

PACECAT



THE INTELLIGENCE
EYE OF ROBOTS

TOF TECHNOLOGY LEADING BRAND

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PACECAT



TOF LIDAR PROFESSIONAL SUPPLIER

MAIN MARKET



LIDAR

OEM & ODM LIDAR SOLUTIONS



100⁺

More than 100 patents

300⁺

Over 300 employees

200⁺million

Output value over
¥ 200 million in 2022

1000⁺

More than 1000
cooperative customer

19⁺

More than 19 years Laser
ranging technology
accumulation

20⁺

Market over 20 countries
Customer coverage worldwide

OUR HISTORY

2006

Company established and began to focus on the application research of pulse laser ranging

2012

Successfully developed the first Laser speed device (the only one in China)

2009

First customized production rangefinder completed

2014

More than 10 large customers of customized production

2017

The first lidar came out

2021

Revenue over 160 million

2020

Output value over 100 million

2022

Revenue over 200 million
Chip-level and sub-level navigation lidar came out

2023

Established Zhejiang LiDAR industry standard

Focus on TOF & Bring smart life
Craftsman. Since 2006
Dedicated to R&D on LiDAR sensors



COMPANY PROFILE

Since its establishment in 2006, PACECAT commits to the application research of pulse laser ranging and have established a complete system that integrates development, production and sales.

Now we provide ODM services for laser rangefinders for European and American brand companies, with sales ranking among the top in the world.

PACECAT has also developed a domestically leading handheld laser velocimeter that integrates speed measurement and photography, as well as a two-dimensional LiDAR with an accuracy of centimeter level, through continuous efforts. PACECAT has grown into one of the benchmark enterprises in the field of pulse laser.



2D LiDAR

LDS-E110-R/E200-A/E/R

Series

Compact Innovation, Versatile Performance,
Entry-Level Excellence

Ultra-compact for seamless robotic integration.
Complete 360° scanning for full environmental coverage.
18KHZ sampling for high-fidelity environmental sensing.
Precise mapping and localization for enhanced navigation.
Proven reliability for long-term stable operation in various scenarios.
Economical and versatile, an ideal entry-level choice with optional I/O.

Technical Parameters

Model	LDS-E110-R	LDS-E200-A	LDS-E200-E	LDS-E200-R
Laser Wavelength	905nm ± 15nm	905nm ± 15nm		
Measuring Range	0.05-12m (90%) 0.05-7m (10%)	0.1-20m (90%) 0.1-7m (10%)		
Measurement Frequency	4.2KHz	18KHz		
Scan Frequency	10Hz	10Hz, 15Hz (default: 10Hz)		
Echo Mode	Single Pulse	Single Pulse		
Echo Intensity	0-255	0-255		
Drive	Built-in DC brushless motor	Built-in DC brushless motor		
Measure Angle	360°	360°		
Angle Resolution	0.86°@10Hz	0.2°@10Hz, 0.3°@15Hz		
Ranging Accuracy	±15mm@<2m ±30mm@≥2m	±30mm		
Range Resolution	mm	mm		
Communication Interface	UART 3.3V	Rs232, Ethernet, UART 3.3V		
I/O output	N/A	Four-way Switch	Na	
Optical Interference Resistance	> 65,000 Lux	> 80,000 Lux		
Weight	< 80g	< 60g	< 90g	< 60g
Supply Voltage	5.1VDC±0.2V	10VDC~26VDC		5.1VDC ±0.2VDC
Working Temperature	-10°C ~ +50°C	-10°C ~ +50°C		
Power Dissipation	≤ 1.5W	≤ 2.5W		
Size (mm)	38.5x38.5x33.6mm	60.2x42.8x38mm		42.6x42.6x35mm



LDS-E110-R



LDS-E200-A/E/R



2D LiDAR

LDS-E340-E / E400-E

Series

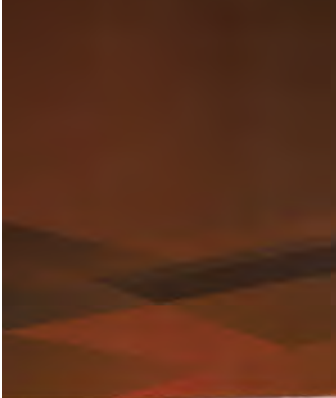


Precision Navigation, High-Performance, Interference Resistance

Ultra-precise up to 40 meters for navigation.
84,000 samples per second for instant mapping.
Unmatched light interference resistance up to 10,000 lux.
Complete 360-degree environmental scanning.
Pinpoint accuracy at 2cm for detailed path planning.
Enhanced internal design for improved performance and reliability.

