

Uses original converging technology to achieve illumination with reduced diffusion



LNSP-600SW

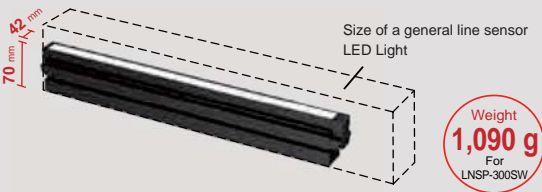
**Applications** Inspection for parts mounted on circuit boards, inspection for scratches on clear film, inspecting alignment for label seals, visual inspection of cans, inspection for unevenness in sheet metal, etc.

➤ Illuminance of 400,000 lx\* with Natural Air Cooling

\* At the LWD of 50 mm

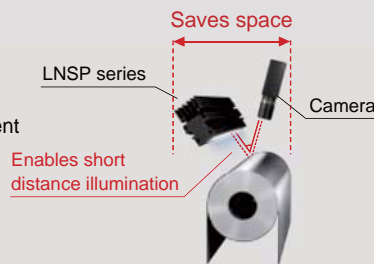
➤ Achieving both high output and compact space

Achieved a more compact design compared to LED Lights for general high output line sensors.



➤ Saving space for your inspection environment

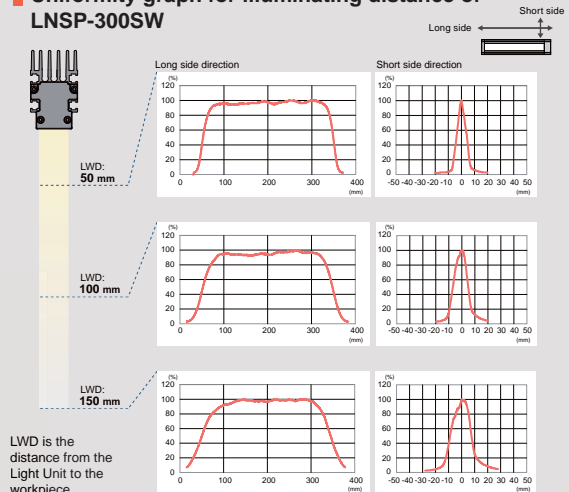
By making the Light Unit more compact, we contribute to saving space in your inspection environment or equipment environment.



➤ Unique Illuminating Mechanism with Little Light Diffusion

By controlling light diffusion through the unique illuminating mechanism, there is little change in the brightness due to distance, so you can flexibly set the distance between the workpiece and the Light Unit. Uses constant-voltage control.

➤ Uniformity graph for illuminating distance of LNSP-300SW

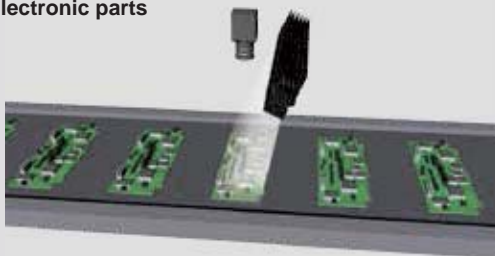


LWD is the distance from the Light Unit to the workpiece.

The graph included is for reference only. Actual values may vary.

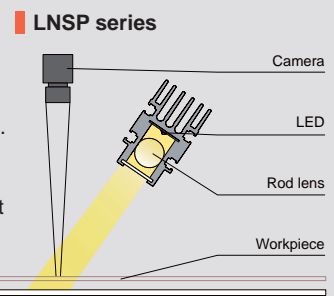
➤ Applications

➤ Visual inspection of circuit boards mounted with electronic parts



➤ Example Configuration

Achieves high output illumination with controlled diffusion due to this unique illuminating mechanism. Because light does not easily diffuse, there is little loss for the amount of light, allowing for illumination over long distances.



