

SFS Series Spectral Confocal Displacement Sensor*6

SFS-D1220 Product Parameters



Reference Distance*1	20 mm
Measurement Range	± 0.6 mm
Measurement Angle*2	$\pm 32^\circ$
Spot Diameter*3	$\Phi 9.5/19/152 \mu\text{m}$
Repeatability*4	30 nm
Linear Error*5	$< \pm 0.24 \mu\text{m}$
Outer Diameter x Length	$\Phi 36 \times 106.3$ mm
Weight	182 g
Min. Measurable Thickness	5% off F. S.
Temperature Characteristic	$< 0.03\%$ F. S. / $^\circ\text{C}$
Protection Rating	IP40

*1 Calculated at the center of the measurement range.

*2 Tested with a standard flat mirror tilted at a 1 kHz sampling rate.

*3 Measured on a sharp glass edge and verified with a sub-micron positioning motion platform using a laser interferometer as the displacement reference; spot diameter values correspond to small / large / four-spot diameters.

*4 Measured on a standard silver-coated mirror at 1 kHz without averaging; RMS deviation of 10,000 consecutive data sets.

*5 Calibrated and verified with a nanometer-level high-precision laser interferometer.

*6 Suffix definitions: N = near reference distance, F = far reference distance, S = small size, L = large size, H = high-temperature version (operating temperature: -10 C to 150 C). To improve product experience, this series (excluding C2000) uses a gold identification ring. The received product may have different ring versions; appearance is subject to the actual product received. Product performance and quality are unaffected.

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SFS-D1220 Product Outline Drawing

