

Laser Scan Micrometer LSM-501S

SERIES 544 — High Accuracy Non-contact Measuring System



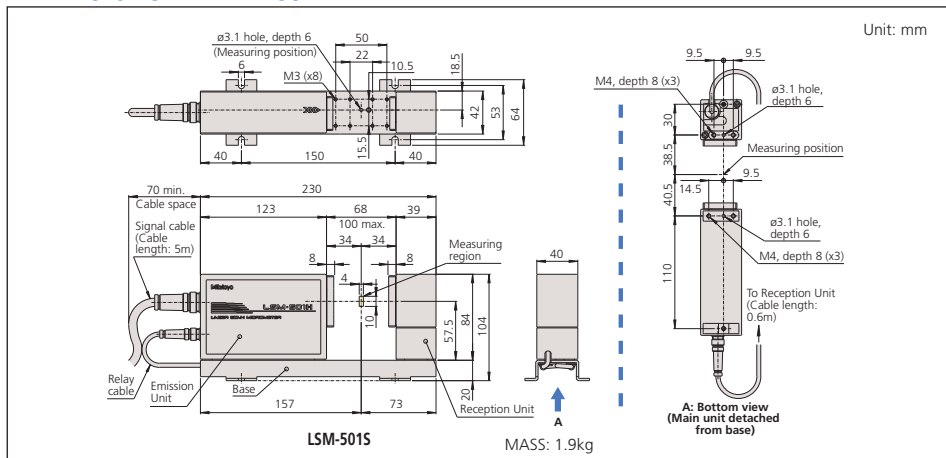
544-534

SPECIFICATIONS

Model		LSM-501S	
Order No.		544-534	
Applicable display unit		LSM-6200	
Laser Scanning Range		Up to .74" (19mm)	
Measuring range		.002 to .4" (0.05 to 10mm)	
Resolution		.00001 to .0005" (0.0001 to 0.01mm) [Selectable]	
Repeatability [*1]		inch(μm) ±.000016" (±0.04μm) [*2]	
Linearity [*1]	Whole range	inch(μm) ±.00002" (±0.5μm) [*3]	
	Narrow measuring range	μm ±(0.3 + 0.1 ΔD) — [*3][*4] inch ±(.000012" + .000004" ΔD)	
Positional error [*1][*5]		inch(μm) ±.00002" (±0.5μm)	
Measuring region		.08 x .4" (2 x 10mm) (Measuring region: .002 to .004" (0.05 to 0.1mm))	
		.16 x .4" (4 x 10mm) (Measuring region: .004 to .4" (0.1 to 10mm)) [Optical axis direction x Scanning direction]	
Number of scans for averaging		scan 1 to 2048	
Laser classification		Class 2 (Max. Output: 1.3mW with a scanning laser, semiconductor laser: wavelength 650nm)	
Number of laser scans		/sec 3200	
Laser scanning rate		inch/sec (m/sec) 4449"/sec (113m/sec)	
Protection level		IP64	
Distance between the laser emission unit and reception unit		inch(mm) Standard 2.68" (68mm)	
		Max. 3.93" (100mm) [*6]	
Operation environment		Temperature 0°C to 40°C	
		Humidity 35%RH to 85%RH [without condensation]	
		Altitude 2000m or less	
Storage environment		Temperature -15°C to 55°C	
		Humidity 35%RH to 85%RH [without condensation]	

- [*1] Environment for accuracy validation: 20°C ± 1°C temperature; 50% ± 10% humidity.
 [*2] A value of ±2 with a 10mm-diameter gage has been measured for two minutes with a measurement interval of 0.32 seconds, where σ is the standard deviation.
 [*3] The value of measurements in the center of the measurement region.
 [*4] ΔD is the difference in diameter of the workpiece and the master gage.
 [*5] Error due to the positional shift of workpiece in optical axis direction or scanning direction.
 [*6] The distance between the laser emission unit and reception unit other than the standard, may affect the accuracy.

DIMENSIONS AND MASS



Optional Accessories for LSM-501S

- 02AGD120: Calibration gage set (ø0.1mm, ø10mm)
 - 02AGD210: Wire guiding pulley
 - 02AGD400: Adjustable workstage
 - 02AGD400: Center support*
 - 02AGD450: Adjustable V-block*
 - 02AGD230: Air blow cover
 - 957608: Air cleaner for air blow cover
 - 02AGC150A: Extension relay cable 1m
 - 02AGN780A: Extension signal cable 5m
 - 02AGN780B: Extension signal cable 10m
 - 02AGN780C: Extension signal cable 15m
- *Use with an adjustable workstage.