

Illuminate the Path for AI Recognition, Fast and Accurate

**Specialized Long-Distance LEP Auxiliary
Lighting for Drones, FA-1X1 (White Light / IR)**

Empower your drone's AI to identify potential threats successfully, even in the weakest light, making your AI image identification unhindered — Complete tasks that require AI to accurately identify at any time



Approx.
323g

Features

Enhance night image quality, minimize false alarms, and enable real-time perception

1 Reduce AI Processing Load

High-quality image input minimizes AI pre-processing and save power.

2 Boost Recognition Accuracy

LEP lighting enhances night contrast, significantly improving AI's success in identifying personnel, vehicles, and equipment, while reducing false positives.

3 Shorten reaction latency

High-speed synchronized illumination and focused lighting enable AI to perceive the tactical environment faster and from greater distances.

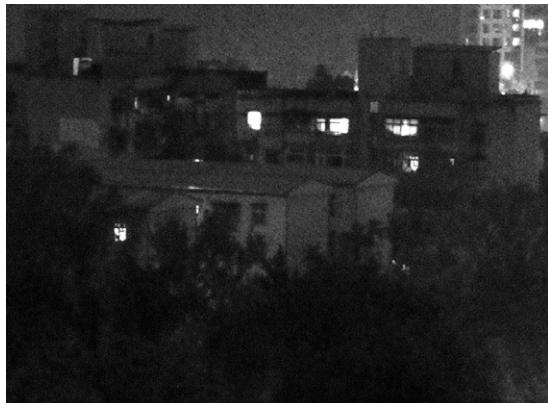
Night target scene comparison

LED Floodlight

Overexposure at close range, unclear at far distance

Note : 1. Applicable to an illumination distance of 300-600 meters ;

2. Illumination distance is measured based on the distance measurement function in Google Maps.



▲ Low-light environment

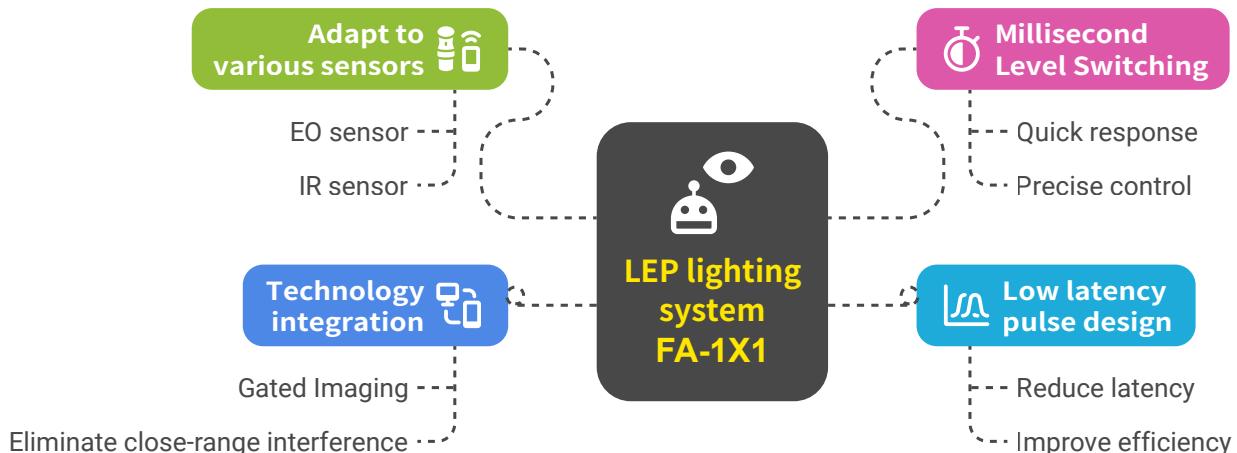
LEP Auxiliary Lighting

Uniform high contrast, clear details



▲ LEP Auxiliary Lighting

Function Optimizing Image Recognition / identification for Drone AI



Applicable scenarios

Tactical Reconnaissance | Border Patrol | Night Search & Rescue
 Disaster Site Reconstruction | Illegal Activity Monitoring | Automated Target Tracking

Long Distance LEP Auxiliary Lighting FA-1x1 Specification		
	FA-1X1-IR	FA-1X1-W
Input		
Input Voltage (DC) Range	6-24 VDC	6-24 VDC
Input Power	Max 9 W	Max 30 W
Maximum Input Current	9 / Input Voltage	30 / Input Voltage
Output		
Number of Solid State LEDs	1	1
Lens Diameter	25 mm	25 mm
Light Source Wavelength	850 nm	White Light
Beam Projection Angle (Selectable 4°, 12°, 18°)	Default 4°	Default 4°
Photoelectric Conversion Efficiency	40 %	25 %
Electrical Power		
Maximum Output Electrical Power	Max 7 W	Max 27 W
Default Output Current (Customizable)	2.2 A	2.2 A
Illumination Distance (Default 4 degrees)	600 m	400 m
Control Interface	Default battery box with switch, customizable for electronic control or drone power supply	
Heat Dissipation Method	Active Air Cooling	
Dimensions (Including Battery Box)* ¹	110 x 88 x 74 mm	110 x 75 x 74 mm
Dimensions (Excluding Battery Box)* ¹	110 x 88 x 51 mm	
Weight (Including Battery Box and Battery)* ¹	Approx. 323 g	Approx. 360 g
Weight (Excluding Battery Box)* ¹	Approx. 185g	
Continuous Illumination Time (Battery Box Power Supply)* ²	(Default Conditions ²) 2.5 hrs	(Default Conditions ²) 1 hrs
18650 Lithium Rechargeable Battery Specification ³	Recommended use of 3200mAh specification with protection board	
Storage Temperature Range (Celsius)	-40° ~ +85°	
Operating Temperature Range (Celsius)	0° ~ +55°	

*¹ Measured under standard product conditions, subject to change with customization

*² Continuous illumination time default test conditions: powered by battery box, lithium battery is 3200mAh 18650 specification, outputting default current

*³ Product does not include lithium rechargeable battery, nor does it have charging function

* We (RayTo Imaging Tech.) reserves the right to change the product appearance or specification. The contents of catalogs/manuals are subject to change without prior notice.

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