

SPD MINI – NIGHT VISION & THERMAL

SPD1200M2

LASER CLASS

CLASS 1

IEC 60825-1

A 6-gram micro distance engine — 7.7 × 15.3 × 27.85 mm — that still ranges 0.2–1,200 m (1,500 m at night) at ±0.3 m to 100 m. Built to disappear inside thermal sights, night-vision devices and civil UAV payloads.

MAX RANGE	ACCURACY	WEIGHT	INTERFACE
0.2–1,200 m (1,500 m night)	±0.3 m (≤100 m)	≈ 6 g	UART-TTL

TECHNICAL SPECIFICATIONS

FULL SHEET

Laser wavelength	905 nm ± 5 nm
Laser divergence	< 4 mrad
Optical material	PMMA
Receiving aperture	5.0 × 7 mm
Measurement range	0.2–1,200 m (max 1,500 m nighttime)
Ranging accuracy	±0.3 m (≤100 m) · ±0.3 m + d·0.7‰ (100–1,200 m)
Measurement frequency	2–15 Hz / 4–15 Hz adaptive
Accuracy rate	≥ 98%
Interface	UART-TTL (customizable)
Baud rate	115200 bps
Supply voltage	3.3–5 V
Startup time	≤ 200 ms
Operating power	≈ 0.45 W average · ≤ 0.75 W max
Operating temperature	-20 to +60 °C
Storage temperature	-30 to +70 °C
Protection rating	IP67 (inside lens cavity)
Laser safety class	IEC Class 1
Dimensions	7.7 × 15.3 × 27.85 mm
Weight	≈ 6 g



INTERFACE

UART-TTL

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

APPLICATION FIT

- THERMAL IMAGING
- NIGHT VISION
- CIVIL UAVS

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.