

Coaxial Unit Operation Guide

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.

- This product is designed for use with the Line Lights LNSP2 series. Mount the product on the Light Unit to enable coaxial lighting from the same optical axis as the camera lens.
- Do not mount the product on the Light Unit of any other series. Confirm applicable models and use the product correctly.

1 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 instruction guide to indicate and classify the relative importance of warnings and cautions.

	Warning	Indicates that incorrect usage may result in serious injury or death.		Caution	Indicates that incorrect usage may result in injury or property damage.
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■ The following symbols in the instruction guide indicate and classify the precautions.

PROHIBITED	DISASSEMBLY PROHIBITED	DO NOT TOUCH WITH WET HANDS	DO NOT SUBJECT TO MOISTURE	MANDATORY ACTIONS
These symbols indicate prohibited actions.				This symbol indicates required actions.

Warning	
Do not disassemble or modify the Coaxial Unit. Doing so may result in fire or electric shock.	Coaxial light from the Coaxial Unit mounted on the Light Unit may cause corneal or retinal abnormalities if you look directly at the light. To prevent harmful light exposure, never look directly at the irradiation from the Coaxial Unit.
Make sure that the Coaxial Unit is free of moisture or any liquid. Exposure to water may result in fire, electric shock.	The Coaxial Unit becomes very hot in use. Do not touch the Coaxial Unit while the Light Unit is turned on or immediately after it is turned off. Doing so may cause burn. Provide cooling with a fan or other ventilation if the Coaxial Unit is used in a closed space.
If abnormal condition occurs such as fuming, heat, smell, noise, or so on, stop using the Coaxial Unit immediately, and turn off the power source. A fire or electric shock may result if the Coaxial Unit is kept used.	Disconnect the Light Unit from the Control Unit before mounting or removing the Coaxial Unit. Failure to do so may result in fire or electric shock.

Caution	
Do not drop the Coaxial Unit or subject it to impact. Doing so may cause damage to the Coaxial Unit.	Mount the Coaxial Unit onto the applicable model. Mounting the Coaxial Unit onto another model is not included in the warranty.

■ Do not use the Coaxial Unit in the following situations.

- Under conditions or in an environment not described in this instruction guide.
- 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 Coaxial Unit to locations with following conditions. Incorrect installation location may cause Coaxial Unit failure.

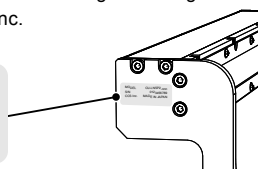
- In a flat and stable location with minimal vibration.
- Well-ventilated places with minimal dust.
- Places that are not subject to sudden temperature changes.
- Places free from any water, oil, liquid, chemical, or steam.
- Places free from corrosive or combustible gas.
- Places away from water faucets,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

2 Confirming Product Information

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

Label (Example)

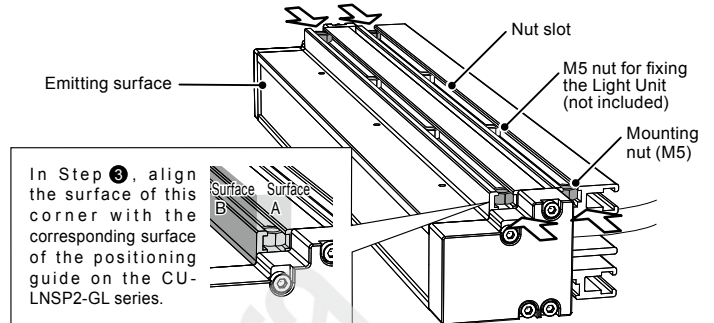
MODEL CU-LNSP2-nnn-GL
S/N 0123456789
CCS Inc. MADE IN JAPAN



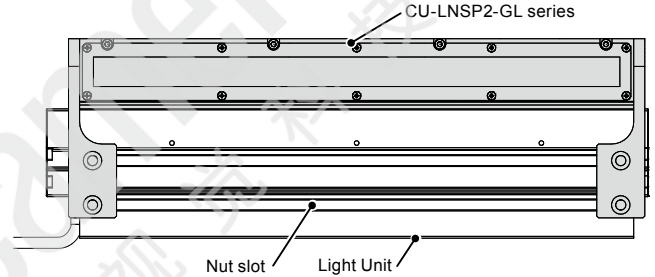
Warning Make sure that the Light Unit is disconnected from the Control Unit before installation.

Caution Thin and delicate glasses are used for the CU-LNSP2-GL Series. Do not drop it or subject it to impact. Doing so may cause damage to the CU-LNSP2-GL Series.

- 1 Place the Light Unit as shown in the figure below, and insert the included mounting nuts into the nut slot.
 - To fix the Light Unit to the place using the nut slots on the top side, additionally insert the M5 nuts into the nut slot beforehand as necessary.
 - The CU-LNSP2-GL series cannot be mount onto the bottom side of the Light Unit in the figure below.



