

Single Line Laser Radar LS-0940H-007M-2C-B1

Features

- 360° scanning distance measurement with high precision
- VCSEL lighting source, excellent performance
- High measurement frequency and wide range of measurement
- Strong resistance to ambient light interference
- Opto-magnetic fusion, compact structure



Applications

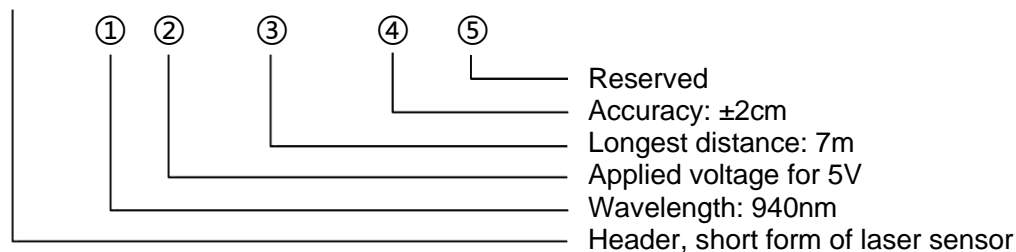
- Sweeper navigation and obstacle avoidance
- Environmental scanning and 3D modelling
- Obstacle detection and evasion of security
- Regional security
- Service robot navigation

PRODUCT IDENTIFY

Part Number	Description
LS-0940H-007M-2C-B1	940nm VCSEL, TOF, single line laser radar, up to 7m, 10Hz

CODE RULES

e.g. LS - 0940H - 007M - 2C - B1



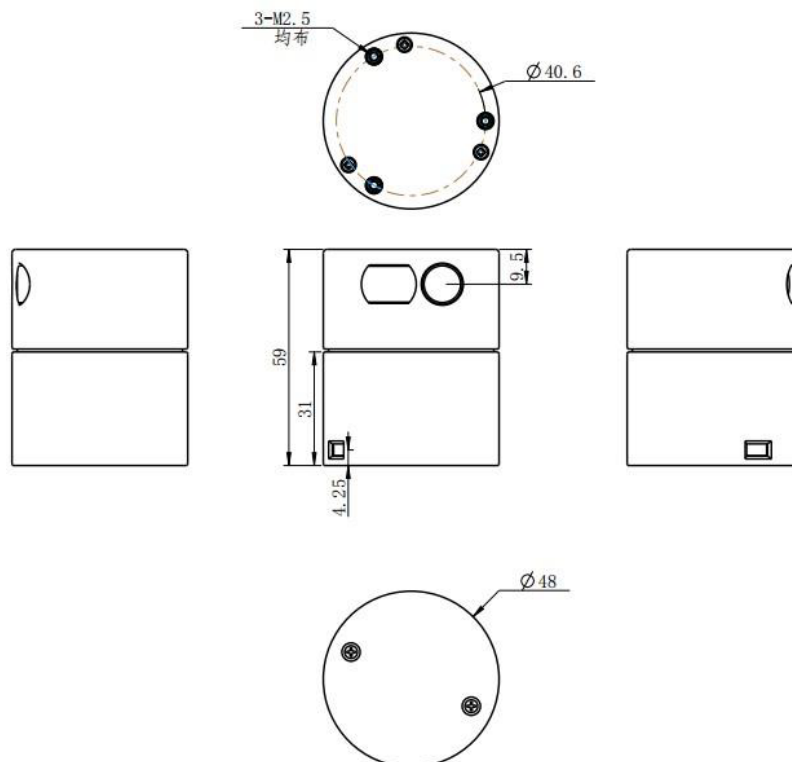
Description

The B1 series laser scanning radar adopts high performance, high pulse power VCSEL device and high quality optical design, advanced opto-magnetic fusion design and high performance, high precision timing circuit, high measurement frequency and small volume. The distance detection in the two-dimensional plane of 360° is realized. The infrared high power pulsed VCSEL laser is invisible to the naked eye and has strong anti-jamming ability, so it can be widely used in the navigation and obstacle avoidance of floor sweeper / robot.

Specifications

Parameters	Min	Typical values	Max	Unit	Remarks
Measuring range	6	6.5	7	m	Gray
Ranging accuracy		±0.02		m	
Repeatability		±0.02		m	
Ranging frequency	6000	6500		Hz	
Scanning frequency	5	10	20	Hz	Rotating speed
Scanning angle		0~360		°	
Angle resolution		0.25		°	
Laser wavelength		940		nm	
Divergence angle		10		mrad	
Laser class		Class I		-	Eye safety
Power supply		5		V	
Power consumption			1	W	Rotating speed 20Hz
Output interface		UART / RS232		-	UART default
Operating temperature	-20	25	60	°C	
Storage temperature	-40	25	70	°C	
Water and dust proof		IP45		-	
Can material and color		ABS (Black)		-	
Dimensions		H59×φ48		mm	
Weight				g	

Mechanical drawing



Laser safety

The laser used in this device is classified as Class I, which is eye-safe one. Please refer to GB7247.1-2016 / IEC60825-1:2014 "Laser Product Safety: Part 1: Devices classifications, requirements and user's manual".

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Revision history

Revision	Date	Description
V.01	2020/01/07	The first official edition