SPD1200M4 · 905 NM

SPD MINI — NIGHT VISION & THERMAL

SPD1200M4

LASER CLASS
CLASS 1
IEC 60825-1

Ultra-compact 905 nm rangefinder module for thermal imagers, night vision and civil UAV payloads — a 9.45 × 16.8 × 27.85 mm, ≈ 6 g mini-series distance engine for tight integration.

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 beam divergence	< 4 mrad
Optical material	PMMA
Receiving aperture	5.0 × 7 mm
Measurement range	0.2–1,200 m (max 1,500 m at night)
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%
False alarm rate	⩽ 1%
Interface	UART-TTL (customizable)
Baud rate	115200 bps (default)
Supply voltage	3.3–5 V
Startup time	⩽ 200 ms
Inrush current	≈ 380 mA
Average laser power	On request
Response time	On request
Operating power	Average ≈ 0.45 W · max ⩽ 0.75 W
Operating temperature	-20 to +60 ℃
Storage temperature	-30 to +70 ℃
Protection rating	IP67 (inside lens cavity)
Laser safety class	IEC Class 1
Dimensions	9.45 × 16.8 × 27.85 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	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.

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ISO 9001:2015 · CE · RoHS · FDA · IEC 60825-1 Class 1 · MIL-STD-810G tested

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