Technical Parameters

Model	LDS-E340-E	LDS-E400-E
Laser Wavelength	905nm ± 15nm	905nm ± 15nm
Measuring Range	0.1-40m (90%) 0.1-15m (10%)	0.1-40m (90%) 0.1-15m (10%)
Measurement Frequency	90KHz	84KHz
Scan Frequency	10Hz-30Hz (default: 20Hz)	10Hz-50Hz (default: 25Hz)
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	0-255	0-255
Drive	Built-in DC brushless motor	Built-in DC brushless motor
Measure Angle	360°	360°
Angle Resolution	0.04°@10Hz, 0.06°@15Hz, 0.08°@20Hz, 0.10°@25Hz, 0.12°@30Hz,	0.043°@15Hz, 0.108°@25Hz, 0.150°@35Hz, 0.172°@40Hz, 0.193°@45Hz
Ranging Accuracy	±25mm	±20mm
Range Resolution	mm	mm
Communication Interface	Ethernet 100Mbit/s	Ethernet 100Mbit/s
I/O output	N/A	N/A
Optical Interference Resistance	> 80,000 Lux	> 100,000 Lux
Weight	< 300g	< 500g
Supply Voltage	10VDC ~ 36VDC	10VDC ~ 36VDC
Working Temperature	-10°C ~ +50°C	-10°C ~ +50°C
Power Dissipation	≤ 5W	≤ 5W
Protective Class	IP65 (IP67)	IP67
Size (mm)	56.4x56.4x63.5mm	94.5x83.5x87.5mm



2D LiDAR

LDS-E300-E/-R/E310-E/R

Series



Compact Reliability, Precise Frequency, High-Tech Precision

Compact precision in a small form factor.
360-degree detection in a compact package.
High durability with a precision rotary axis.
25HZ scan rate for fast real-time responses.
High performance without the bulk.



LDS-E300-E/-R



LDS-E310-E/-R

Technical Parameters

Model	LDS-E300-E/-R	LDS-E310-E/-R
Laser Wavelength	905nm ± 15nm	905nm ± 15nm
Measuring Range	0.1-25m (90%) 0.1-10m (10%)	0.1-40m (90%) 0.1-12m (10%)
Measurement Frequency	18KHz	E310-E: 30KHz, E310-R: 18KHz
Scan Frequency	10Hz / 15Hz / 20Hz / 25Hz (default: 15Hz)	10Hz / 15Hz / 20Hz / 25Hz (default: 15Hz)
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	0-255	0-255
Drive	Built-in DC brushless motor	Built-in DC brushless motor
Measure Angle	360°	360°
Angle Resolution	0.2°@10Hz, 0.3°@15Hz 0.4°@20Hz, 0.5°@25Hz	E310-R: 0.2°@10Hz, 0.3°@15Hz, 0.4°@20Hz, 0.5°@25Hz E310-E: 0.12°@10Hz, 0.18°@15Hz, 0.24°@20Hz, 0.36°@25Hz
Ranging Accuracy	±30mm	±30mm
Range Resolution	mm	mm
Communication Interface	E300-R: UART 3.3V, E300-E: Ethernet	E310-R: UART 3.3V, E310-E: Ethernet
I/O output	N/A	N/A
Optical Interference Resistance	> 80,000 Lux	> 80,000 Lux
Weight	< 160g	< 160g
Supply Voltage	E300-R: 5.1VDC±0.2V, E300-E: 10~26VDC	E310-R: 5.1VDC±0.2V, E310-E: 10~26VDC
Working Temperature	-10°C ~ +50°C	-10°C ~ +50°C
Power Dissipation	≤ 3W	≤ 3W
Size (mm)	56.8x56.8x44mm	56.8x56.8x57.5mm

2D LiDAR

LDS-E320-S / E330-S

Series



Compact Design, Cost-Effective, High Frequency

Sleek and compact, the LDS-E320/E330 series facilitates easy integration. Economical without equal, these LiDARs offer unmatched value for performance. 360-degree scanning ensures complete environmental coverage. A 40-meter detection range makes it perfect for extensive monitoring areas. Dual output capability for point cloud and area information versatility. Versatile interfaces including Ethernet, USB, and IO for diverse connectivity.

