

Safety and Warning Instruction Sheet For VLR Products

Consult www.sick.com for more information

*** Read this instruction sheet before attempting to use the product ***

Thank you for purchasing a Sick VLR product. To properly use the product and take full advantage of the functionality, read the instruction sheet before using the product. After reading the instruction sheet, store it in a safe and readily accessible location.

Safety Precautions

Information in this instruction sheet marked with a "▲WARNING" "▲CAUTION" or "▲IMPORTANT" is provided to help prevent injury, electrical shock and other accidents. Be sure to follow the information provided.

▲ WARNING

- Do not disassemble or modify the product. There is a danger of fire or electrical shock.
- Connect the illumination cable directly to the illumination power supply. Using power strips or otherwise overloading a power outlet into which the illumination power supply is connected may cause fires. When it is necessary to use an extension cable, use the optional extension cable.
- The illuminator device becomes very hot depending on the mounting, the environmental temperature and the mode of operation. Do not touch with your hands during operation.
- Do not touch the LED lighting or cable with wet hands, there is a danger of electrical shock.
- In the event of a malfunction, such as the LED lighting emitting smoke, overheating, giving off a strange odour or making strange noises, stop operating immediately. Turn OFF the power supply and unplug the cable from the power outlet.
- Do not look directly into the LED light. LEDs emit incoherent light from a larger emitting area compared to a semiconductor laser, so for the same output power the power density is lower. However, avoid looking directly into any bright light or looking directly at the light for an extended period while the strobe is flashing. Failure to do so may adversely affect the eyes. Using procedures not included in this manual may result in harmful exposure to LED irradiation.

▲ CAUTION

- When using illuminator devices with a power consumption of 10W or more without a cooling fan, use the ON/OFF external control or other functions to suppress warming of the illuminator devices and avoid keeping the illuminator devices continuously lit.
- If it is necessary to use an extension cable, use a cable with a max length of 5 m. If a cable longer than 5 m is used, the DC resistance of the cable will reduce the voltage applied at both ends of the LED light. Even when using 100% modulated light, the rated voltage level will not be achieved and the light intensity will be reduced. The total cable length is limited to max. 10 m

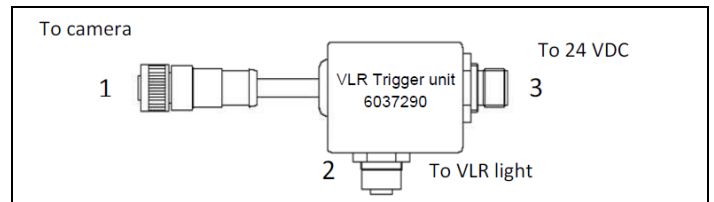
▲ IMPORTANT

- When plugging in or unplugging the power cable to the light, be sure to turn off the power supply first. Circuit damage, small sparks, fire and shocks may result if the power cable is plugged in or unplugged while the power supply is ON.
- Take measures to suppress the heat emitted by the LED lighting. The LED life span is shortened when used in high-temperature, high humidity environments. When the LED is left ON continuously, stable performance characteristics and a long life span can be achieved by setting the modulated light volume of the power supply to 50% or less. Heat generation can be controlled and stable operation achieved by turning ON the LED only while images are being taken (intermittent illumination).
- Note the following points when using a white LED lighting with colour image processing equipment. When the LED lighting is left ON continuously, the temperature of the spotlight will rise, causing changes in brightness and hues. Re-adjust the camera's white balance about 60 minutes after turning ON the power of the LED lighting. When using the LED lighting for intermittent illumination, it can be used as soon as the power is turned ON.
- Static electricity built up in the human body may be released when a person comes into contact with parts of the LED, such as the LED mounting plate, possibly damaging the illuminator device. Do not allow objects charged with static electricity near the illuminator device.
- VLR light products are designed and built for use as illumination in image processing applications. The following uses are not covered under warranty: Use under conditions or in an environment not described in this instruction sheet. Use in nuclear power control, railways, aircraft, vehicles, combustion equipment, medical applications, amusement devices or safety devices. Use in which there is a large and foreseeable risk to life and property, particularly applications demanding a high level of safety.
- VLR Trigger unit is only intended for use with VLR lights. If used with other light types the Trigger unit may not work properly or and misuse can lead to broken VLR Trigger unit.
- VLR Trigger unit is not short circuit protected.
- Reverse polarity protection is only valid for connected VLR lights, not for other electrical loads.

Wiring

This section describes the wiring possibilities with VLR products

VLR Trigger unit



Pin	Connector 1, M12 8-pin female	Connector 2, M12 4-pin female	Connector 3, M12 8-pin male
1	Trigger in	+24 VDC	Trigger in
2	+24 VDC	Not in use	+24 VDC
3	Out 0		Out 0
4	Out 1	Not in use	Out 1
5	In 1		In 1
6	In 2		In 2
7	GND		GND
8	Trigger out, active low		Trigger out, active low

Connecting VLR Trigger unit to IVC-2D

- Connect IVC-2D power connector via connector [1] and VLR light via connector [2]
- Connect an unpowered 24 VDC power supply to connector [3] before switching on the power supply

Connecting VLR Trigger unit to Inspector

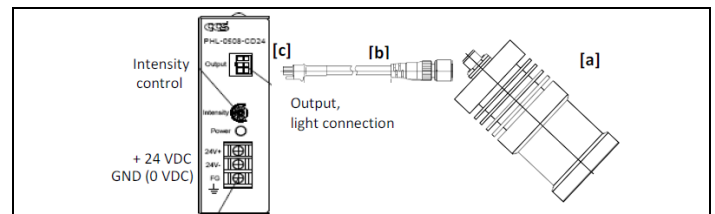
- Use T-adapter 6034950 and screw it into Inspector power connector
- Connect the T-adapter (6034950) via cable 6026625 (1m/8-pin/male/female) to [3] and VLR-light via connector to [2]. (Connector [1] is not used)
- Connect an unpowered 24 VDC power supply via cable (6034604/2m/12pol/female) to T-adapter (12-pol) before switching on the power supply

Pin configuration of VLR lights with M12 4-pin male connector

Pin	M12 4-pin male connector
1	+24 VDC
2	Not in use
3	GND
4	Not in use

Connection of VLR-XXPL1011

VLR-XXPL1011P01 is a kit and contains the necessary parts for proper connection. Use only these parts as a complete kit. Use connection cable [b] when connecting the spot light [a] to the power supply [c]. Switch on the power supply.



Safety Standards

WARNING: OPTICAL RADIATION
VISIBLE LED LIGHT, $\lambda = 400 - 800\text{nm}$
DO NOT STARE INTO BEAM
RISK GROUP 1 (LOW RISK)
According to IEC 62471:2006



ISM High Frequency statement

ISM high frequency classification EN 55011: Group 1, class A. Warning: Devices in class A are designed for operation in an industrial environment.

