Sintec Optronics

SLY Series Laser Rangefinders

Laser rangefinder is a kind of equipment to measure the distance of the target. It can measure the distance information of the target by detecting the return signal of the emitting laser. This series of products has mature technology and stable performance, which can be tested on a variety of static and dynamic targets, and can be equipped and used on a variety of platforms. Laser rangefinder is used to measure the range of the target. Its military application can be summarized into two categories: reconnaissance and fire control. Reconnaissance includes individual reconnaissance, sea base, road base, air base target detection and terrain detection. Fire control is mainly used in land air defense, sea combat, short-range fire control equipment precision attack, as well as ship and airborne fire control system in long-range ranging and target attack. According to different combat platforms, the laser range finder can be applied to the optoelectronic reconnaissance system of different platforms such as ground vehicle, light portable, air artillery, missile defense, airborne, shipborne and space detection as a supporting ranging system. The rangefinder products are characterized by independent control of core devices, small size and light weight, mass production, stable performance and easy operation.

1. 3-15km Laser Rangefinders (1535nm)

This series rangefinder is based on 1535 nm erbium-doped glass lasers, which are completely independently developed and protected by patents and intellectual property rights, and have now reached Class I human eye safety standards. The product is a single-pulse rangefinder that features small size, light weight, high-cost performance and adaptability to multiple platforms. The main functions are: single pulse range and continuous range, distance selection, front and rear target display and self-test function, and continuous range frequency adjustable from 1-10Hz. The series offers different products to meet different range requirements (3km to 12km).

Features:

- Small size and light weight
- Class I human eye safety standards
- Stable performance and easy to use
- Provide customization service
- Distance measurement for vehicle (2.3*2.3m) over 3km
- Developed based on 1535nm Er: Glass Laser

Applications:

- Laser ranging
- Targeting
- Photoelectric reconnaissance

Part number	SLY-0310F-04	SLY-0516F	SLY-0621F	SLY-0825F	SLY-1040F	SLY-1552F
Wavelength	1535nm±5nm					
Ranging Capability (Vehicle, 2.3m x 2.3m)	≥3km	≥5km	≥6km	≥8km	≥10km	≥15km
Minimum range	≤15m	≤15m	≤20m	≤30m	≤50m	
Receiving Aperture		Φ16mm	Φ21mm	Φ25mm	Φ40mm	Φ52mm
Laser divergence angle	≤0.6mrad	≤0.3mrad				
Continuous ranging frequency	1-10Hz	1Hz-10Hz (adjustable)				
Ranging accuracy (RMS)	≤1m				≤1.5m	
Accurate ranging ratio	≥98%					
Range resolution	≤30m					
Voltage supply	DC 5-28V					
Weight	3 g ±1 g	≤40g	≤55g	≤72g	≤130g	≤190g
Average Power Consumption (at 1Hz Operation)	≤ 0.8W	≤1W@5V	≤1W@5V	≤1.3W@5V	≤1.5W@5V	≤2W@5V
Peak Power Consumption	≤3W	≤3W@5V	≤3W@5V	≤4W@5V	≤4.5W@5V	≤5W@5V
Dimension (mm)	≤48×21×31	≤50×23×33.5	≤65×40×28	≤65×46×32	≤83×61×48	≤104×61×74
Working temperature	-40°C~70°C	-40°C~60°C				
Storage temperature	-45°C~70°C	-55°C~70°C				
Communication interface	RS422 Serial Port (Customizable TTL Serial Port)	TTL,115200bp	RS422 Serial Port (Customizable TTL Serial Port)			
Shock	75g@6ms (Customizable 1000g/1ms)	>75g@6ms				

2. 20km-40km Laser Rangefinders (1570nm)

This series rangefinder is based on the 1570nm OPO laser developed completely in-house, protected by patents and intellectual property rights, and has now met the Class I human eye safety standard. The product is a single pulse rangefinder with, cost-effective and adaptable to a variety of platforms. The main functions are: single pulse rangefinder and continuous rangefinder, distance selection, front and rear target display and self-test function, continuous rangefinder frequency adjustable from 1-5Hz. The average power consumption of the product is less than 50W and the peak power consumption is less than 100W.