Technical Parameters

Model	LDS-E320-S	LDS-E330-S
Laser Wavelength	905nm ± 15nm	905nm ± 15nm
Measuring Range	0.1-20m (90%) 0.1-10m (10%)	0.1-40m (90%) 0.1-15m (10%)
Measurement Frequency	18KHz	30KHz
Scan Frequency	10Hz / 15Hz / 20Hz / 25Hz	10Hz / 15Hz / 20Hz / 25Hz
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	0-255	0-255
Drive	Built-in DC brushless motor	Built-in DC brushless motor
Measure Angle	360°	360°
Angle Resolution	0.2°@10Hz, 0.3°@15Hz 0.4°@20Hz, 0.5°@25Hz	0.12°@10Hz, 0.18°@15Hz 0.24°@20Hz, 0.3°@25Hz
Ranging Accuracy	±30mm	±30mm
Communication Interface	TYPE-C USB / Ethernet 100Mbit/s	TYPE-C USB / Ethernet 100Mbit/s
Input / output	Four-way switch input/output	Four-way switch input/output
Programmable Alert Area	16 area groups (each group contains 3 areas)	16 area groups (each group contains 3 areas)
Alert Area Applicable Shape	Any shape such as a circle, rectangle, polygon etc.	Any shape such as a circle, rectangle, polygon etc.
Optical Interference Resistance	> 80,000 Lux	> 80,000 Lux
Weight	< 300g	< 300g
Supply Voltage	10VDC ~ 26VDC	10VDC ~ 26VDC
Working Temperature	-10°C ~ +50°C	-10°C ~ +50°C
Power Dissipation	≤ 4W	≤ 4W
Protective Class	IP65 / IP67	IP65 / IP67
Size (mm)	56.4x56.4x50mm	56.4x56.4x63.5mm



2D LiDAR

LDS-50C-R / -E

Series

Long-range, Compact, Reliable

Long-range detection up to 40 meters.
Compact and lightweight design with high performance.
Self-developed 360-degree scanning for reliable operation.
Step window design for excellent dirt resistance.
Cost-effective solution with reduced maintenance needs.

Technical Parameters

Model	LDS-50C-R	LDS-50C-E
Laser Wavelength	905nm ± 15nm	905nm ± 15nm
Measuring Range	0.1-40m (90%) 0.1-15m (10%)	0.1-40m (90%) 0.1-15m (10%)
Measurement Frequency	18KHz	36KHz
Scan Frequency	10Hz / 15Hz	10Hz / 15Hz
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	0-255	0-255
Drive	Built-in DC brushless motor	Built-in DC brushless motor
Measure Angle	360°	360°
Angle Resolution	0.2°@10Hz, 0.3°@15Hz	0.1°@10Hz, 0.15°@15Hz
Ranging Accuracy	±25mm	±25mm
Range Resolution	mm	mm
Communication Interface	UART 3.3V	Ethernet
I/O output	N/A	N/A
Optical Interference Resistance	> 80,000 Lux	> 80,000 Lux
Weight	< 108g	< 108g
Supply Voltage	5.1VDC±0.2V	10VDC ~ 26VDC
Working Temperature	-10°C ~ +50°C	-10°C ~ +50°C
Power Dissipation	≤ 2.5W	≤ 2.5W
Protective Class	IP5X / IP54	IP5X / IP54
Size (mm)	55.5x55.5x51.7mm	55.5x55.5x51.7mm



LDS-50C-R



LDS-50C-E

2D LiDAR

LSS-10A / -40S / -40D

Series



Reliable Performance, Versatile Usage, User-Friendly

Robust metal casing with IP67 protection ensures durability.
360-degree panoramic scanning for comprehensive environmental awareness.
Ultra-long detection range up to 40 meters for long-distance sensing needs.
Outputs both point cloud and area information for flexible detection configurations.
Multiple interface options for high compatibility and easy integration.