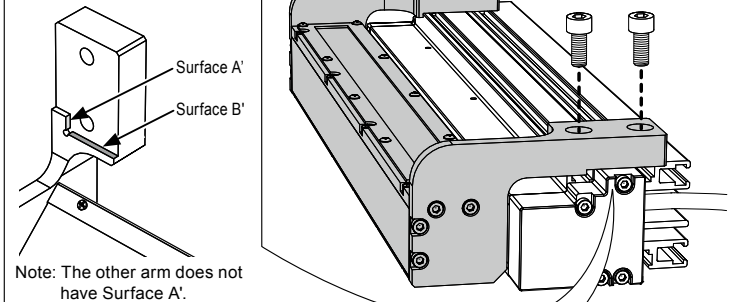
- 2 Mount the CU-LNSP2-GL series onto the Light Unit.



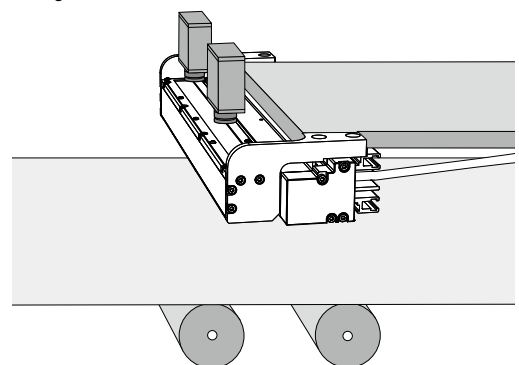
- 3 Position the CU-LNSP2-GL series by aligning the guide with the corner of the Light Unit and tighten the included Mounting screws.

Positioning guide

There are guiding surfaces on the back side of the arm. Align each guiding surface with the corresponding surface of the corner on the Light Unit.



- 4 Fix the Light Unit to the place after mounting the CU-LNSP2-GL series on it. For information on installation and usage of the Light Unit, refer to the instruction guide of the Light Unit.



If you need high resolution imaging, please contact CCS Inc.

3 Installation (Continued)

Precautions

- Ghost images (double vision) of the inspection object may appear due to reflection from the half mirror inside the CU-LNSP2-GL series. It is impossible to remove these images because of the characteristics of the CU-LNSP2-GL series.
- Dust, dirt, or fingerprints on the glass portions of the CU-LNSP2-GL series may affect the captured image. In that case, clean the CU-LNSP2-GL series as follows:
 - Remove dust and dirt by blowing it off with air. Do not touch the CU-LNSP2-GL series with your hand.
 - Use a soft, finely woven cloth to wipe away any marks, such as fingerprints.
 - Use a soft, finely woven cloth soaked with diluted neutral detergent to remove any heavy dirt.

Handle the CU-LNSP2-GL series with care during daily use. Make sure no dust, dirt, or fingerprints adhere to the CU-LNSP2-GL series.

4 Main Specifications

Common Specifications

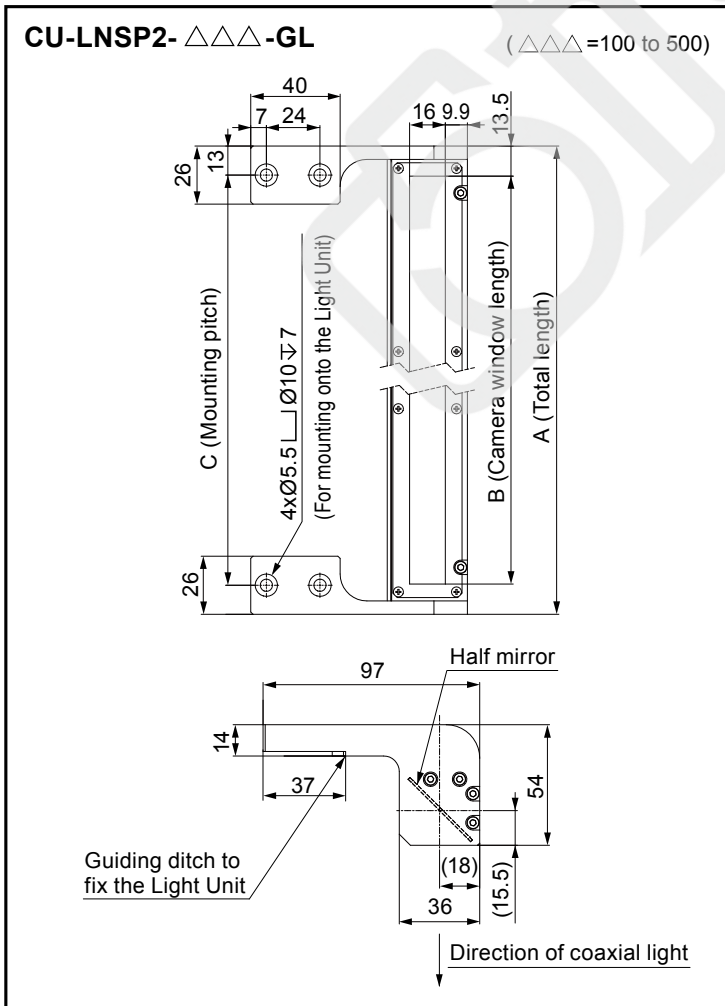
Operating env. (indoors only)	Temperature: 0 to 40°C, Humidity: 20 to 85%RH (with no condensation)
Storage environment	Temperature: -20 to 60°C, Humidity: 20 to 85%RH (with no condensation)
Case material	Aluminum alloy, Glass
Accessories	Operation guide x1, Mounting nuts (M5) x4, Mounting screws (M5) x4

