

SFS Series Spectral Confocal Displacement Sensor*6

SFS-D1502 Product Parameters



Reference distance*1	1.7 mm
Measuring range	± 0.75 mm
Measuring angle*2	$\pm 12^\circ$
Spot diameter*3	$\Phi 17 \mu\text{m}$
Repeatability*4	100 nm
Linearity error*5	$< \pm 0.75 \mu\text{m}$
OD*Length	$\Phi 3.8 \times 85$ mm
Weight	23 g
Min. measurable thickness	10% of F.S.
Temperature characteristic	$< 0.03\%$ F.S./ $^\circ\text{C}$
Protection rating	IP40

*1 Calculated at the center of the measuring range.

*2 Tilt test using a standard plane mirror at a 1 kHz sampling rate.

*3 Measured on a sharp glass edge and verified on a sub-micron positioning stage, with a laser interferometer as the displacement reference. The spot diameter values correspond to the small spot / large spot / 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 meanings: N - near reference distance, F - far reference distance, S - compact size, L - large size, H - high-temperature version (operating temperature: -10°C to 150°C). To improve product experience, the color ring of this series (except C2000) has been upgraded to gold. The color ring on received products may differ between old and new versions; actual product appearance prevails. Product performance and quality are unaffected.

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SFS-D1502 Product Outline Drawing

