SPD INTEGRATION SERIES

SPD1200Z2

LASER CLASS
CLASS 1
IEC 60825-1

Ultra-light full-range module for intelligent integration — 0.2–1,200 m in a 7.2 × 14.8 × 28.2 mm, ≈ 6 g body with an aspherical lens for stable transmission across indoor and outdoor scenes.

MAX RANGE	ACCURACY	WEIGHT	INTERFACE
0.2–1,200 m (1,500 m night)	**±0.2 m (⩽200 m)**	**≈ 6 g**	**UART-TTL**

TECHNICAL SPECIFICATIONS

FULL SHEET

Laser wavelength	905 nm ± 5 nm
Laser beam divergence	< 6 mrad
Optical material	Aspherical lens
Receiving aperture	5.0 × 7 mm
Ranging range	0.2–1,200 m (max 1,500 m at night)
Ranging accuracy	±0.2 m (⩽200 m) · ±0.5 m (⩽400 m) · ±0.5 m + d·0.1% (400–1,200 m)
Ranging frequency	2–20 Hz adaptive
Measurement accuracy rate	⩾ 98%
False alarm rate	⩽ 1%
Interface	UART-TTL (customizable)
Baud rate	115200 bps (default) · 9600 bps (optional)
Supply voltage	3.3–5 V
Startup time	⩽ 200 ms
Inrush current	≈ 350 mA
Average laser power	On request
Response time	On request
Operating power	Average ≈ 0.45 W · max ≈ 0.7 W
Operating temperature	-20 to +60 ℃
Storage temperature	-40 to +60 ℃
Protection rating	IP67 (lens cavity)
Laser safety class	IEC Class 1
Dimensions	7.2 × 14.8 × 28.2 mm (rectangular)
Weight	≈ 6 g
Shock / vibration	1000 g/ms (10×/s along optical axis) · 5–50–5 Hz, 2.5 g
Reliability	MTBF ⩾ 1500 h



INTERFACE

UART-TTL

PIN	SIGNAL	DESCRIPTION
1	SW-SHOT	Function enable (active high)
2	RXD	Host → module
3	TXD	Module → host
4	I/O	Reserved for expansion
5	VCC	Power +
6	GND	Power −

APPLICATION FIT

INTELLIGENT INTEGRATION · INDOOR & OUTDOOR SENSING · SMART DEVICES

Standard 8-byte UART frame (0x55 0xAA header, function code, 4 data bytes, checksum); distance returned ×10 for a one-decimal reading. Full integration manual ships with samples.

ERDI TECH LTD — 905 nm eye-safe laser rangefinder modules (IEC 60825-1 Class 1)
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