Features:

- High reliability
- Class I human eye safety standards
- Stable performance and easy to use
- Provide customization service
- Distance measurement for vehicle (2.3*2.3m) over 15km
- Developed based on 1570nm OPO laser

Applications:

- Laser ranging
- Targeting
- Photoelectric reconnaissance

Part number	SLY-1465	SLY-2005
Wavelength	1570nm±10nm	
Maximum Measuring Big Target (Building)	300m~27km	300m~37km
Maximum Measuring Target Size：2.3mx2.3m	300m~14km	300m~19km
Maximum Measuring Target Size：0.1 ㎡	300m~7km	300m~10km
Laser divergence angle	1±0.2mrad	1.2±0.2mrad
Visibility	＞25km	
Continuous ranging frequency	1-10Hz	
Ranging accuracy	±5m	
Voltage supply	DC 18V~32V	
Weight (kg)	2.3	12
Dimension (mm)	214.3×116×81.15	405×234×163
Working temperature	-40°C~60°C	
Storage temperature	-50°C~70°C	
Communication interface	RS422,	
Working Life	≥1 Million Times	

3. SLY-880, Handheld Rangefinder

Infrared	
Model	SLY-880
Detector type	Amorphous silicon uncooled infrared focal plane
Resolution	384x288
Field angle	17um
Field angle	7.5°x 5.6°
Working band	8-14um
NETD	<50mk@25C, @f/1.0
Focal length	50mm
Frame rate	≤50Hz
Focus mode	Electric focus
Detection distance	
Characters (1.7mx0.5mx0.3m)	3333m
Vehicles (4.5mx2.0mx1.5m)	8823m
Identification distance	
Characters (1.7mx0.5mx0.3m)	883m
Vehicles (4.5mx2.0mx1.5m)	2205m
Shimmer	
Detector type	Ultra- low illumination CMOS
Resolution	1920x1080
Pixel size	4.0um
Focal length	35mm
Frame rate	≤30Hz
Focus mode	Focus free
Display	
Display screen type	OLED
Resolution	1024x768
Display screen size	0.39 inches
Display screen mode	Infrared/ shimmer/ dual light fusion/ picture in pictures
Electron doubling	1x /2x /4x
Visual control	±4SD
Color palette	Rainbow, iron red, cold color, white hot, and black hot
Other functions	
WIFI	2.4G image transmission
Electronic compass	Square angle display
Positioning	GPS/BD
Ranging	
Ranging range	9m-2500m
Ranging accuracy	<400m, ±1m; >400m, 0.4%

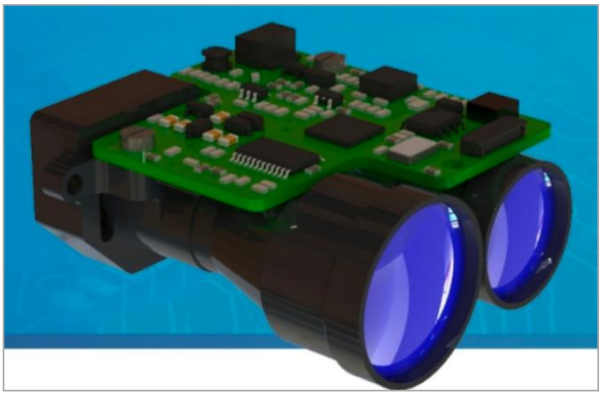
Storage	
Capacity	Built-in 16G eMMC (Note: the usable storage capacity is less than this value, because the system software occupies a certain space)
Shooting	Supported
Video recording	Supported
Picture/ Video format	JPG/MP4
Interface	
CVBS output	PAL system video output
USB interface	Export pictures and videos
External power supply	DC12/1A
Power supply	
Detachable rechargeable lithium battery	3200mAhx2 (battery model 18650)
Battery charging mode	Standalone charging stand
Overall power consumption	≤6W
Endurance duration	≥4 hours
Operating/ storage environment	
Operating temperature	-20C to 50C
Storage temperature	-30C to 70C
Shock	≤30g
Protection level	1P54
Overall dimension/Weight	
Overall dimension	193.1mmx176.8mmx99mm
Weight	1.58kg (including batteries)

