

TS-P Series Laser Triangulation Displacement Sensor*7



TS-P25B Product Parameter



Reference Distance*1	25 mm
Measurement Range	±1 mm
Spot Diameter	Φ18 μm
Repeatability*2	0.05 μm
Repeatability*3	0.01 μm
Linear Error*4	< ±0.6 μm
Outer Diameter*Length	120*80*31 mm
Weight	372 g
Sample Frequency	Max. 160 kHz
Light Source*5	405 nm, Max.4.9 mW
Temperature Characteristics	0.01% of F.S./°C
Industrial Interface*6	Ethernet,RS-485 serial port,analog signal output(Max.±10 V, 4~20 mA)
Measurement & Control Software	Comes with TSLaserStudio measurement & control software,C++&C# SDK
Operating Mode	Operates independently without a controller.The head can be configured as a master or slave,the master controls the slave to achieve functions such as synchronous thickness measurement,alternating exposure for interference resistance
Supply Voltage	DC 9~36 V,maximum allowable ±10% fluctuation
Power Consumption	Approx.2.5 W
IP Grade	IP67 (IEC60529)
Operating Temperature	0 to +50°C

*1 Calculation based on the center position of the measurement range;

*2 Measurement of standard white ceramic sample, 50kHz without averaging, taking the root mean square deviation (1 σ) of 65536 sets of measurement data; U series probes, 8kHz without averaging, taking the root mean square deviation (1 σ) of 65536 sets of measurement data;

*3 Measurement of standard white ceramic sample, 50kHz with 1024 averaging times, taking the root mean square deviation (1 σ) of 65536 sets of measurement data; U series probes, 8kHz with 1024 averaging times, taking the root mean square deviation (1 σ) of 65536 sets of measurement data;

*4 Calibration and verification using nanometer-level high-precision laser interferometer;

*5 Laser power can be customized according to different application requirements, some models provide 405nm blue light version;

*6 The probe can independently provide voltage, current, and RS-485 output, Optional analog voltage/current output module.

*7 For the sub-series, PD indicates a split-type structure, and PM indicates a mirror-reflection calibration type. The different suffixes are distinguished as follows:W for wide spot, U for ultra-wide spot, B for blue laser, and H for high-power laser.

TS-P25B Product Dimension Drawing

