

# SURVEYOR® Laser Probe 2000

## Specifications



### Surveyor Laser Probe (SLP) 2000

- **Extra Long Laser Line** – Up to 240 mm laser line length
- **Dual CMOS Cameras** – Higher point density scanning of complex parts; faster data acquisition rate of over 75,000 points/sec.
- **7-Axis Scanning Integration** – Compatible with FARO®, PH-10, most CMMs
- **Standard USB Interface**
- **Big Performance, Small Weight** – Only 566 g for reduced stress on operator

### Probe Features

The new Surveyor Laser Probe (SLP) 2000 offers a super-long 240mm laser line for faster scanning with better coverage than most handheld scanning systems on the market today. Dual digital CMOS sensors capture the entire laser line from two distinct orientations, increasing the amount of data obtained and allowing the user to scan geometry that could be obstructed from one camera's field of view. The device is also compatible with the leading third-party software packages.

### System Integration

The SLP 2000 laser probe is fully integrated with Laser Design's Surveyor 3D scanning systems. The SLP laser probe can also be easily integrated with 7-axis Platinum/Titanium FaroArms® as well as with any traditional CMM. (See FARO® Interface Kit Spec Sheet or CMM laser probe system information for integration instructions.)

### PC and Software Interface

The SLP 2000 interfaces to PCs using a standard USB connection.

A high-end PC with ample memory, Windows XP, XP 64, or Windows 7 or 7 64, and a high-end Open GL graphics video card are recommended.

The SLP 2000 is interchangeable with the RPS probes on most LDI Surveyor scanning systems. LDI provides scanning plug-ins for Geomagic, Polyworks, and Rapidform for use with FaroArm® scanning systems.

### Application Tools Library for Integrators

The Application Tools Library contains all the tools essential for capturing and buffering data, and outputting profile data. Consisting of ActiveX controls and available in object form for all the popular PC-based development environments, the library provides a straightforward integration path for application software developers and system integrators.

### Common Applications

- Part-checking against CAD
- Dimensional Inspection
- GD&T Measurements
- Reverse Engineering



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SLP 2000 Specs	
LDI Part Number	995-2000-2
Laser Type	Laser Diode
Laser Power Output	<1mW, Class II
Laser Wavelength	670 nm
Standoff Distance	185 mm
Depth of Field	215 mm
Line Length	
Near	150 mm
Mid	195 mm
Far	240 mm
Accuracy <sup>1</sup>	75 µm
Repeatability <sup>2</sup>	95 µm, 2σ
Sample Count	752 points / line
Sample Rate <sup>3</sup>	75,000 total points per sec.
Frame Rate depends on WOI <sup>4</sup>	50 Hz to 150 Hz
Sample Density	250 µm
Detectors (dual)	480 x 752 CMOS
Weight (probe only)	566 g
Size (h x w x d)	280 x 75 x 55 mm
PH10 Compatibility	PH10M
Typical Application	Large parts
Beam Spreader	Passive optical, no moving parts, uniform dispersion
Minimum Angle of Incidence	20 degrees
Ambient Light Rejection	Inference filters on sensors

Hardware Specs	
Operating Temp Range	10°C to 40°C (50°F to 104°F)
Temperature Rate	3°C/5min. (5.4°F/5min.) max
Operating Humidity Range	0 - 95%, non-condensing
Power Supply	Universal worldwide voltage 85-245 VAC, 50/60 Hz
Certifications	Complies with 21 CFR 1040.10 and 1040.11 at date of manufacture

<sup>1</sup> Accuracy is the allowable error of the measured diameter of a circle measured at a minimum 25 positions throughout the field of view.

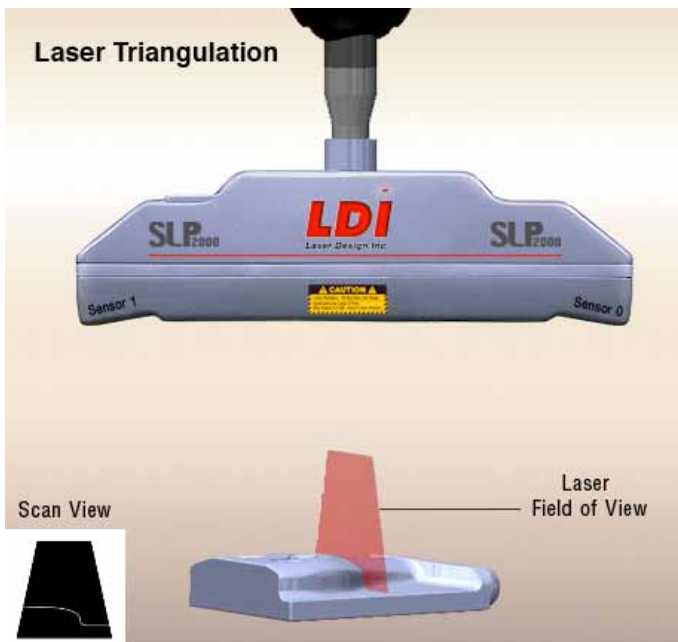
<sup>2</sup> Repeatability is the 2 Sigma deviation of the measured diameter of a circle measured at a minimum 25 positions throughout the field of view.

<sup>3</sup> Sample rates assume simultaneous dual sensor operation mode.

<sup>4</sup> WOI: Window of Interest

### CAUTION

- Laser radiation - Do not stare into beam
- Semiconductor laser 670nm
- Max output 0.9mW. Class II laser product
- Avoid Exposure: Laser radiation emitted from this aperture.
- This laser product complies with 21 CFR 1040.10 and 1040.11 at date of manufacture.



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