STDY Series Laser Rangefinders

1. STDY-DA and STDY-YA Series Laser Rangefinder

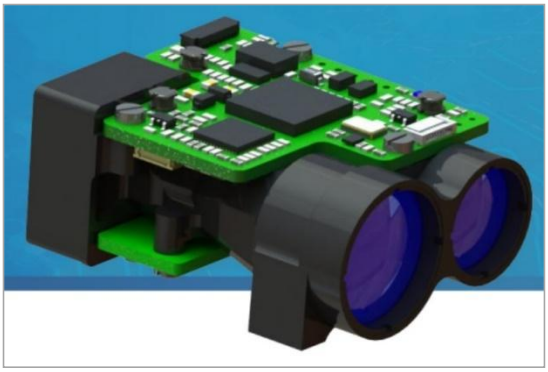
STDY-DA and STDY-YA series laser rangefinder is compact in design and easy to integrate. The working light source is 905nm and 1550nm semiconductor laser diode. The features are long service life and low power consumption. And it is widely used in the airborne pod, vehicle turntable, handheld observation instrument, altimeter, telescope, gun sight, gun sight project and other photoelectric equipment, to meet aviation, ship, vehicle, police, railway, electric power, communication, geology, construction, fire protection, forestry, outdoor applications and other applications.

(1) STDY-DA1xxx series



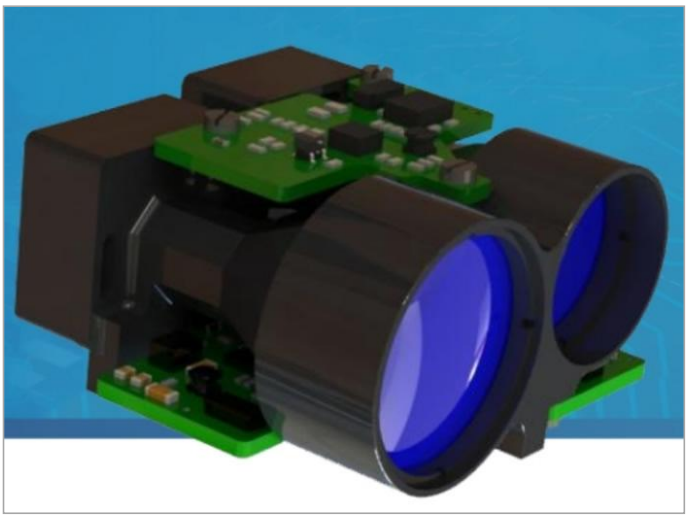
Model	STDY-DA1000	STDY-DA1500
Wavelength	905nm	
Range	20m~1000m	20m~1500m
Ranging accuracy	≤±2m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Acceptance aperture	17mm	
Connector	TTL	
Supply voltage	5V±0.5V	
Power consumption	≤2W	
Dimension	45mmx44mmx21mm	
Weight	≤35g	
Operating temperature	-40℃~+55℃	

(2) STDY-DA2xxx series



Model	STDY-DA2000	STDY-DA2500
Wavelength	905nm	
Range	20m~2000m	30m~2500m
Ranging accuracy	≤±2m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Acceptance aperture	17mm	
Connector	TTL	
Supply voltage	5V±0.5V	
Power consumption	≤2W	
Dimension	50.5mmx37mmx22mm	
Weight	≤45g	
Operating temperature	-40℃~+55℃	

(3) STDY-DA3xxx series

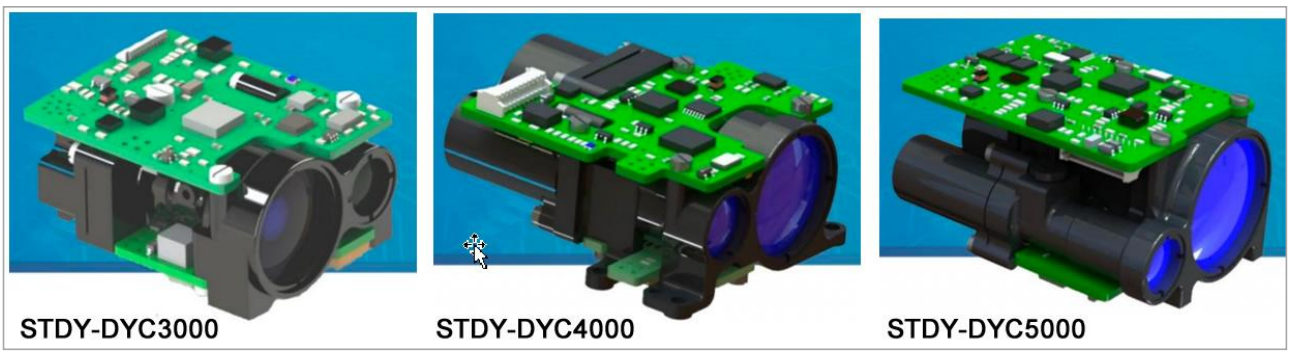


Model	STDY-DA3000	STDY-DA3500
Wavelength	905nm	
Range	20m~3000m	30m~3500m
Ranging accuracy	≤±2m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Acceptance aperture	24mm	
Connector	TTL	
Supply voltage	5V±0.5V	
Power consumption	≤2W	
Dimension	50mmx49.5mmx29mm	
Weight	≤65g	
Operating temperature	-40℃~+55℃	