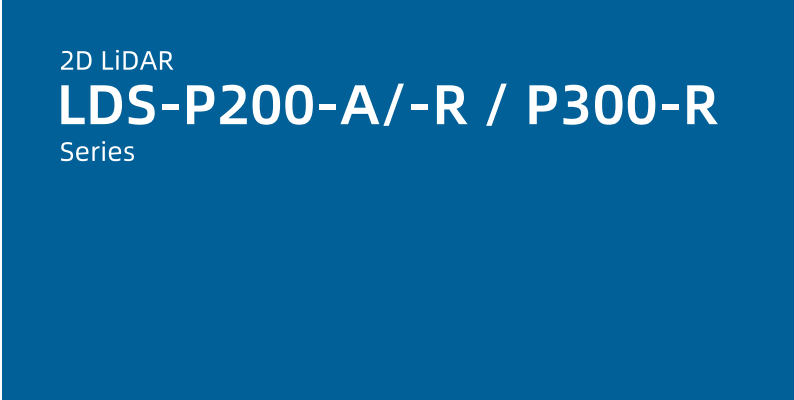


Technical Parameters

Model	LSS-10A-C30E44	LSS-40S-B20E44	LSS-40D-C30E	LSS-40D-C20E
Laser Wavelength	905nm ± 15nm		905nm ± 15nm	
Measuring Range	0.1-20m (90%) 0.1-10m (10%)		0.1-40m (90%) 0.1-12m (10%)	
Measurement Frequency	18KHz	18KHz		30KHz
Scan Frequency	10Hz / 15Hz		10Hz / 15Hz	
Echo Mode	Single Pulse		Single Pulse	
Echo Intensity	0-255		0-255	
Drive	Built-in DC brushless motor		Built-in DC brushless motor	
Measure Angle	360°		360°	
Angle Resolution	0.2°@10Hz, 0.3°@15Hz	0.2°@10Hz, 0.3°@15Hz		0.12°@10Hz, 0.2°@15Hz
Ranging Accuracy	±30mm		±30mm	
Range Resolution	mm		mm	
Communication Interface	USB / Ethernet 100Mbit/s		USB / Ethernet 100Mbit/s	
Input / output	Four-way switch input/output	Four-way switch input/output		N/A
Programmable Alert Area	16 area groups (each group contains 3 areas)	16 area groups (each group contains 3 areas)		N/A
Alert Area Applicable Shape	Any shape such as a circle, rectangle, polygon etc.	Any shape such as a circle, rectangle, polygon etc.		N/A
Optical Interference Resistance	> 80,000 Lux		> 80,000 Lux	
Weight	< 330g		< 330g	
Supply Voltage	10VDC ~ 26VDC		10VDC ~ 26VDC	
Working Temperature	-10°C ~ +50°C		-10°C ~ +50°C	
Power Dissipation	≤ 4W	≤ 4W		≤ 3W
Protective Class	IP65 / IP67		IP65 / IP67	
Size (mm)	88(68)x68x59mm		88(68)x68x59mm	



2D LiDAR
LDS-P100C
Series



2D LiDAR
LDS-P200-A/-R / P300-R
Series

**Long-Range Expertise, Industrial-Grade Reliability,
Versatile Application**

Reaches up to 200 meters for extensive industrial applications.
Seamlessly integrates with multiple industrial communication interfaces.
Built to last with an IP67 rating for all-weather resilience.
Quick and easy installation for a hassle-free setup.
Offers high performance at a competitive price point.
Compact yet powerful, with long-range and precision measurement.
Enhanced performance through an efficient optical system.
Improved reliability and efficiency with an optimized electrical design.

