

LRF50VB · 905 NM

SHORT-RANGE DToF

LRF50VB

LASER CLASS

CLASS 1

IEC 60825-1

A 1.3 g, 18.7 × 11.8 × 13.3 mm DToF sensor for industrial automation, AGV and traffic-safety monitoring
— 0.05–50 m at 100 Hz with dual UART/I²C output and 60 kLux ambient immunity.

MAX RANGE	ACCURACY	WEIGHT	INTERFACE
0.05–50 m (90% refl.)	±5 cm (<5 m); 1% (≥5 m)	1.3 g	UART / I ² C

TECHNICAL SPECIFICATIONS

FULL SHEET

Laser wavelength	905 nm
Ranging range	0.05–50 m (90% refl.) · 0.05–20 m (10% refl.)
Measurement frequency	100 Hz
Ranging accuracy	±5 cm (<5 m) · 1% (≥5 m)
Repeatability	±30 mm
Ambient light immunity	10 m @ 60 kLux
Laser safety class	Class 1
Field of view	1.9°
Supply voltage	3.3–5 V DC
Peak current	70 mA @ 5 V
Average current	40 mA @ 5 V
Average power consumption	0.2 W
Interface	UART / I ² C
Dimensions	18.7 × 11.8 × 13.3 mm
Weight	1.3 g
Operating temperature	-20 to +60 °C
Wire specification	4-pin 1.0 mm terminal, 10 cm tinned stranded wires
Customization	Available in appearance / structure / output protocol



INTERFACE

UART-TTL

PIN	SIGNAL	DESCRIPTION
1	GND	External power -
2	3.3-5V	External power +
3	RX (SDA)	Host TX (SDA)
4	TX (SCL)	Host RX (SCL)

APPLICATION FIT

- INDUSTRIAL AUTOMATION
- AGV & ROBOT OBSTACLE AVOIDANCE
- TRAFFIC SAFETY MONITORING

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.