

# TS-P Series Laser Triangulation Displacement Sensor\*7



## TS-PD08 Product Parameter



<b>Reference Distance*1</b>	8 mm
<b>Measurement Range</b>	±0.8 mm
<b>Spot Diameter</b>	Φ20 μm
<b>Repeatability*2</b>	0.03 μm
<b>Repeatability*3</b>	0.01 μm
<b>Linear Error*4</b>	< ±0.5 μm
<b>Outer Diameter*Length</b>	82*115*38.5 mm
<b>Weight</b>	213 g
<b>Sample Frequency</b>	Max. 160 kHz
<b>Light Source*5</b>	655 nm, Max.4.9 mW
<b>Temperature Characteristics</b>	0.01% of F.S./°C
<b>Industrial Interface*6</b>	Ethernet,RS-485 serial port,analog signal output(Max.±10 V, 4~20 mA)
<b>Measurement &amp; Control Software</b>	Comes with TSLaserStudio measurement & control software,C++&C# SDK
<b>Operating Mode</b>	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
<b>Supply Voltage</b>	DC 9~36 V,maximum allowable ±10% fluctuation
<b>Power Consumption</b>	Approx.2.5 W
<b>IP Grade</b>	IP67 (IEC60529)
<b>Operating Temperature</b>	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  $\sigma$ ) of 65536 sets of measurement data; U series probes, 8kHz without averaging, taking the root mean square deviation (1  $\sigma$ ) 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  $\sigma$ ) of 65536 sets of measurement data; U series probes, 8kHz with 1024 averaging times, taking the root mean square deviation (1  $\sigma$ ) 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-PD08 Product Dimension Drawing

