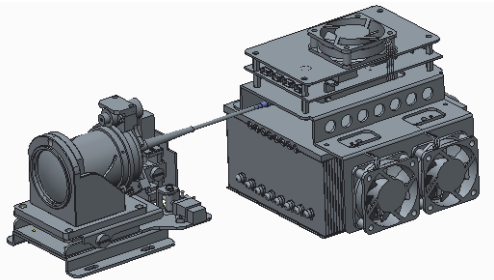
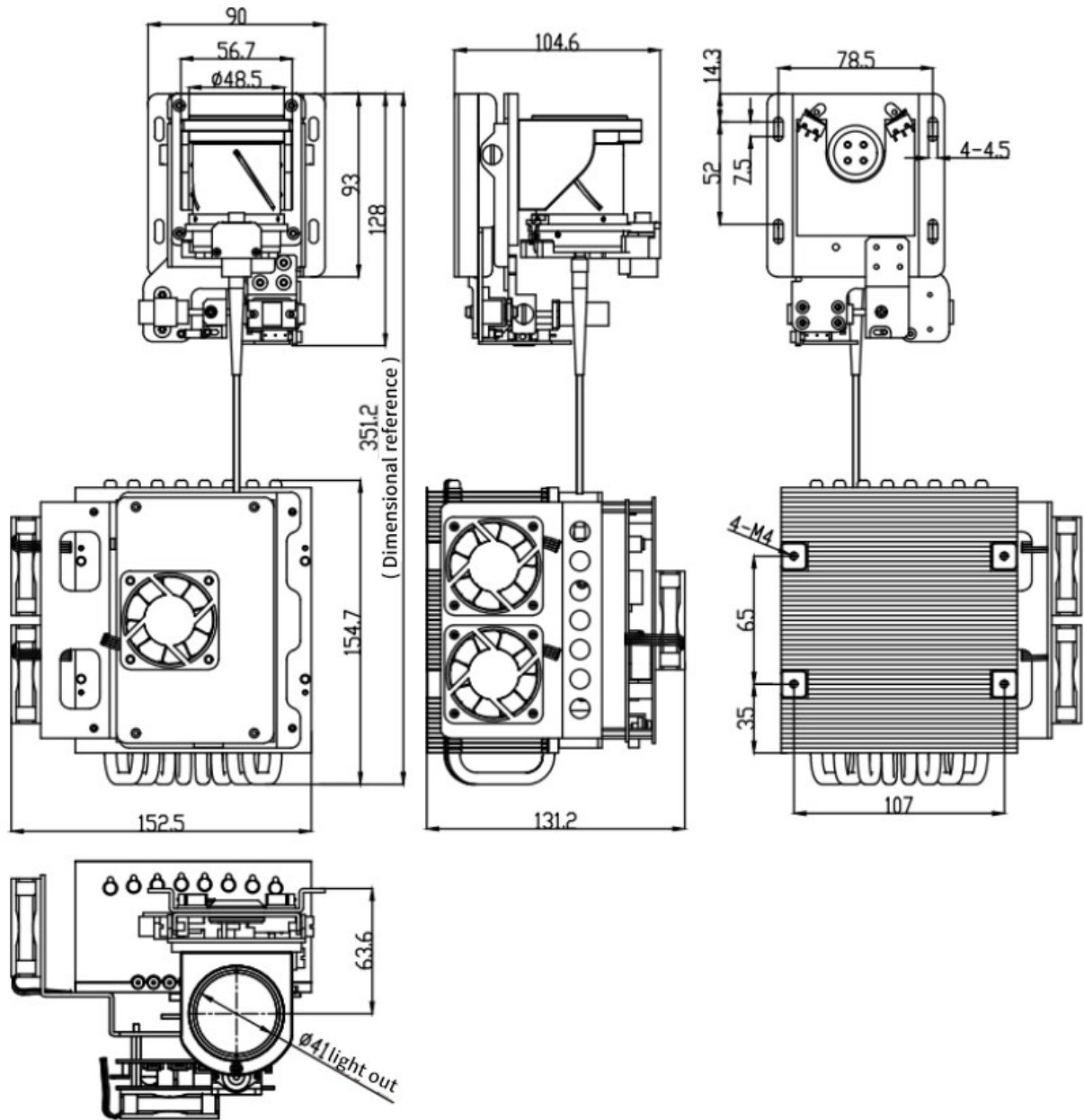


