

# Handling Precautions for Laser Lights

Light for Machine Vision  
and Industrial Inspection



Thank you for purchasing a CCS product. To ensure proper use of the product, please read this instruction guide before use and keep it for your future reference.

## 1 Introduction

This product is a light used for machine vision and industrial inspection. Do not use the product for other applications, and be sure to follow the instructions below.

### Do not use the product in the following situations.

- Under conditions or in an environment not described in this document .
- In nuclear energy control systems, railroad systems, aviation systems, vehicles, combustion equipment, medical equipment, amusement machines, or safety equipment.
- In applications involving serious risk to life or property, particularly applications demanding a high level of safety.

### Please install the product to locations with following conditions.

#### Incorrect installation location may cause product failure.

- In a flat and stable location with minimal vibration.
- Well-ventilated places with minimal dust.
- Places that are not subject to sudden temperature changes.
- Places free from any water, oil, liquid, chemical, or steam.
- Places free from corrosive or combustible gas.
- Places away from water faucets, boilers, humidifiers, air conditioners, heaters, or stoves.

### Refer to Specifications sheet that comes with the product for information on the operating temperature/humidity and storage temperature/humidity. Using the product under any other conditions may damage the product.

## 2 Important Information for Equipment Safety - Read Before Use -

This product has been designed with full consideration of safety. However, incorrect usage of the product may result in fire, electric shock, or other serious damages. Please ensure to follow the conditions below.

### The following symbols are used in this document to indicate and classify the relative importance of warnings and cautions.

	<b>Warning</b>	Indicates that incorrect usage may result in serious injury or death.		<b>Caution</b>	Indicates that incorrect usage may result in injury or property damage.
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### The following symbols in the document indicate and classify the precautions.

These symbols indicate prohibited actions.				This symbol indicates required actions.

<b>Warning</b>	
Do not disassemble or modify the product. Doing so may result in fire, electric shock, or laser exposure.	Light radiation may cause corneal or retinal abnormalities if you look directly at the light. To prevent harmful light exposure, never look directly at the light.
Do not touch the product with wet hands. Doing so may result in electric shock.	This product generates high temperatures. Do not touch the product while it is turned on or immediately after it is turned off, or burning may result. Provide cooling with a fan or other ventilation if the product is to be used in a closed space.
Make sure that the product is free of moisture or any liquid. Exposure to water may result in fire, electric shock, or product failure.	Connect or disconnect the light cable only after turning off the power supply for the light. Failure to do so may result in circuit damage, fire caused by a minute spark, or electric shock.
If the diffusion plate or body component of the light is damaged, or if abnormal condition occurs such as fuming, heat, smell, noise, or so on, stop using the product immediately, and turn the power off. A fire, electric shock, or laser exposure may result if the product is kept used.	

## 2 Important Information for Equipment Safety (Continued)

<b>Caution</b>	
Do not use user-made cables. Doing so may cause product failure. Use the CCS extension cable if it is necessary to extend the distance between the light and the power supply.	Use a power supply that is suitable for the product ratings. Using an incorrect power supply can cause product failure.
Be careful of static electricity. Damage to the light may occur, if a person charged with static electricity touches it. Keep the product away from all items charged with static electricity.	Make sure that the length of the extension cable is less than 5 m. However, if the cable is too long, the light intensity will decrease due to the DC resistance of the cable.
Do not drop the product or subject it to impact. Doing so may cause the product to malfunction.	Do not touch the connector pins directly by hand. A weak static discharge can cause product failure of light.

## 3 Confirming Product Information

### Model Name, Power Consumption, and Other Information

The following name label is attached to the light. The name label specifies the model name, power consumption, and serial number. Be sure to check the contents before using the product and handle the label with care. If the label is missing or damaged and the contents cannot be checked, please contact CCS Inc.

#### Name Label Example

MODEL	LDL2-33x8RD
INPUT	24V=n.nW
S/N	0123456789
Manufacturer:	CCS Inc. 374 Okakuencho, Kamigyo-ku, Kyoto 602-8011, Japan
EU Importer:	CCS Europe N. V. Bergensesteenweg 421B, 1600 Sint-Pieters-Leeuw, Belgium
MADE IN JAPAN	

### Safety Standards and the Laser Class

As the product is equipped with laser diodes, it is classified as one of the laser classes (Class 1 to 4) based on the safety standards for laser products. For information on the compliant safety standards and the laser class of the product, refer to *Specifications* sheet that comes with the product.

Also, a label corresponding to the laser class is attached to the product body. For information on the location and contents of the label, refer to *Outline Drawing* that comes with the product.

- Contents of this Instruction Guide may be changed without prior notice.
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