

SFS Series Chromatic Confocal Displacement Sensor^{*6}

SFS-D2409 Specifications



Reference Distance*1	9 mm
Measuring Range	± 1.2 mm
Measurement Angle*2	$\pm 60^\circ$
Spot Diameter*3	$\Phi 5.5/11/88 \mu\text{m}$
Repeatability*4	45 nm
Linearity Error*5	$< \pm 0.12 \mu\text{m}$
Outer Diameter x Length	$\Phi 94 \times 267.5$ mm
Weight	2350 g
Minimum Measurable Thickness	5% 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 with a standard flat mirror at a 1 kHz sampling rate.

*3 Sharp glass edge measured on a sub-micron positioning stage, using a laser interferometer as the displacement reference. Values correspond to small / large / four-point spot diameters.

*4 RMS deviation of 10,000 consecutive samples from a standard silver-coated mirror at 1 kHz, without averaging.

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

*6 Suffixes: N = near reference distance; F = far reference distance; S = compact; L = large; H = high-temperature (-10 $^\circ\text{C}$ to 150 $^\circ\text{C}$). The identification ring on this series (except C2000) has been upgraded to gold. Delivered units may have old or new ring colors; actual appearance may vary, with no effect on performance or quality.

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SFS-D2409 Outline Drawing