2. STDY-DYC Series Small & Medium-sized Laser Rangefinder

STDY-DYC series of small and medium-sized laser rangefinders are compact, easy to install and operate. The working light source is a human eye safe band solid state laser. The features are long service life and low power consumption. It can provide deep customization according to different needs. And it is widely used in the airborne pod, vehicle turntable, handheld observation instrument, altimeter, telescope, gun sight, gun sight project and other photoelectric equipment, to meet aviation, ship, vehicle, police, railway, electric power, communication, geology, construction, fire protection, forestry, outdoor applications and other applications.

(1) STDY-DYCx000 series



Model	STDY-DYC3000	STDY-DYC4000	STDY-DYC5000
Wavelength	1535nm	1535nm	1535nm
Range	15m~3000m	50m~4000m	50m~5000m
Ranging accuracy	≤±2m	≤±2m	≤±2m
Ranging frequency	≥1Hz	≥1Hz	≥1Hz
Accurate rate	≥98%	≥98%	≥98%
Divergence angle	≤0.65mrad	≤0.6mrad	≤0.7mrad
Acceptance aperture	18mm	21mm	25mm
Connector	TTL	RS422	RS422
Supply voltage	12V±2V	12V±2V	12V±2V
Power consumption	≤2W	≤3W	≤3W
Dimension	50mmx36mmx24mm	57mmx50mmx30mm	61mmx43mmx32mm
Weight	≤56g	≤75g	≤85g
Operating temperature	-40℃~+55℃	-40℃~+55℃	-40℃~+55℃

STDY-DYC6000/7000

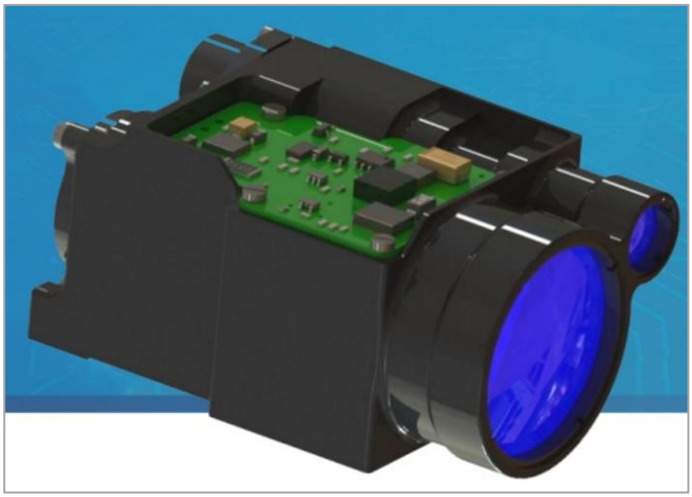
STDY-DYC8000/9000

Model	STDY-DYC6000	STDY-DYC7000	STDY-DYC8000	STDY-DYC9000
Wavelength	1535nm	1535nm	1535nm	1535nm
Range	20m~6000m	20m~7000m	80m~8000m	80m~9000m
Ranging accuracy	≤±2m	≤±2m	≤±2m	≤±2m
Ranging frequency	≥1Hz	≥1Hz	≥1Hz	≥1Hz
Accurate rate	≥98%	≥98%	≥98%	≥98%
Divergence angle	≤0.3mrad	≤0.3mrad	≤0.5mrad	≤0.5mrad
Acceptance aperture	34mm	34mm	42mm	42mm
Connector	RS422	RS422	RS422	RS422
Supply voltage	7.5V±1.5V	7.5V±1.5V	12V±2V	12V±2V
Power consumption	≤2W	≤2W	≤3W	≤3W
Dimension	80x59x45mm	80x59x45mm	86x66x45mm	86x66x45mm
Weight	≤120g	≤120g	≤145g	≤145g
Operating temperature	-40℃~+55℃	-40℃~+55℃	-40℃~+55℃	-40℃~+55℃

