

LGA10 series

270° high-performance 2D laser radar



Accurate and realistic target restoration
±30mm detection precision



Detecting distance can reach 20m



62mmx62mmx83mm (max)
compact size



Customized multi-angle view for
different requirement



0.18° minimum angular



Strong recognition ability even
low reflectivity

Application Case



AMR



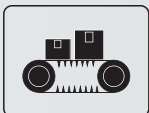
Forklift



Robot



Mechanical
arm



AGV



Safety
protection



Smart
Traffic



Smart
port

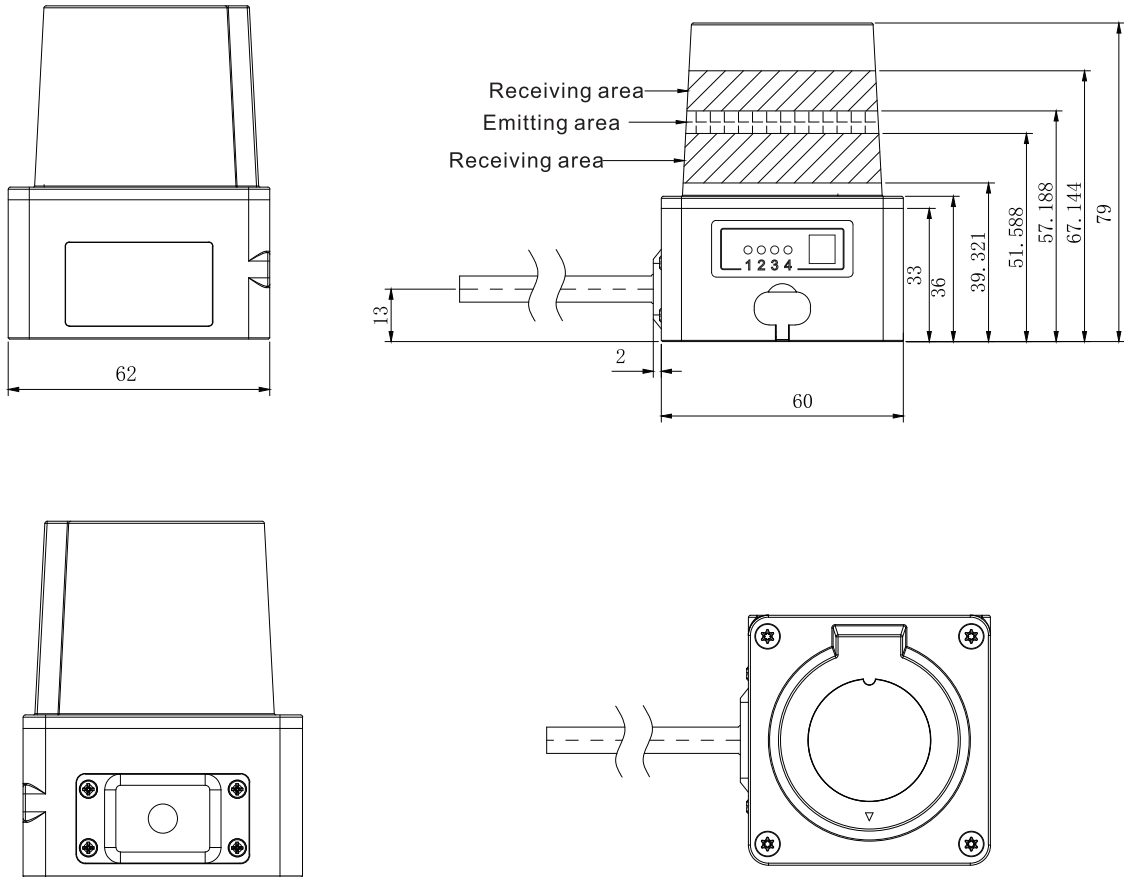


 Product parameters

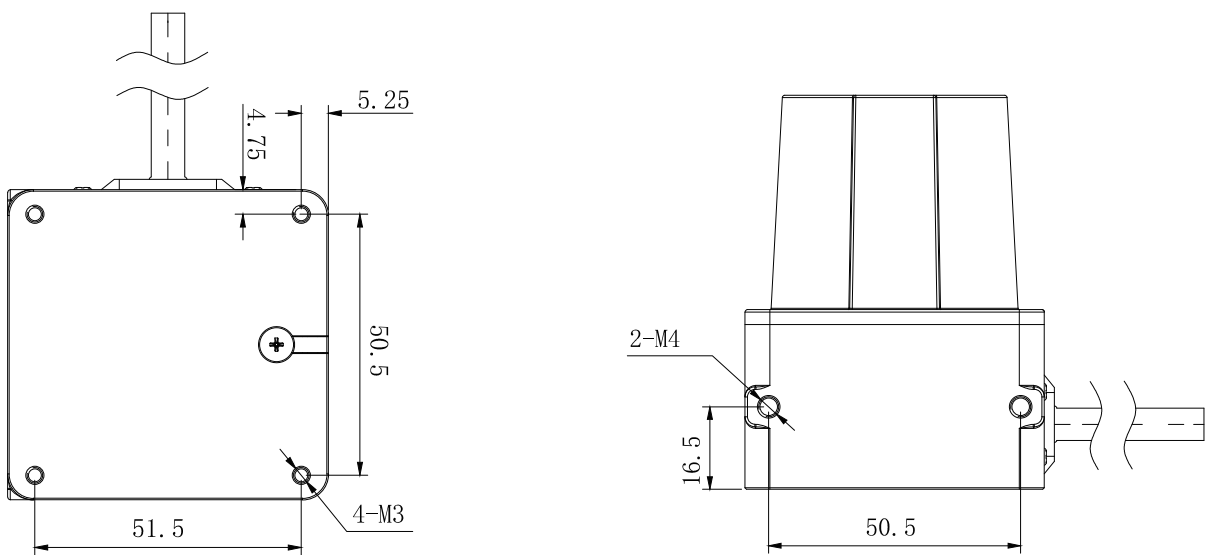
Detection distance	0.1m~8m (10% reflectivity)	
	0.1m~20m (90% reflectivity)	
Detection range	270°	
Scanning principle	Pulse TOF	
Laser level	Level 1(IEC60825-1:2014, EN 60825-1:2014)	
Wave length	905nm	
Sampling rate	20KHz	
Scanning frequency	10HZ、 20Hz can be set	
Horizontal angular resolution	0.18°	0.36°
Response time	100ms	50ms
Accuracy	±30mm	
Startup time	8s	
Channel	15 (each channel includes 3 detection areas)	
Operating current (DC24V)	≤100ma (signal output not by IO)	
Switching input	4	
Switching output	4 (2 for NPN area warning signals, 1 pair for NPN OSSD safety output signal) NPN OR PNP output	
Protection rate	IP65	
Anti-optical interference	100000Lux	
Weight	171g	
Dimension (max)	62mm×62mm×79mm	
Sine vibration frequency	10Hz-1000Hz, acceleration 5g, 10 time each at X, Y, Z,	
Random vibration frequency	5Hz-250H, G r.m.s=4.24g, 5 hours each at X, Y, Z direction.	
Impact resistance	196m/(20G) 30000 times each at X□Y and Z directions.	
Electromagnetic compatibility	EN IEC 61000-6-2:2019; EN IEC 61000-6-4:2019	
Indicator	4 (3 for area signals, 1 for faulty signal)	
