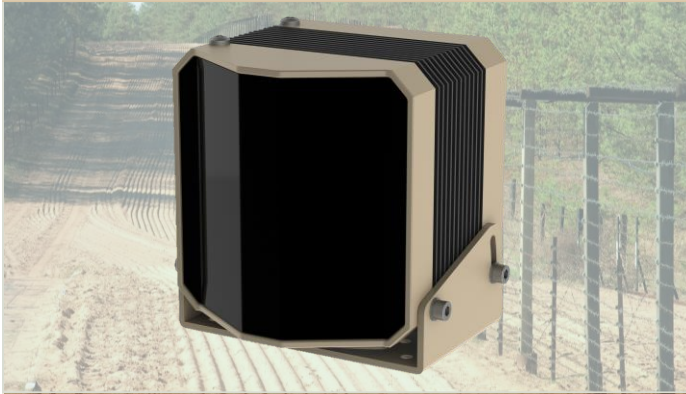


IR-Illuminator

IR-Illuminator for fixed and vehicle installations

Datasheet



Features

- IR light invisible for the human eye
- Flexible mounting
- 3D Diffuser technology (Black Diamond)
- Flexible FOV
- Low power consumption
- Military grade product
- Wide temperature range, -40°C to +70°C
- Adaption to different sensor suites

Description

The CST IR-Illuminator is designed for harsh military and civil environments, demanding a ruggedized construction with high precision.

The CST IR-Illuminator is designed for meeting harsh environmental conditions on military tracked and wheeled vehicles as driving aid.

High Power LED

2nd generation High Power Dual Junction Infrared LED emitter generates 21W radiant flux nominal output at 48W power dissipation for emitters. Provides exceptional radiant flux density equals to 43.7%. The patent-pending design has unparalleled thermal and optical performance.

The high-quality materials used in the Infrared LED emitter are chosen to optimize optical performance and minimize stresses which results in monumental reliability and flux maintenance. The robust product design thrives in outdoor applications with high ambient temperatures and high humidity.

LED driver system

The LEDs are arranged in Multi-Channel Matrix configuration. This gives a large range in input voltage and provides continues IR light if the failure of any one of the four LED strings.

Flexible FOV

The CST IR-Illuminator offers flexible FOV adjusted at the manufacturing state. This gives the flexibility to use the same Illuminator for different FOV matching the FOV of the camera. 4 separate IR lens clusters' technology provide AI adaptive lens ready. (Future feature) for 2 axis beam control.

Diffuser technology

The Total Internal Reflection (TIR) lens is designed specifically for infrared emitters, providing maximum Lux on target. The TIR lens collimates the LED light into efficient, well-controlled light beams that maximize the usable lumens in the target area with an absence of discomfort glare or shadows.

The result is a smooth, high quality beam of superior intensity, uniformity, designed for projector and directional lighting applications. The narrow beam options are excellent for distance lighting, supporting night surveillance applications.

Safety

This product emits non-visible infrared light, which can be hazardous depending on total system configuration (including, but not limited to optics, drive current and current and temperature). Observe safety precaution given in IEC 62471 when operating this product. **PLEASE NOTE EYE SAFETY DISTANCE OF 60cm LOOKING DIRECTLY INTO THE ILLUMINATOR, WHEN ACTIVATED.**

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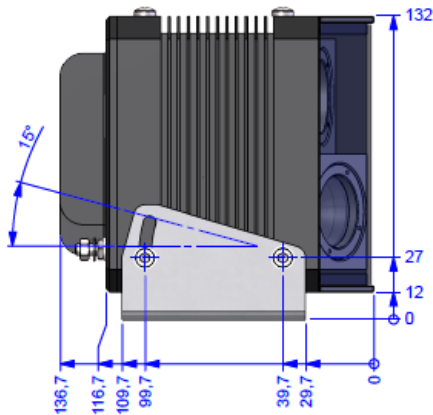
IR-Illuminator

