

FOR IMMEDIATE RELEASE

**CCS Releases LN2 Series:
Industry-Leading Brightness Enhances Inspection Accuracy and Speed
New line scan lighting achieves 5 million lx with natural air cooling**

Kyoto, Japan, June 27, 2025 –CCS Inc. (CCS) will release the LN2 Series of lighting for line scan cameras^{*1} on June 30, 2025.

The LN2 Series features high output with a maximum illuminance of 5 million lx^{*2}, capturing sufficient light for inspection with line-scan cameras, even with high-resolution cameras and within short exposure times, thereby improving inspection accuracy and speed.

CCS offers a lineup of three types: two “convergent type” models suitable for detecting defects in inspection objects with low reflectivity, and one “bi-directional angled type” for detecting defects such as scratches in the moving direction that are difficult to detect with the convergent type due to the way light is reflected. This lineup enables a wide range of applications.

In recent years, the market for line scan cameras has been expanding^{*3} along with the growth of electrode sheet and film sheet manufacturing.

In addition, the increasing demand for inspections with higher resolution and speed is accelerating the need for more high-output lighting.

In particular, inspections of products with low reflectance, such as dark rubber sheets, or products that transmit light, such as transparent film sheets, are challenging since these materials reflect less light. When manufacturers attempt to increase conveyor speed or resolution, the brightness of conventional products can be insufficient. To resolve this problem, CCS developed higher-output lighting for line scan cameras.

With CCS’s unique optical design (patent pending in Japan) and heat dissipation design, this series achieves one of the highest illuminance levels^{*4} in the industry—5 million lx—among lights with natural air cooling,^{*5} enabling high-speed, high-resolution image inspections.

Furthermore, with a lineup of three types of products according to the inspection object, it can be used for various inspections, such as foreign material inspection of electrode sheets for secondary batteries and scratch inspection on film sheets for electronic components.

^{*1} Industrial cameras used for inspecting sheet products such as film and printed materials, as well as cylindrical products, capture images by moving the object and scanning it line by line. High pixel count and high resolution images can be obtained.

^{*2} Measured values at light working distance (LWD) 40 mm using LN2-NE-300SW.

^{*3} Source:

"Current Status and Future Outlook of the Image Processing System Market in 2025" Fuji Keizai Co., Ltd. 「2025 年版 画像処理システム市場の現状と将来展望」

Line scan camera (FA) market size trends: 19.3 billion JPY (2023), 19.6 billion JPY (2024), and 21.0 billion JPY (forecast) in 2025 (in terms of value).

^{*4} According to CCS research as of May 2025.

^{*5} A cooling method that dissipates heat through natural convection, radiation, and conduction, without the use of external power sources such as fans.



Convergent type
LN2-NE-300SW (LWD less than 65 mm)
LN2-FA-300SW (LWD 65 mm or more)



Bi-directional angled type
LN2-IS-300SW

■ Lineup

Convergent type (For LWD under and over 65 mm)

Two types are available with different focal points depending on the LWD (light working distance). The type for LWD less than 65 mm achieves approximately five times^{*6} the illuminance of CCS conventional products, making it ideal for applications where the light source is positioned close to the workpiece. The type for distances of 65 mm or more ensures sufficient brightness even when the light cannot be placed near the inspection objects. It allows customers to choose the best option for their inspection environment.



Illumination Structure:
Illumination is configured to target a specific location

Application example ►
Foreign material inspection on metal sheets



Bi-directional angled type

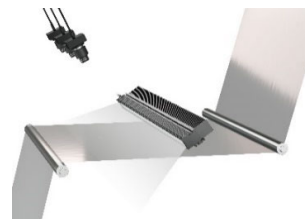
The bi-directional angled type illuminates in an oblique direction. It is effective in inspecting defects that are difficult to detect with the convergent type, such as film sheet scratches or wrinkles that are parallel to the line direction.

The illuminance is approximately six times^{*7} higher than that of CCS conventional products, enabling both high-speed and high-resolution inspections.



Illumination structure:
Emits crossed light from the emitting surface

Application example ►
Inspection of scratches and wrinkles in the conveyor direction
(Streak inspection)



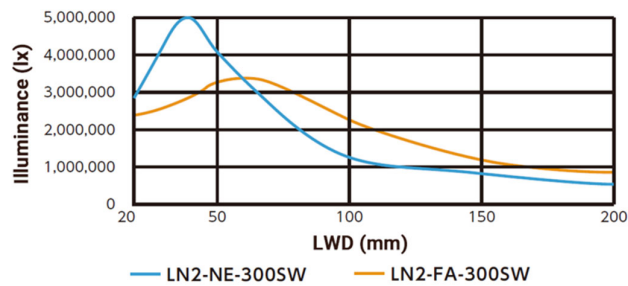
^{*6} Comparison of actual measured values of CCS conventional product LN2-NE-300SW and LN2-NE-300SW at LWD 50 mm.

^{*7} Comparison of actual measured values of CCS conventional product LN2-IS-300SW and LN2-IS-300SW at LWD 50 mm.

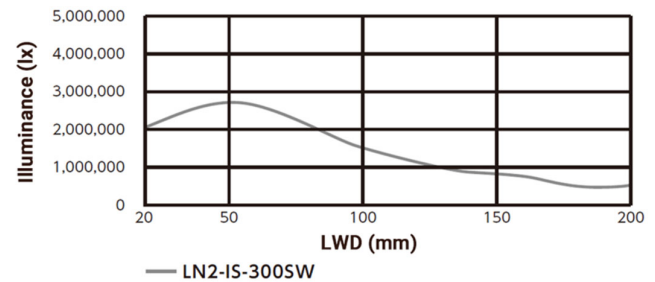
■ Illuminance Change Graph*8

Convergent type

(LWD less than 65 mm type/65 mm or more type)



Bi-directional angled type



■ Common Specifications

Series Name	LN2 Series		
Model Name*9	LN2-NE-▲▲SW	LN2-FA-▲▲SW	LN2-IS-▲▲SW
LED Color	White		
Correlated Color Temperature	6,500 K		
Emitting Surface Size	75 to 3,000 mm (in 75 mm increments)		
Cooling Method	Natural air cooling		
Main Applications	Surface inspection and defect detection of film sheets, glass, metals, etc.		

*8 The graphs shown are for reference only. Actual values may vary.

*9 ▲▲ indicates the emitting surface size.

Since 1993, CCS has advanced the machine vision industry by developing LED lighting for inspection that creates customer satisfaction for both manufacturers and their consumers, who demanded safe, high-quality goods. Today, CCS leads the machine vision world in innovation with thousands of products including lights, controllers, and accessories. CCS's global network of employees is dedicated to helping manufacturers capture the most important details in an inspection so that their customers never receive anything less than their highest quality.

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