

LRF50H · 905 NM

SHORT-RANGE DTOF

LRF50H

LASER CLASS

CLASS 1

IEC 60825-1

A high-speed 50 m LiDAR distance sensor for overhead cranes, carriage distance control and industrial safety — 20 Hz–10 kHz output (1 kHz default), 9–36 V DC input, with a switchable 650 nm aiming light.

MAX RANGE	ACCURACY	WEIGHT	INTERFACE
0.05–50 m (90% refl.)	±5 cm (<10 m); 1% (≥10 m)	15 ± 2 g	UART

TECHNICAL SPECIFICATIONS

FULL SHEET

Laser wavelength	905 nm
Ranging range	0.05–50 m (90% refl.) · 0.05–15 m (10% refl.)
Measurement frequency	20 Hz–10 kHz, default 1 kHz
Ranging accuracy	±5 cm (<10 m) · 1% (≥10 m), 2σ
Repeatability	±5 cm
Ambient light immunity	45 m @ 100 kLux
Laser safety class	Class 1
Field of view	≈ 4 mrad
Aiming light	650 nm visible red, Class 2 (switchable; auto-off below -20 °C)
Supply voltage	9–36 V DC
Peak current	100 mA @ 24 V
Average current	34 mA @ 24 V
Average power consumption	0.8 W
Interface	UART
Dimensions	38 × 20 × 30 mm
Weight	15 ± 2 g
Operating temperature	-20 to +60 °C (non-condensing)
Wire specification	5-pin 1.25 mm terminal (M1250V-05P), 50 cm tinned loose wire
Customization	Available in appearance / structure / output protocol



INTERFACE

UART-TTL

PIN	SIGNAL	DESCRIPTION
1	9–36V	External power +
2	GND	Ground
3	GND	Ground
4	TX	Host RX
5	RX	Host TX

APPLICATION FIT

- OVERHEAD CRANE POSITIONING
- CARRIAGE DISTANCE CONTROL
- INDUSTRIAL SAFETY

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.