(2) STDY-DYCx000A series

Model	STDY-DYC6000A	STDY-DYC7000A
Wavelength	1535nm	
Range	20m～6000m	20m～7000m
Ranging accuracy	≤±2m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Divergence angle	≤0.3mrad	
Acceptance aperture	34mm	
Connector	TTL	
Supply voltage	7.5V±1.5V	
Power consumption	≤2W	
Dimension	81mmx57.5mmx41.5mm	
Weight	≤125g	
Operating temperature	-40℃~+55℃	

(3) STDY-DYC6000B



Model	STDY-DYC6000B
Wavelength	1535nm
Range	50m~6000m
Ranging accuracy	≤±2m
Ranging frequency	1Hz
Accurate rate	≥98%

Divergence angle	≤0.7mrad
Acceptance aperture	34mm
Connector	RS422
Supply voltage	28V±6V
Power consumption	≤3W
Dimension	87mmx52mmx41mm
Weight	≤195g
Operating temperature	-40℃~+55℃

(4) STDY-DYC100X and STDY-DYC100XA

Model	STDY-DYC100X	STDY-DYC100XA
Wavelength	1535nm	
Range	50m～10000m	80m～10000m
Ranging accuracy	≤±2m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Divergence angle	≤0.5mrad	
Acceptance aperture	48mm	
Connector	RS422	
Supply voltage	28V±6V	
Power consumption	≤4W	
Dimension	107mmx84mmx56mm	
Weight	≤230g	≤290g
Operating temperature	-40℃~+55℃	

(5) STDY-DYC series medium range finder

STDY-DYC series of medium range finders are compact and easy to install and operate. The working light source is a human eye safe band solid state laser. The features of it are long service life and low power consumption. It can provide deep customization according to different needs. And it is widely used in the airborne pod, vehicle turntable, handheld observation instrument, altimeter, telescope, gun sight, gun sight project and other photoelectric equipment, to meet aviation, ship, vehicle, police, railway, electric power, communication, geology, construction, fire protection, forestry, outdoor applications and other applications.

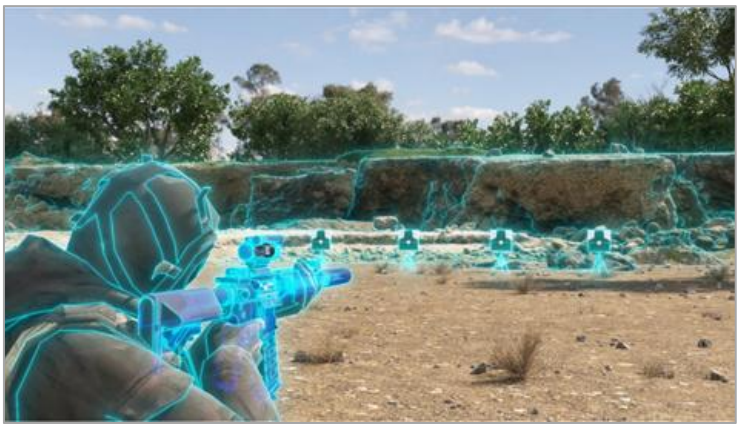
Model	STDY-DYC250X	STDY-DYC300X
Wavelength	1535nm	
Range	300m～25000m	300m～30000m
Ranging accuracy	≤±5m	
Ranging frequency	1Hz	
Accurate rate	≥98%	
Divergence angle	≤0.4mrad	
Acceptance aperture	48mm	65mm
Connector	RS422	
Supply voltage	28V±6V	
Power consumption	≤10W	
Dimension	245mmx113mmx85mm	133mmx122mmx76mm
Weight	≤2100g	≤1000g
Operating temperature	-40℃~+55℃	

3. STDY-DYB Series Small Laser Photometer

STDY-DYB series of small laser photometer is pumped by semiconductor, which can transmit laser pulse and receive laser echo to obtain the distance information of the measured target. It emits laser pulses in a specified precise coding or external synchronous way to provide semi-active guidance laser spots for laser guided weapons. The product is suitable for ground reconnaissance equipment, vehicle turret, ship turret, helicopter and UAV photoelectric load.