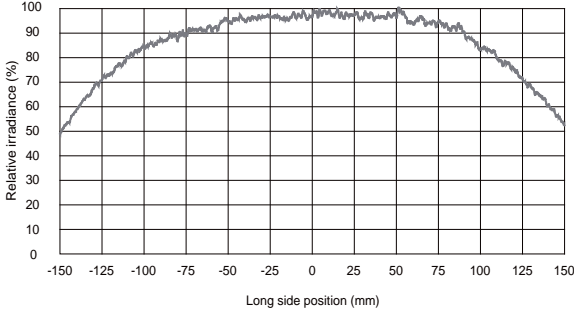
LDR2	Direct Lighting
LDR2-LA	Direct Lighting
LDR-LA1	Direct Lighting
SQR	Direct Lighting
SQR-TP	Direct Lighting
HPR2	Diffused Lighting
LFR	Diffused Lighting
LKR	Diffused Lighting
FPR	Diffused Lighting
FPQ2	Diffused Lighting
LDL2	Direct Lighting
LDLB	Direct Lighting
HLDL2	Direct Lighting
HL	Direct Lighting
TH2 (5 types)	Direct Lighting
TH	Direct Lighting
LFL	Diffused Lighting
HPD2	Diffused Lighting
LDM2	Diffused Lighting
LAV	Diffused Lighting
PDM	Diffused Lighting
LFX3	Diffused Lighting
LFX3-PT	Diffused Lighting
LFV3	Diffused Lighting
MSU	Strobe, Colored Lighting
MFU	Strobe, Colored Lighting
PF	Strobe, Colored Lighting
HLDR-IP/ HSL-PCL	Water-proof Lighting
UV2	Ultraviolet Lighting
UV	Ultraviolet Lighting
LNSP-UV-FN	Ultraviolet Lighting
IR2	Infrared Control Lighting
IU	Infrared Control Lighting
HLV3	Spot Lighting, Etc.
HLV2	Spot Lighting, Etc.
LV	Spot Lighting, Etc.
LSP	Spot Lighting, Etc.
HFS/HFR	Spot Lighting, Etc.
HLV3-NR	Spot Lighting, Etc.
HLV3-3M-RGB-4	Spot Lighting, Etc.
HLV2-NR	Spot Lighting, Etc.
HLV2-3M-RGB-3W	Spot Lighting, Etc.
PFB3	Spot Lighting, Etc.
PFB3	Spot Lighting, Etc.
PFB2	Spot Lighting, Etc.
LNSP	Convergent Lighting
LNSP2	Convergent Lighting
LNSP	Convergent Lighting
Coaxial Units	Convergent Lighting
LNSP-FN	Convergent Lighting
LN/LN-HK	Convergent Lighting
LNSD	Diffused Lighting
LND2	Diffused Lighting
HLND	Diffused Lighting
LT	Diffused Lighting
LNV	Diffused Lighting
LNDG	Oblique Angled Lighting
LNIS2	Oblique Angled Lighting
LNIS	Oblique Angled Lighting
LNIS-FN	Oblique Angled Lighting
Telecentric Lens	Lenses
Macro Lens	Lenses

**Data** (Representative Example)

The graph included is for reference only. Actual values may vary.

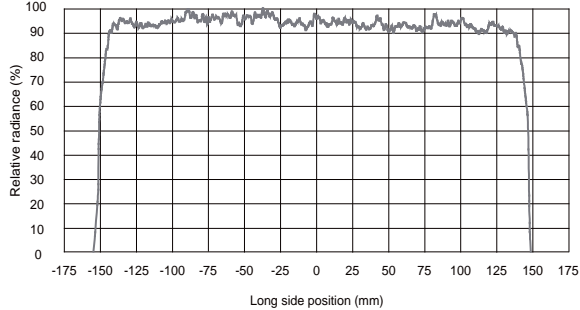
**LNSP-300SW**

Relative irradiance distribution



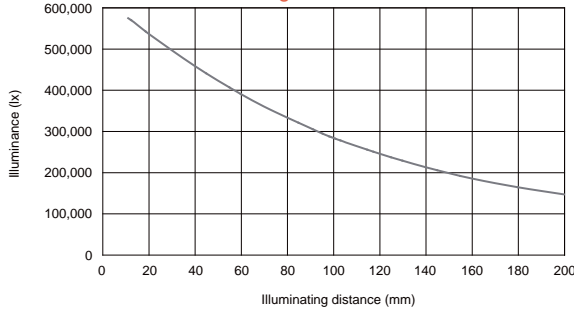
Actual measurement values at 100% intensity in 100 mm illuminating distance. Results for individual products may vary.