3KM	Specification	Version
		V1.1
Product Name	SWIR Laser Lighting Module	
Product Model	IR-1550-3000-S-04	
Product Number	K10010403	
Dimension	See Below	
Application Range: City-wide surveillance, smart transportation, fire watch, oil depots, large factories, security departments, vehicle-mounted systems, prisons, border and maritime defense, ecological reserves, mining sites, water and power grid inspection, terminals, ports, law enforcement, and maritime patrol, etc.		
Statement: This specification is copyrighted by Shenzhen 3KM Optoelectronics Technology Co., Ltd., and may not be distributed to personnel who are not employed by 3KM Optoelectronics Technology Co., Ltd. without the written approval of the company. It may not be used, copied or modified in whole or in part, and may not be disclosed in any way. 3KM reserve the right to update the technical parameters of the product to ensure that the latest and best products are provided to the customer.		
Shenzhen 3KM Optoelectronics Technology Co., Ltd.		File Type: Specification
Prepared	ZJY	Aug 3 rd , 2026
Review	LZHL	Aug 3 rd , 2026
Approve	LZHJ	Aug 3 rd , 2026

Optical and Electrical Parameters	
Item	Parameter
Product Name	Continuous Clear Imaging IR Laser Illuminator
Product Module	IR-1550-3000-S-04
Effective Range	≥3000 meters
Laser Type	Fiber-coupled homogenized laser
Wavelength	1520nm~1560nm @25°C (Wavelength Drift Coefficient 0.6nm/°C~0.8nm/°C)
Laser Safety	Class 4 (FDA、IEC)
Safety Range	45m(@0.17°, Approx)
Illumination Angle	Motorized Continues Zoom, 0.17° to 17°
Zoom Time	≤4 seconds(Far to Near)
Laser Chip Power	18W
Output Power	≥16W(@25°C)
Fiber Diameter	200um
Illumination Angle	Far Angle 0.17°: ≥3000m, light spot diameter 9m
Performance	Continuous Clear IR Illumination Technology delivers sharp beam edges, uniform brightness, clear image quality, and enhanced visibility in smoke, rain, fog, and haze.
Operation Voltage	DC28V±10%
Operation Current	3.0A±0.5A
Total Power Consumption	≤98W
Comm. Interface	RS-422(Default: 9600bps)
Comm. Protocol	Pelco_D
Default Operation Temperature	-35°C~+55°C
Storage Temperature	-40°C~+85°C
Operation Life	>20000hrs