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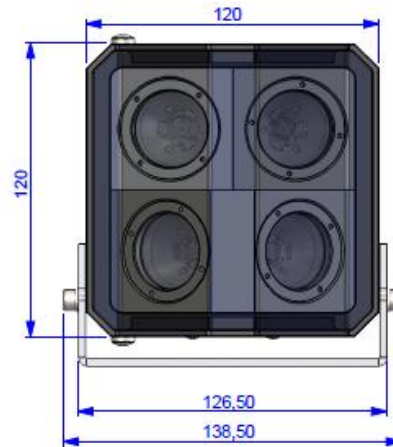
Datasheet



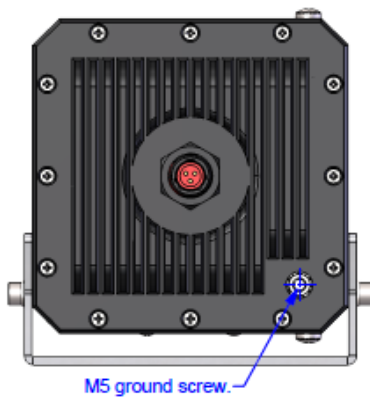
Mechanical outline and dimensions



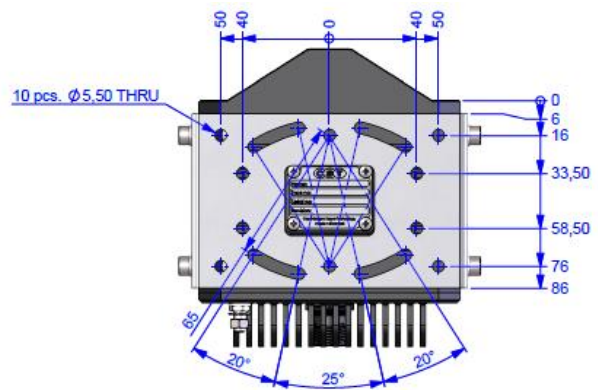
Side View



Front View



Rear view



Bottom view

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Specifications

Illuminator	
LED	High efficiency LED area in 4x4 sections
Number of total LED's	16
Wavelength	850nm or 940nm
Horizontal FOV	95°
Vertical FOV	35°
Achievable distance	Expected 50m with FOV 95°H 70°V
Overall dimensions	Note above
Mounting holes	TBD
Net weight	Max 2 kg
Electrical specifications and functions	
Connectors: Power	62GB-12E14-12PN
Operating voltage	16-36VDC def stand 61-5 pt6 issue 6
Current consumption	Nom. 45W max 50W
Environmental	
Chock/vibrations	Vibration 6.25 Grms tracked vehicles and shock 18ms @ 30g
Operating temperature	-40°C to +70°C
Storage temperature	-46°C to +71°C
Surface treatment	Chromit AL TCP / Painting
Protection	IP 67

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About Us

CST - Copenhagen Sensor Technology A/S is a privately held Danish company specialising in the design and manufacture of high-performance electro-optical solutions for demanding battlefield and surveillance applications.

Founded in 2001, CST has rapidly grown to a mature organisation, capable of serving a global customer base. In modern facilities on the outskirts of Copenhagen, Denmark, CST houses R&D, production, QA and sales and marketing functions. With a collective experience in CCD camera, optics, electronics and software development, the highly skilled staff at CST is committed to creating rugged, durable and innovative electro-optical solutions.

CST is certified to ISO 9001:2015, which applies to the whole process flow of design, development, manufacturing and testing. Furthermore, ISO 10007:2003 configuration management standards are used as a guideline for design and development activities. CST products are not restricted by ITAR.

Customer and OEM solutions

CST has a long tradition of working closely with its customers, identifying unmet needs and creating solutions with sustainable value for the users.

With a strong R&D base at the headquarters in Denmark, CST is able to provide mechanical, optical, software and hardware customisations while meeting the toughest requirements for military, homeland security and high-end surveillance applications.

Whether the need calls for a ruggedized high-precision zoom lens or a highly sensitive CCD camera, or a complete system comprising lens, camera and advanced video processing, CST can offer a fast-track design process. Contact us to discuss your specific requirements. Together we can create a solution that provides the best price and performance ratio.

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