Relative radiance distribution



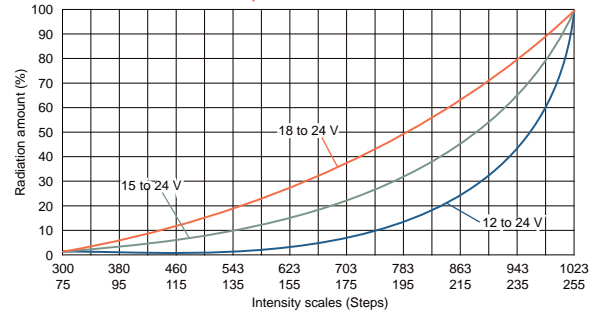
The graph included is for reference only. Actual values may vary.

Change in illuminance



Actual measurement values at 100% intensity in each illuminating distance. Results for individual products may vary.

Output characteristics



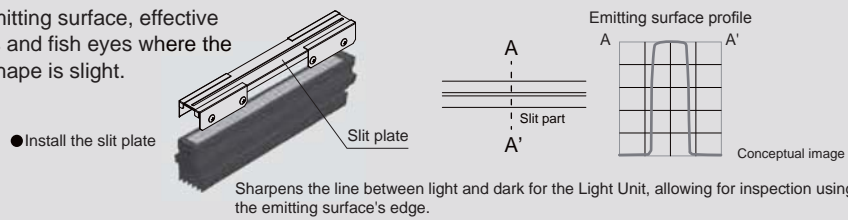
Actual measurement values using the Analog Control Unit PSB4-30024-PEI. Results for individual products may vary. Measured in each voltage range because the Analog Control Unit PSB4-30024-PEI has a switching function for the lower limit of the output voltage.

**Custom Orders**

Please contact your sales representative.

Example 1: Slit specifications (Install a slit plate on the emitting surface)

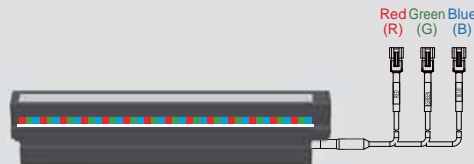
Result: Uses the edge of the emitting surface, effective for inspections for dents and fish eyes where the change in the surface shape is slight.



Sharpens the line between light and dark for the Light Unit, allowing for inspection using the emitting surface's edge.

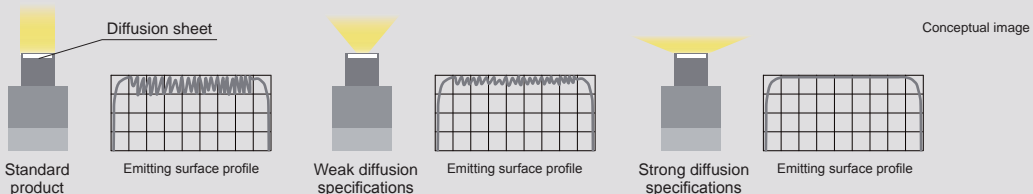
Example 2: Full color (RGB) specifications

Result: Because each emitted color (red, green, blue) can be controlled separately, this is effective for sheet inspections of different models on the same line.



Example 3: High uniformity specifications

Result: Achieved higher uniformity than a standard product by replacing the diffusion sheet.



Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FPQ2
Direct Lighting	LDL2 LDLB HLDL2 HL
	TH2 (5 types) TH LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFV3
Diffused Lighting	MSU MFU
Strobe Lighting	PF
Water-proof Lighting	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV UV LNSP-UV-FN
Infrared Control Lighting	IR2
	IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-4 HLV2-NR HLV2-3M-RGB-3W PFBR PFB3 PFB2
Convergent Lighting	LNLP LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK
Diffused Lighting	LNSD LND2 HLND LT LNV
Oblique-Angled Lighting	LNDG LNIS2 LNIS LNIS-FN
Lenses	Telecentric Lens Macro Lens

