

SFS Series Chromatic Confocal Displacement Sensor^{*6}

SFS-D1504 Product Parameters



Reference Distance*1	3.92 mm
Measuring Range	± 0.75 mm
Measurement Angle*2	$\pm 14^\circ$
Spot Diameter*3	$\Phi 20 \mu\text{m}$
Repeatability*4	80 nm
Linearity Error*5	$< \pm 0.3 \mu\text{m}$
Outer Diameter*Length	$\Phi 8 \times 68.8$ 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 Tested with a standard flat mirror at a 1 kHz sampling rate under tilt.

*3 Measured on a sharp glass edge using a sub-micron positioning stage; a laser interferometer was used as the displacement reference. Spot diameter values correspond to small-spot, large-spot and four-point spot diameters.

*4 Measured on a standard silver-coated mirror at 1 kHz with no averaging; RMS deviation of 10,000 consecutive samples.

*5 Calibrated and verified using a nano-level high-precision laser interferometer.

*6 Suffixes: N = near reference distance; F = far reference distance; S = compact; L = large body; H = high-temperature version (operating temp.: -10°C to 150°C). The identification ring of this series (except C2000) has been upgraded to gold. Delivered products may have old or new ring versions; appearance is subject to actual delivery, with no effect on performance or quality.

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SFS-D1504 Outline Drawing

