## Easy-to-mount, high accuracy, compact LASERSCALE

- •Compact scale and read head design meet a wide variety of needs.
- Compact for easy installation and high accuracy. Well suited for use with instruments which require high accuracy measurements such as electron microscopes and wafer inspection devices.
- Provides consistent measurements little affected by temperature, air pressure or disturbed air.
- •Offers superior repeatability and return error thanks to noncontact measuring.

## **Specifications**

Model	BS77
Measuring length L mm (inch)	10/30/70/120/170/220/270/320/370/420
	(0.3/1.1/2.7/4.7/6.6/8.6/10.6/12.6/14.5/16.5)
Overall length mm (inch)	Measuring length +26 mm (L = 70 to 420) / 1.0" (L = 8.6" to 16.5")
Max. travel mm (inch)	Measuring length +10 mm (L = 70 to 420) / 0.3" (L = 8.6" to 16.5")
Accuracy (at 20 °C/ 68 °F)	NS type: ± 0.03 µm <measuring (0.3"="" 1.1")="" 10="" 30="" length="" mm=""></measuring>
	± 0.08 μm <measuring (2.7"="" 120="" 4.7")="" 70="" length="" mm=""></measuring>
	± 0.15 μm <measuring (6.6"="" 170="" 220="" 8.6")="" length="" mm=""></measuring>
	± 0.2 μm <measuring (10.6")="" 270="" length="" mm=""></measuring>
	± 0.34 μm <measuring (12.6")="" 320="" length="" mm=""></measuring>
	± 0.39 μm <measuring (12.6")="" 320="" length="" mm=""></measuring>
	± 0.44 μm <measuring (16.5")="" 420="" length="" mm=""></measuring>
	N type: ± 0.06 µm <measuring (0.3"="" 1.1")="" 10="" 30="" length="" mm=""></measuring>
	± 0.2 μm <measuring (2.7"="" 120="" 4.7")="" 70="" length="" mm=""></measuring>
	± 0.35 μm <measuring (6.6"="" 170="" 220="" 8.6")="" length="" mm=""></measuring>
	± 0.5 μm <measuring (10.6"="" 12.6"="" 14.5")="" 270="" 320="" 370="" length="" mm=""></measuring>
	± 0.65 µm <measuring (16.5")="" 420="" length="" mm=""></measuring>
Return error	± 0.02 µm
Repeatability	± 0.01 µm
Light source	Semiconductor laser
Expansion coefficient	-0.7 x 10 <sup>-6</sup> / °C
Operating temperature	10 °C to 30 °C (no condensation) / 50 °F to 86 °F
Storage temperature	-10 °C to 50 °C / 14 °F to 122 °F
Detection principle	Diffraction grating scan
Compatible detectors	BD15, BD60

## **Dimensions**