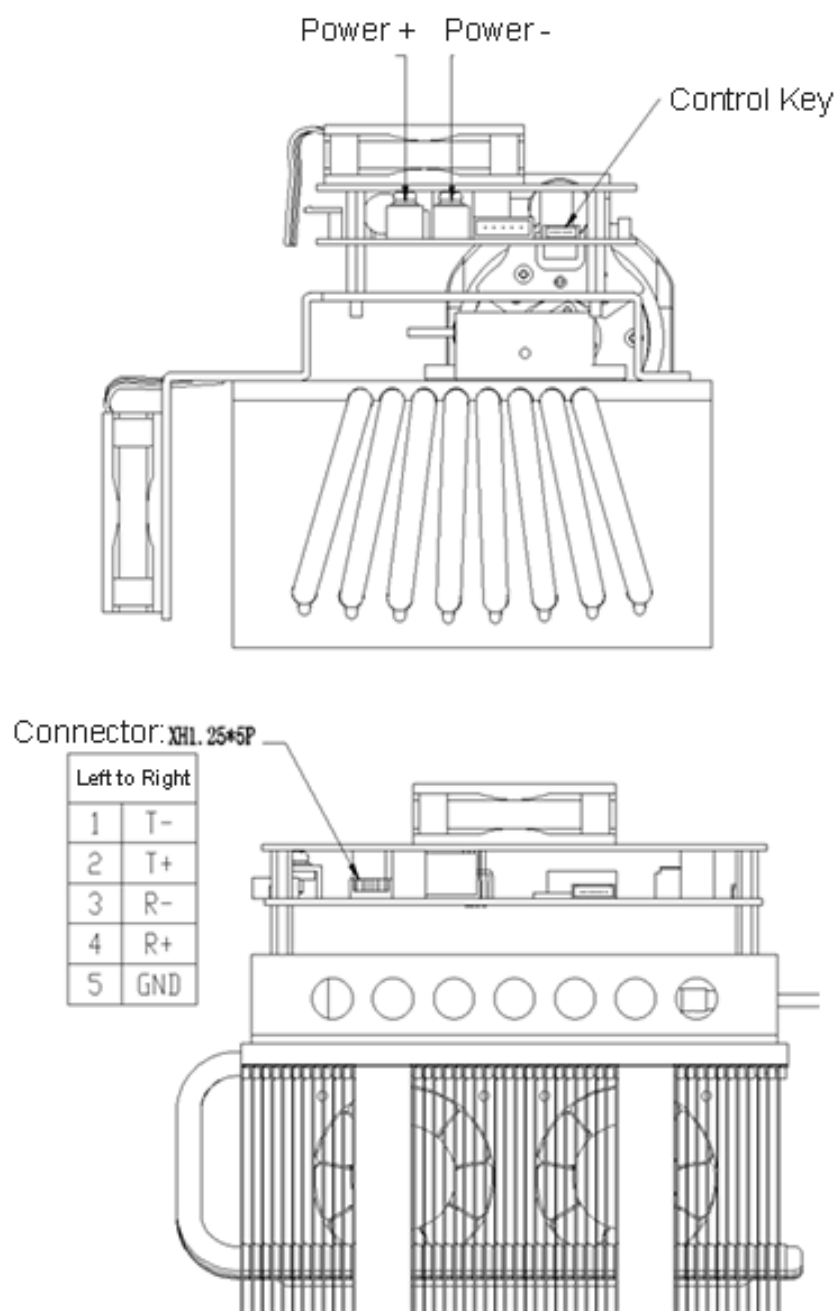
Dimension	See Below
Weight	≤3kg
Environmental	ROHS
Fiber Length	1.5m
Circuit Board	Apply conformal coating
Others	1. Fast power adjustment response time: <100ms 2. Dimming range: 5%–100% (above laser threshold) 3. Illumination angle memory function: retains preset angle after restart and provides corresponding beam divergence angle feedback 4. Direct angle value query 5. Real-time laser baseplate temperature monitoring for system alerts 6. Driver board-to-light source cable length: 0.6–0.7m

Dimension



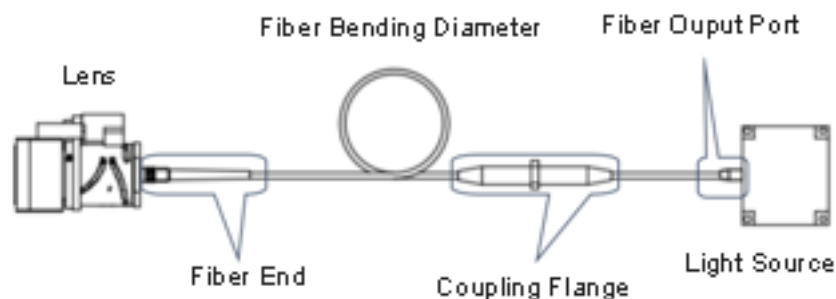
unit: mm

Pin Definition



Precautions

1. This IR laser illuminator is classified as a **Class IV** non-visible light laser. While the laser is on, staring back at or observing the laser with an optical instrument is **strictly prohibited**.
2. While the IR laser illuminator is on, flammable objects are **strictly prohibited** within **100cm** in front of the lens to prevent fires.
3. The IR laser illuminator should be installed where people **cannot** see it directly, **or** at a **safe distance** where people can see it directly. Manufacturers should choose the laser radiation power according to its actual application environment to **avoid** hurting people's eyes.
4. Manufacturers using this IR laser illuminator should put warning labels for laser radiation.
5. Please contact our qualified maintenance personnel for service when a device fault occurs. The warranty will expire if the device is disassembled by anyone else.
6. Do not fold, crush, or pull the fiber cable. Maintain a bending diameter >60mm when coiling the fiber.
7. During testing, assembly, inspection, operation, and other processes, the fiber tail of the light source, the fiber output port, and the bundled coupling flange area must not be subjected to any external force or pressure (some laser models do not have a coupling flange).
8. When returning the product to the manufacturer, the original packaging must be used to prevent damage to the infrared laser module during transportation.
9. The following diagram illustrates the location description of the infrared laser module:



Contact Information

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