Communication interface	(USB or RS232or RS485)& Ethernet	
Power supply	DC9-28V	
Rated power	< 1.5W(without load)	
Starting power	< 3W(without load)	
Operating temperature	-10°C~55°C	
Storage temperature	-20°C~70°C	
Operating humidity	Below 85%RH	

Safety Light Curtain
Measurement Light Curtain
Safety Interlock Switch
Laser Radar
LGA10 Series
LGA60 Series
F27X Series

Product size



Base

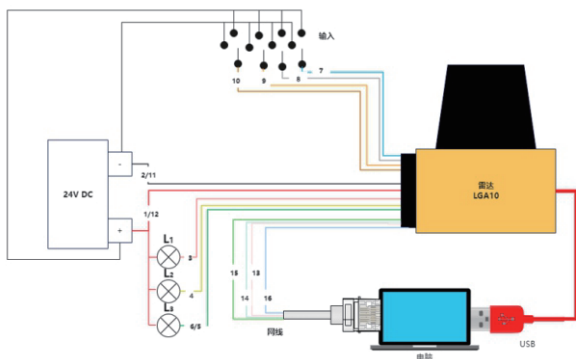


Base bottom diagram

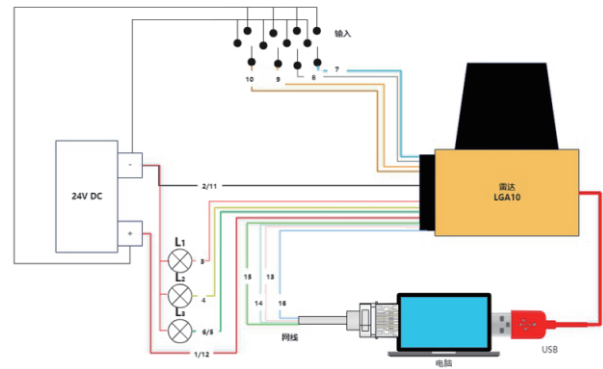
Base side diagram

▶ Wiring Connection

Wire sequence & Related function			
Wire number	Color	Signal definition	Signal description
1	Red 26AWG	VCC	Power supply VCC
2	Black 26AWG	GND	Power supply GND
3	Light red	ALARM2	2 independent NPN outputs, ON state: maximum IOU _T = 200mA, VOUT > COMIN + -2V, OFF state: IOU _T < 1mA, VOUT is less than 2V. The warning zone is state ON when no obstacles, and state OFF when with obstacles.
4	Black	ALARM1	
5	Yellow	OSSD2	2 independent NPN outputs, ON state: the maximum IOU _T is 200mA, VOUT ≥ COMIN + /- 2V, OFF state: IOU _T < 1mA, VOUT is less than 2V. The roTECTED zone is state ON when no obstacles, and state OFF when with obstacles.
6	Dark green	OSSD1	
7	Dark blue	In4	Selection signal in area group, to achieve switching between multiple protected areas through the changes of input signals IN1, IN2, IN3, and IN4.
8	White	In3	
9	Orange	In2	
10	Brown	In1	
11	Grey	COM_GND	Protection input/output GND
12	Purple	COM_IN+	Protection input/output power supply
13	Pink	OUT_RX+	Network port input +
14	Transparent	OUT_RX-	Network port input -
15	Light green	OUT_TX+	Network port output +
16	Light blue	OUT_TX-	Network port output -



NPN wiring diagram



PNP wiring diagram