# LNSP Series



## Lineup

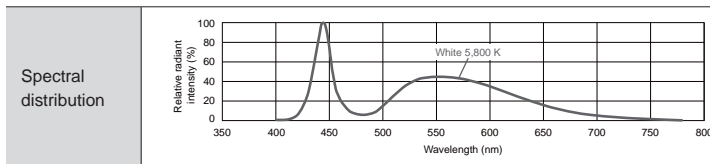
Model name	LED color	Power consumption	Correlated color temperature	Extension cables	Recommended Control Units	Weight	
Standard products	White	24 V / 21 W	5,800 K	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7	PSB4-30024-PEI	430 g	
		LNSP-100SW				24 V / 41 W	760 g
		LNSP-200SW				24 V / 61 W	1,090 g
		LNSP-300SW				24 V / 81 W	1,420 g
		LNSP-400SW				24 V / 101 W	1,740 g
		LNSP-500SW				24 V / 121 W	2,070 g
		LNSP-600SW				24 V / 142 W	2,400 g
		LNSP-700SW				24 V / 162 W	2,730 g
		LNSP-800SW				24 V / 182 W	3,050 g
		LNSP-900SW				24 V / 202 W	3,380 g
Special orders	White	24 V / 222 W	5,800 K	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7 x 2 *	PSB4-30024-PEI x 2 *	3,700 g	
		LNSP-1100SW				24 V / 242 W	4,000 g
		LNSP-1200SW				24 V / 263 W	4,300 g
		LNSP-1300SW				24 V / 283 W	4,600 g
		LNSP-1400SW				24 V / 299 W	4,900 g
		LNSP-1500SW				24 V / 324 W	5,300 g
		LNSP-1600SW				24 V / 344 W	5,700 g
		LNSP-1700SW				24 V / 364 W	6,100 g
		LNSP-1800SW				24 V / 384 W	6,500 g
		LNSP-1900SW				24 V / 404 W	6,900 g
		LNSP-2000SW				24 V / 424 W	7,300 g
		LNSP-2100SW				24 V / 444 W	7,700 g
		LNSP-2200SW				24 V / 464 W	8,100 g
		LNSP-2300SW				24 V / 484 W	8,500 g
		LNSP-2400SW				24 V / 505 W	8,900 g
		LNSP-2500SW				24 V / 526 W	9,300 g
		LNSP-2600SW				24 V / 541 W	9,700 g
		LNSP-2700SW				24 V / 562 W	10,100 g
		LNSP-2800SW				24 V / 582 W	10,500 g
		LNSP-2900SW				24 V / 598 W	10,900 g
LNSP-3000SW							

\* For sizes 1,600 mm (emitting surface) or longer, a cable comes out of each end of the Light Unit.

PSB4-30024-PEI Product Page ▶ P.295

We accept custom orders, such as changes to the LED color (red/blue/IR, etc.) and size changes. Inquire at your sales representative for details.

## LED Properties



Be sure to read the "Instruction Guide" included with the product before use and follow the safety precautions upon use. The data included is for reference only. Actual values may vary.

## Options



Model name	Applicable Light Unit
CU-LNSP-100-GL	LNSP-100SW
CU-LNSP-200-GL	LNSP-200SW
CU-LNSP-300-GL	LNSP-300SW
CU-LNSP-400-GL	LNSP-400SW
CU-LNSP-500-GL	LNSP-500SW

Coaxial Unit

CU-LNSP Product Page ▶ P.191

Allows for imaging with illumination on the same axis as the camera.

Various technical documents available.

PDF Drawings

DXF Drawings

Product Brochures

Instruction Guides

3D CAD

Data Sheets

Imaging Examples

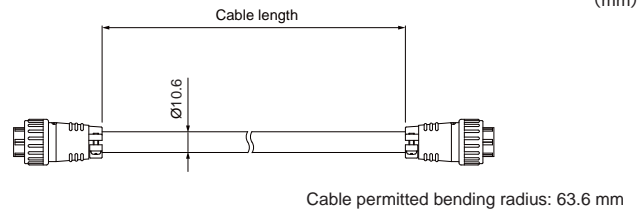
Digital Catalogs

## Extension Cables

Necessary when connecting the Light Unit to the recommended Control Unit, PSB4-30024-PEI.

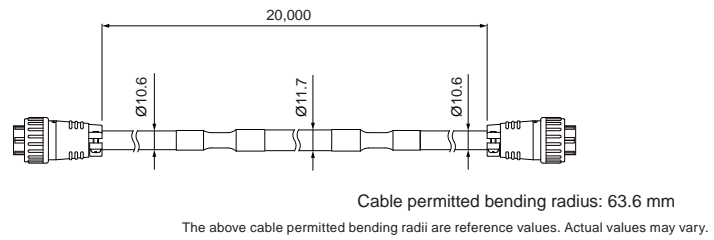
### FCB-1.25SQ-ME7

Model name	Cable length	Weight
FCB-2-1.25SQ-ME7	2 m	430 g
FCB-3-1.25SQ-ME7	3 m	580 g
FCB-5-1.25SQ-ME7	5 m	1,000 g
FCB-10-1.25SQ-ME7	10 m	2,000 g

