFD24n1-Tool Free demo software tool included in delivery

### Accessories light source

IFX2471/Xe/75 external Xenon light source for controller IFC2471 (70 kHz)  
 IFX2471/Xe/75-light-bulb for IFX2471  
 IFL2451/LED-light-bulb for IFC2451  
 IFL2451/LED(003)-light-bulb for IFC2451(003) with cooling element  
 CL2471-1/Xe Light source cable, 1m

### Accessories IFS2405

C2401-X Fibre optical cable (3m, 10m, customer specific length up to 50m)  
 C2401/PT-X Armored cable (3m, 10m, customer specific length up to 50m)  
 C2401-3(10) Sensor cable for drag chain use, 3m  
 C2401-5(10) Sensor cable for drag chain use, 5m

### Accessories IFS2402/2403

CE2402-X Extension for fibre optical cable (3/10/13/30/50m)  
 CE2402-X/PT Sensor with armored cable  
 (3/10m, customer specific length up to 50m)  
 C2402/Vac/KF16 Vacuum feedthrough, 1 channel  
 C2405/Vac/6/CF63 Vacuum feedthrough, 6 channel  
 C2405/Vac/9/CF63 Vacuum feedthrough, 9 channel

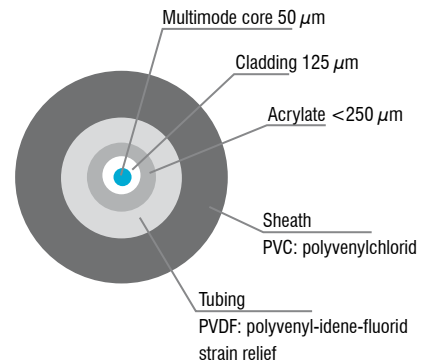
### Accessories

SC2471-3/USB/IND Connector cable IFC2451/61/71, 3m  
 SC2471-3/IF2008 Connector cable IFC2451/61/71-IF2008, 3m  
 SC2471-3/CSP Connector cable IFC2451/61/71-CSP2008, 3m  
 SC2471-10/IF2008 Connector cable IFC2451/61/71-IF2008, 10m  
 SC2471-10/CSP Connector cable IFC2451/61/71-CSP2008, 10m  
 SC2471-10/USB/IND Connector cable IFC2451/61/71, 10m  
 SC2471-20/USB/IND Connector cable IFC2451/61/71, 20m  
 PS2020 Power supply 24 V / 2,5 A  
 EC2471-3/OE Encoder cable, 3 m

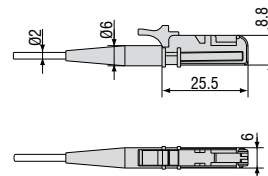
### Fibre optic

Temperature range : -50°C - 90°C

Bending radius: 30/40mm



### E2000/APC standard connector



## High performance sensors made by Micro-Epsilon



Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



2D/3D profile sensors (laser scanner)



Optical micrometers, fibre optic sensors and fibre optics



Colour recognition sensors, LED analyzers and colour online spectrometer



Measurement and inspection systems



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