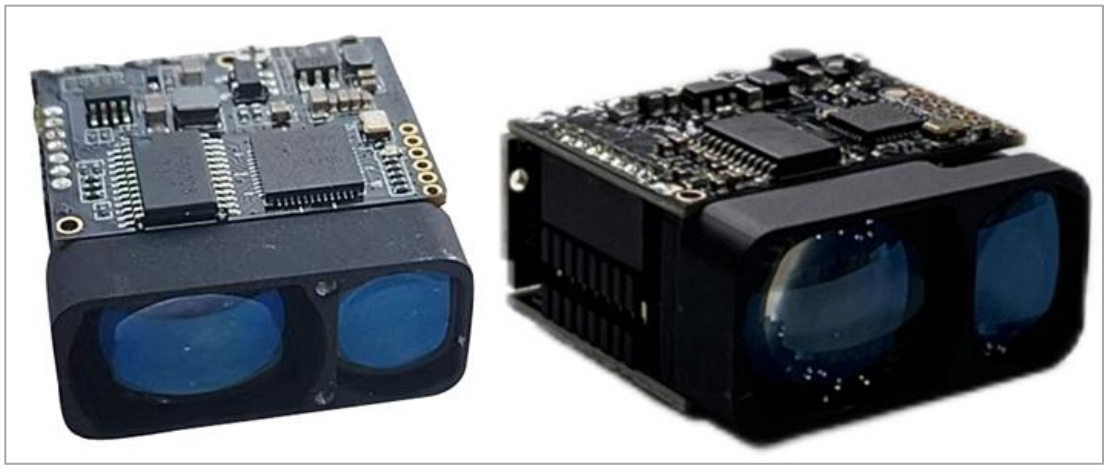
Model	STDY-DYB025	STDY-DYB040	STDY-DYB060	STDY-DYB100
Wavelength	1064nm	1064nm	1064nm	1064nm
Averag energy	≥25mJ	≥40mJ	≥60mJ	≥100mJ
Energy instability	≤10%	≤10%	≤10%	≤10%
Divergence angle	≤0.5mrad	≤0.4mrad	≤0.4mrad	≤0.25mrad
Optical axis stability	≤0.05mrad	≤0.05mrad	≤0.05mrad	≤0.05mrad
Range	100m~5000m	300m~5000m	300m~8000m	300m~20000m
Irradiation distance	≥2000m	≥4000m	≥5000m	≥13000m
Exposure frequency	20Hz	20Hz	20Hz	20Hz
Precise frequency code	45ms~56ms	45ms~56ms	45ms~56ms	45ms~56ms
Coding accuracy	±2.5us	±2.5us	±2.5us	±2.5us
Pulse width	15ns±5ns	15ns±5ns	15ns±5ns	15ns±5ns
Supply voltage	28V±6V	28V±6V	28V±6V	28V
Weight	≤450g	≤1000g	≤1500g	≤2800g
Dimension	91x6851.5mm	112x62x57mm	180x100x78mm	239x116x81mm
Operating temperature	-40℃~+55℃	-40℃~+55℃	-40℃~+55℃	-40℃~+55℃
Connector	RS422	RS422	RS422	RS422

STTM Series Laser Rangefinders



STTM Series Laser Ranging Module

STTM - 905 - L3 and STTM - 905 - L3 are the latest generation of outdoor long - distance laser ranging modules, which have the characteristics of small size, light weight, strong measurement ability, high measurement accuracy, and simple installation and operation.



Specifications

Model	**STTM-905-L3**
Laser Wavelength	905nm
Detection Distance	5~1300m@70%
Maximum Measurement Time	~0.6s
Accuracy	±1m
Blind Area	5m
Resolution Ratio	0.1m
Voltage	Typical(DC,+3.3V) Voltage Range(+3.3V~+5V)
Current	210mA
Power Consumption	690mW@3.3V
Working Temperature	-20~50℃
UART	115200bps
Serial Port Level	TTL3.3V
Dimension	25.72mm*24.6mm*13.4mm
Weight	~10g

Specifications

Model	**STTM-905-L2**
Laser Wavelength	905nm
Detection Distance	3~700m@70%
Maximum Measurement Time	~1s
Accuracy	±1m
Blind Area	3m
Resolution Ratio	0.1m
Voltage	Typical(DC,+3.3V) Voltage Range(+3.3V~+5V)
Current	100mA
Power Consumption	330mW@3.3V
Working Temperature	-20~50℃
UART	115200bps
Serial Port Level	TTL3.3V
Dimension	43*φ25mm
Weight	~30g


STTM-905-L3
STTM-905-L2