

ControLaser Fusion EX-S1B

1、 Product Picture



2、 Performance features

- ◆ Vehicle regulation-level design, meeting vehicle regulation-level environmental requirements;
- ◆ Built-in deep learning algorithm to achieve pedestrian detection and vehicle detection, for the existence of danger, early warning;
- ◆ Support wireless WiFi video transmission, and monitor the screen in real time through APP;
- ◆ Dual-light fusion technology, using 1080p high-definition low-noise visible light with 640 * 512 high-resolution infrared, the picture is clear and sharp, with rich details and prominent targets;
- ◆ Panoramic focus, ultra-wide field of view, clear image, long detection distance, wide field of view, can provide clear infrared images within 300 m ahead, 1.5 times the distance of the car's high beam, improve the driver's field of vision, help the driver to return to the target in advance;
- ◆ Haze penetration: Thermal imaging products can still provide clear images in dust, fog, haze and other weather conditions where human vision is limited, so as to realize all-weather application and ensure vehicle driving safety.
- ◆ Through the night: The thermal imaging product depends on the temperature rather than the light, and it can still image clearly at night when there is no light, which can effectively improve the driver's ability to predict the distance and time at night and reduce the accident rate.

◆ Anti-glare interference: Thermal imaging products collect external infrared radiation energy to form corresponding images, so they are not affected by light changes;

3、Application

It is suitable for the field of advanced assistant driving and automatic driving of automobiles, such as:

Passenger cars, private cars, commercial trucks, buses and recreational vehicles: The on-board infrared night vision system can detect dangers in advance, reduce the probability of accidents, and protect life, property and personal safety.

Ambulances, fire engines, police patrol cars: The high speeds and poor braking distances of ambulances, fire engines, and police patrol cars increase the probability of accidents, and the infrared night vision system on board at high speeds can also detect the danger ahead of the vehicle.

Passenger and freight trains: On-board infrared night vision systems can detect obstacles on the railway at great distances in complete darkness.

Heavy construction vehicles: When used for navigation of heavy vehicles, the on-board infrared night vision system can improve the driver's perception ability when the camera relying on visual and daylight imaging fails. Clear imaging through dust and smoke to ensure the safety of pedestrians and vehicles.