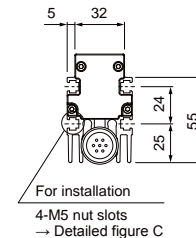
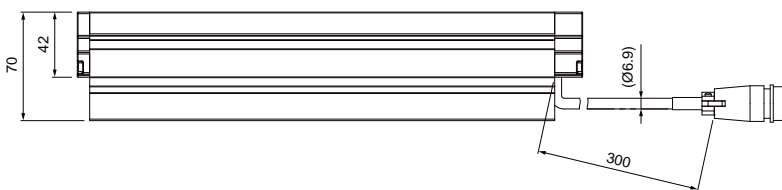
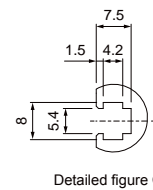
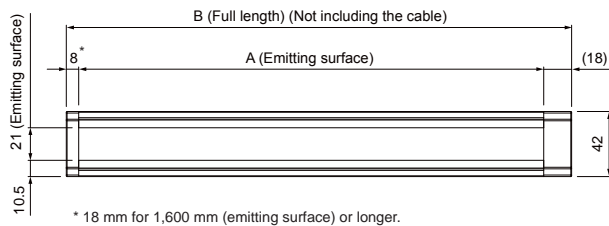


### FCB-20-2.0SQ-ME7

Model name	Cable length	Weight
FCB-20-2.0SQ-ME7	20 m	5,000 g



## Dimensions (mm)



For sizes 1,600 mm (emitting surface) or longer, a cable comes out of each end of the Light Unit.  
For sizes 1,100 mm (emitting surface) or longer, the cable radius is thick (Ø9.7).

	Model name	A (Emitting surface)	B (Full length)	Model name	A (Emitting surface)	B (Full length)	
Standard products	LNSP-100SW	100	126	Special orders	LNSP-1600SW	1,600	1,636
	LNSP-200SW	200	226		LNSP-1700SW	1,700	1,736
	LNSP-300SW	300	326		LNSP-1800SW	1,800	1,836
	LNSP-400SW	400	426		LNSP-1900SW	1,900	1,936
	LNSP-500SW	500	526		LNSP-2000SW	2,000	2,036
	LNSP-600SW	600	626		LNSP-2100SW	2,100	2,136
	LNSP-700SW	700	726		LNSP-2200SW	2,200	2,236
	LNSP-800SW	800	826		LNSP-2300SW	2,300	2,336
	LNSP-900SW	900	926		LNSP-2400SW	2,400	2,436
	LNSP-1000SW	1,000	1,026		LNSP-2500SW	2,500	2,536
Special orders	LNSP-1100SW	1,100	1,126	LNSP-2600SW	2,600	2,636	
	LNSP-1200SW	1,200	1,226	LNSP-2700SW	2,700	2,736	
	LNSP-1300SW	1,300	1,326	LNSP-2800SW	2,800	2,836	
	LNSP-1400SW	1,400	1,426	LNSP-2900SW	2,900	2,936	
	LNSP-1500SW	1,500	1,526	LNSP-3000SW	3,000	3,036	

Direct Lighting

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP

Diffused Lighting

- HPR2
- LFR
- LKR
- FPR
- FPQ2

Direct Lighting

- LDL2
- LDLB
- HLDL2
- HL

Diffused Lighting

- TH2 (5 types)
- TH
- LFL
- HPD2
- LDM2
- LAV
- PDM
- LFX3
- LFX3-PT
- LFV3

Coaxial Lighting

- MSU
- MFU

Strobe Lighting

- PF

Water-proof Lighting

- HLDR-IP/HSL-PCL

Ultraviolet Lighting

- UV2
- UV
- LNSP-UV-FN

Infrared Control Lighting

- IR2

Spot Lighting, Etc.

- IU
- HLV3
- HLV2
- LV
- LSP
- HFS/HFR
- HLV3-NR
- HLV3-3M-RGB-4
- HLV2-NR
- HLV2-3M-RGB-3W
- PFBR
- PFB3
- PFB2

Convergent Lighting

- LNLP
- LNSP2
- LNSP
- Coaxial Units
- LNSP-FN
- LN/LN-HK

Diffused Lighting

- LNLD
- LND2
- HLND
- LT
- LNv

Oblique-Angled Lighting

- LNLDG
- LNIS2
- LNIS
- LNIS-FN

Lenses

- Telecentric Lens
- Macro Lens