

LR2000E2 · 905 NM

ADAPTIVE-FREQUENCY E SERIES

LR2000E2

LASER CLASS

CLASS 1

IEC 60825-1

The extended-range E-series module: ultra-long-range 905 nm distance measurement up to 2,000 m with high precision, for demanding industrial and outdoor systems.

MAX RANGE	ACCURACY	WEIGHT	INTERFACE
4-2,000 m	±1 m (≤400 m)	≈ 10 g	UART-TTL

TECHNICAL SPECIFICATIONS

FULL SHEET

Laser wavelength	905 nm ± 5 nm
Laser beam divergence	< 6 mrad
Optical material	PMMA
Receiver aperture	9.2 × 14.5 mm
Ranging range	4-2,000 m
Ranging accuracy	±1 m (≤400 m) · d·0.4% (400-2,000 m)
Ranging frequency	2-10 Hz adaptive
Valid measurement rate	≥ 98% (≤400 m) · ≥ 80% (400-2,000 m)
False alarm rate	≤ 1%
Interface	UART-TTL (customizable)
Baud rate	115200 bps
Supply voltage	3.3-5 V
Startup time	≤ 200 ms
Inrush current	< 400 mA
Average laser power	On request
Response time	On request
Operating power	≈ 1.2 W
Operating temperature	-20 to +60 °C
Storage temperature	-40 to +60 °C
Protection rating	On request
Laser safety class	IEC Class 1
Dimensions	25.65 × 13.05 × 24.6 mm (square)
Weight	≈ 10 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

- LONG-RANGE INDUSTRIAL
- OUTDOOR SYSTEMS
- SURVEYING

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.