Technical Parameters

Model	LDS-P100C	LDS-P200-A	LDS-P200-R	LDS-P300-R
Laser Wavelength	905nm ± 15nm	905nm±15		
Measuring Range	0.1-200m (90%) 0.1-120m (20%)	0.05-5m	0.05-10m	0.1-15m(90%) 0.1-10m(10%)
Output Frequency	10Hz/100Hz/500Hz/1KHz (default: 100Hz)	10Hz/100Hz/500Hz/1KHz (default: 100Hz)		
Echo Mode	Single Pulse	Single Pulse(Upgrade to double)		
Echo Intensity	0-255	/	Support	0~255
Baud Rate	115200bps	9600bps	Configurable(default: 38400bps)	/
Ranging Accuracy	±(5cm+D*2‰)	/	±1cm@≤2m,±2cm@≥2m	
Range Resolution	cm	mm		/
Repeatability	/	/	1.5cm	
Communication Interface	UART/485/CAN bus	IO/TTL(Input)	UART: 3.3VTTL / RS485	
Data Interface Functionality	/	NPN	Distance / Intensity	/
OTA Update	/	Unsupported	Support	/
Optical Interference Resistance	> 100,000 Lux	100,000Lux		>80,000Lux
Supply Voltage	4.8DC~26VDC	9-28V / 5V		9-26V / 5V
Working Temperature	-10°C ~ +60°C	-20°C ~ +70°C		-10°C ~ +55°C
Power Dissipation	≤ 0.5W	≤ 0.2W		≤ 1W
Protective Class	IP65	IP65		
Size (mm)	54x42.6x62.3mm	30x20x11mm		42x35x22mm
Status Indicator Light	/	Green / Red		/

3D LiDAR

LDS-S110-U/S300-E

Series



- Accurate
- Smart
- Stabilization

Technical Parameters

Model	LDS-S110-U	LDS-S300-E
Laser Wavelength	940nm ± 15nm	905nm ± 15nm
Measuring Range	0.1-8m@10%R-90%R(Indoor Environment)	0.1-40m@90% / 0.1-25m@10%
Laser Beam Bundle	/	Equivalent to 150 Lines
Scan Frequency	10-30Hz	10Hz
Measurement Frequency	/	1500KHz
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	0-1024	Support
Scanning Principle	Pure Solid-State Flash	Pure Solid-State Flash
Laser Dot Count	40x30	360x150
Vertical Angle	45°	50°
Measure Angle	58°	120°
Vertical Resolution	1.4°	0.33°
Horizontal Resolution	1.4°	0.33°
Ranging Accuracy	±20mm@(Indoor Environment ≤2m) ±30mm@(Indoor Environment >2m)	±5cm
Communication Interface	USB TYPE-C	Ethernet
Optical Interference Resistance	60KLux	100KLux
Weight	< 40g	< 700g
Supply Voltage	5V 1A(Must Support Multiple Power Supplies)	12VDC±2V
Working Temperature	-10°C ~ +50°C	-20°C ~ +55°C
Power Dissipation	≤ 1W	≤ 10W
Protective Class	IP65	IP65
Size (mm)	45.3x24.3x16.8mm	68x68x65mm

3D LiDAR

LDS-M300-E / Z300-E

Series



- High-resolution
- Wide field-of-view
- Real-time data acquisition
- Precise distance measurement
- Durability
- Versatile applications

Technical Parameters

Model	LDS-M300-E	LDS-Z300-E
Laser Wavelength	905nm ± 15nm	905nm ± 15nm
Measuring Range	0.05-50m@90% / 0.1-25m@10%	0.2-80m@90% / 0.2-30m@10%
Laser Beam Bundle	/	Equivalent to 70 Lines
Scan Frequency	10Hz	10Hz / 20Hz (default: 10Hz)
Measurement Frequency	>200KHz	300KHz
Echo Mode	Single Pulse	Single Pulse
Echo Intensity	Support	Support
Scanning Principle	Non-repetitive Mechanical Scanning	MEMS Micro-mirror Scanning
Laser Dot Count	/	/
Vertical Angle	-10° ~ 60°	40°
Measure Angle	360°	120°
Vertical Resolution	Horizontal and vertical resolution should be related to the actual point cloud and update speed	0.42°
Horizontal Resolution		0.35°
Ranging Accuracy	±3cm	±3cm
Range Resolution	10mm	10mm
Communication Interface	Ethernet	100 BASE-TX Ethernet, Reserved USB2.0 Internally Reserved RS485 Circuit or CAN Circuit Interface
Optical Interference Resistance	100KLux	100KLux
Weight	< 500g	/
Supply Voltage	9VDC-32VDC	9VDC-32VDC
Working Temperature	-10°C ~ +60°C	-20°C ~ +60°C
Power Dissipation	≤ 4W	≤ 4W
Protective Class	IP67	IP67
Size (mm)	78x78x81mm	100x80x40mm