Specifications by Model

Model name	Applicable model*	Weight (g)	Dimensions (mm)		
			A: Total length	B: Camera window length	C: Mounting pitch
CU-LNSP2-100-GL	LNSP2-100SW	250	112	85	86
CU-LNSP2-200-GL	LNSP2-200SW	350	212	185	186
CU-LNSP2-300-GL	LNSP2-300SW	450	312	285	286
CU-LNSP2-400-GL	LNSP2-400SW	550	412	385	386
CU-LNSP2-500-GL	LNSP2-500SW	650	512	485	486

* The CU-LNSP2-GL series is applicable also to the NDF type Light Units.

5 Dimensions (mm)



Warranty Information

EXCEPT FOR THE EXPRESS WARRANTIES STATED IN THIS DOCUMENT, CCS MAKES NO ADDITIONAL WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, AS TO ANY MATTER WHATSOEVER. IN PARTICULAR, ANY AND ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. EXCEPT AS EXPRESSLY SET FORTH HEREIN, CCS MAKES NO WARRANTIES WITH RESPECT TO THE PRODUCTS.

WARRANTY PERIOD: TWO YEARS, STARTING FROM CCS Inc. SHIPPING DATE.

CCS Inc. WILL REPAIR OR REPLACE THE PRODUCT FREE OF CHARGE IF IT SHOULD FAIL TO FUNCTION WITHIN THE SPECIFIED WARRANTY PERIOD. IF EITHER OF THESE CONDITIONS OCCURS, PLEASE TAKE THE PRODUCT TO YOUR CCS SALES REPRESENTATIVE.

WARRANTY TERMS

1 CCS Inc. WILL REPAIR OR REPLACE THE PRODUCT FREE OF CHARGE IF IT SHOULD FAIL TO FUNCTION UNDER USE ON OUR SPECIFIED CONDITION IN ACCORDANCE WITH THE INSTRUCTION GUIDE AND OTHER WRITTEN CAUTIONS DURING THE INDICATED WARRANTY PERIOD OF SIX MONTHS.

2 CCS Inc. WILL CHARGE A REPAIR FEE UNDER THE FOLLOWING CONDITIONS:

- 1) IF THE PRODUCT HAS BEEN SUBJECTED TO MISUSE, UNAUTHORIZED REPAIRS, OR MODIFICATION FROM ITS ORIGINAL DESIGN.
- 2) IF THE PRODUCT HAS BEEN DAMAGED FROM IMPACTS DUE TO INAPPROPRIATE HANDLING.
- 3) IF DAMAGE TO THE PRODUCT RESULTS FROM EXTERNAL CAUSES INCLUDING ACCIDENTS, FIRE, POLLUTION, RIOTS, COMMUNICATION FAILURES, EARTHQUAKES, THUNDERSTORMS, WIND AND FLOOD DAMAGE, OR ANY OTHER ACT OF PROVIDENCE, OR FROM ANY EXTRAORDINARY CONDITIONS SUCH AS ELECTRICAL SURGES, WATER LEAKAGE, CONDENSATION, OR THE USE OF CHEMICALS.
- 4) IF THE DAMAGE RESULTS FROM CONNECTION TO ANY LIGHT UNIT OR TO ANY EQUIPMENT WHICH CCS Inc. DOES NOT MANUFACTURE OR DOES NOT SPECIFY FOR USE.

3 CCS ASSUMES NO LIABILITY FOR ANY PURCHASER'S SECONDARY DAMAGE (DAMAGE OF EQUIPMENT, LOSS OF OPPORTUNITIES, LOSS OF PROFITS, ETC.) OR ANY OTHER DAMAGE RESULTING FROM A FAILURE OF OUR PRODUCT.

THIS WARRANTY INFORMATION PROVIDES THE SCOPE OF CCS'S PRODUCT WARRANTY WITHIN THE SPECIFIED PERIOD, AND DOES NOT INDICATE OR IMPLY ANY FURTHER GUARANTEE BEYOND THE WARRANTY TERMS.

CONTACT CCS FOR INQUIRIES OR INFORMATION ON REPAIRS TO THE PRODUCT AFTER THE EXPIRATION OF THE WARRANTY.

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