4、Dimensional drawings

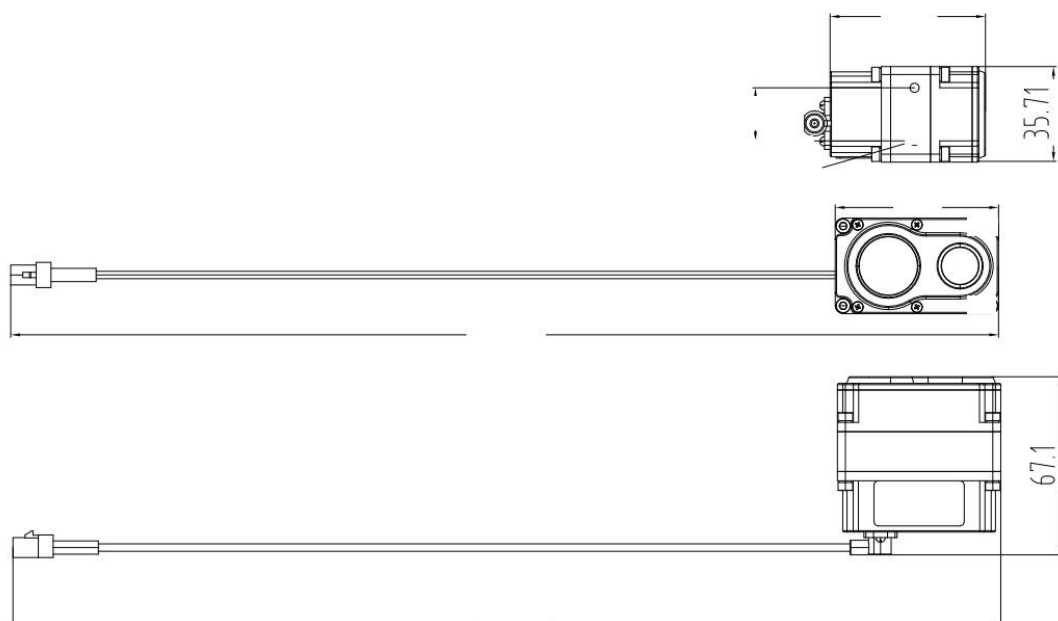


Figure 2

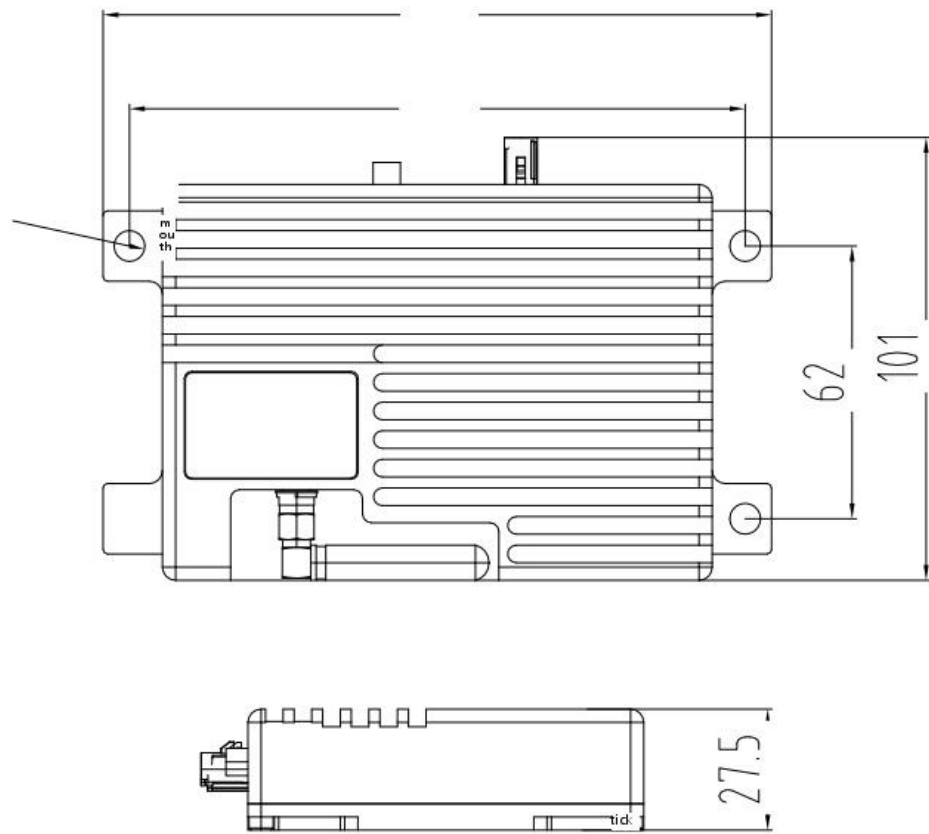


Figure 3

5、Technical specifications

Items	EX-S1B
Detector	
Resolution	640×512
Pixel spacing	12μm
NETD	≤50mK
Infrared Optics	
Focal length	13.5mm
FOV	32°×24°, ±5%
Visible light	
Detector type	1/2" SONY CMOS
Resolution	1920×1080
FOV	It is basically consistent with the infrared
Minimum illumination	Low noise 0.001lux
Image	
Image display	Black hot, white hot, red hot, green hot, iron red, amber
Image adjustment	Automatically adjust brightness and contrast
Image enhancement	Automatic
Image enlargement	2 X Electronic Amplification
Image mode	Daytime fusion, night fusion, edge fusion, infrared and visible light cycle switching
System Performance	
Power-on time	Start-up imaging stabilization time ≤ 10s.
Language	English
Window heating	Press the set temperature automatic switch, and the temperature threshold can be set. The default is to start heating when the window temperature is ≤ 2 ℃, and stop heating when the window temperature is higher than ≥ 7 ℃.
Switch function	By default, the ECU directly energizes the camera to control the camera switch.

Communication function	RS485 Dali's own protocol: brightness, gain setting, alarm sound output control, thermal imager power switch control, etc.
Image output	Frame frequency 25Hz.
Early warning function	With the function of driving detection and early warning
Power supply	
Power supply input	Rated DC24V, voltage range 9 V ~ 32 V.
System power consumption	≤ 6W (≤ 10W (during heating defrosting))
Vehicle Interface	
Power connector	DC 24V, voltage range 9V ~ 32V.
Video interface	Analog HD AHD
Communication interface	RS485
WiFi	Support Android/Apple APP software
Structure Request	
Appearance color	Black or aluminum color
Lens protection	High strength protective window.
Environment Parameter	
Operating temperature	-40℃ ~85℃
Storage temperature	-40℃ ~90℃
Encapsulation	IP69K (dual light fusion night vision camera assembly)/IP40 (night vision system controller assembly)
Physics Characteristic	
Weight	Dual-light fusion night vision camera assembly (without cable) ≤ 216 G Night vision system controller assembly (ECU) (without cable) ≤ 380 G
Size	Dual-light fusion night vision camera assembly ≤ 67.1 × 61.5 × 35.7mm (L × W × H) (rear outgoing line) Night vision system controller assembly (ECU) ≤ 152 × 101 × 27.5mm (L × W × H)
Image Identification	
Detection distance	Forward pedestrian (1.8 * 0.5m) 200 m Forward vehicle (2.3 * 2.3m) 400m

Detection distance	Forward pedestrian (1.8 * 0.5m) 90m Forward vehicle (2.3 * 2.3m) 120m
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6、Packing list

Serial number	Name	Model	Quantity	Remark
1	Dual-light fusion night vision camera assembly	EX-S1B	1	Standard configuration
2	Night vision system controller assembly	EX-ECU	1	Standard configuration
3	Packing box		1	Standard configuration
4	Special cable		1	Standard configuration (with control box)
5	Operation and maintenance manual		1	Standard configuration
6	Bracket		1	Optional