

Line Lights LNSP series

Refer to our website for product details.

CCS LNSP

Search



You can also use your smartphone or cell phone.

For quick access.

Uses original converging technology to achieve illumination with reduced diffusion



Applications

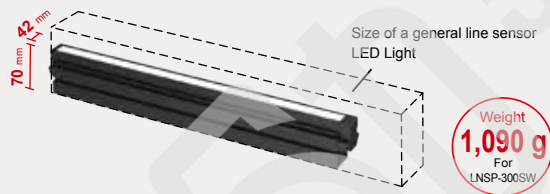
Inspection for parts mounted on circuit boards, inspection for scratches on clear film, inspecting alignment for label seals, visual inspection of cans, inspection for unevenness in sheet metal, etc.

➤ Illuminance of 400,000 lx* with a natural air cooling type

* At the LWD of 50 mm

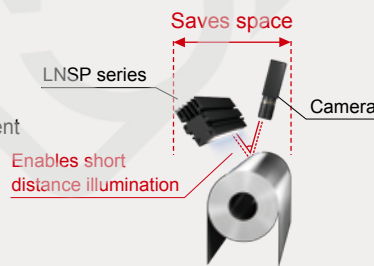
➤ Achieving both high output and compact space

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



➤ Saving space for your inspection environment

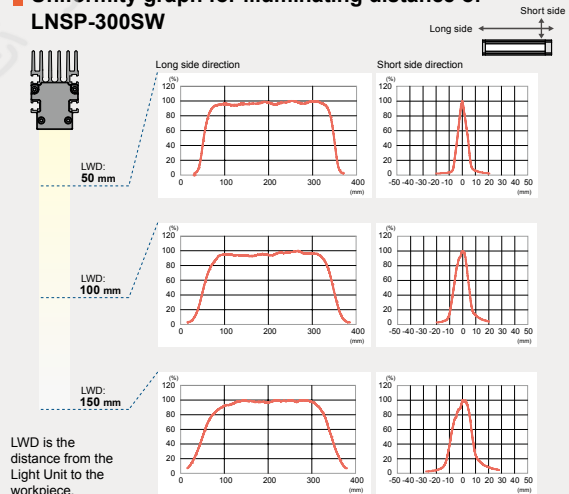
By making the Light Unit more compact, we contribute to saving space in your inspection environment or equipment environment.



➤ 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.

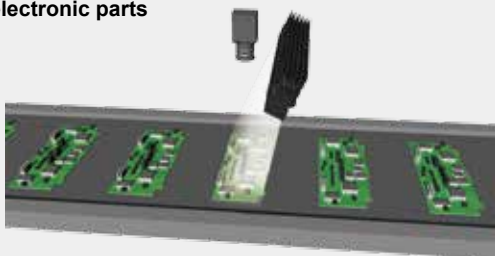
➤ Uniformity graph for illuminating distance of LNSP-300SW



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

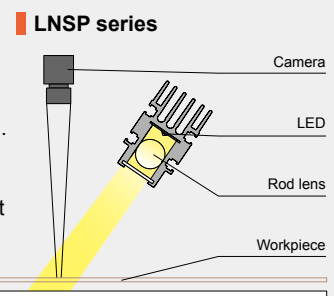
➤ Applications

➤ Visual inspection for 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
HDL2	Direct Lighting
HL	Direct Lighting
TH2 (5 types)	Direct Lighting
TH	Direct Lighting
LFL	Direct Lighting
HPD2	Diffused Lighting
LDM2	Diffused Lighting
LAV	Diffused Lighting
PDM	Diffused Lighting
LFX3	Diffused Lighting
LFX3-PT	Diffused Lighting
LFX2	Diffused Lighting
LFV3	Diffused Lighting
MSU	Collimated Lighting
MFU	Collimated Lighting
PF	Strobe Lighting
HLDR-IP/ IQ/HSL-PCL	Water-proof
UV2	Ultraviolet Lighting
UV	Ultraviolet Lighting
LNSP-UV-FN	Ultraviolet Lighting
IR2	Infrared Lighting
IU	Intensely Control
HLV2	Spot Lighting, Etc.
LV	Spot Lighting, Etc.
LSP	Spot Lighting, Etc.
HFS/HFR	Spot Lighting, Etc.
HLV2-NR	Spot Lighting, Etc.
HLV2-3M-RGB-3W	Spot Lighting, Etc.
PFB2	Spot Lighting, Etc.
PFB2	Spot Lighting, Etc.
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/HLDN	Diffused Lighting
LNDG	Oblique Angled Lighting
LNIS	Oblique Angled Lighting
LNIS-FN	Oblique Angled Lighting
Telecentric Lens	Lenses
Macro Lens	Lenses

Various technical documents available.

- PDF Drawings
- DXF Drawings
- 3D CAD
- Instruction Guides
- Product Filers
- Imaging Samples
- Data Sheets
- Examples of Custom Ordered Products

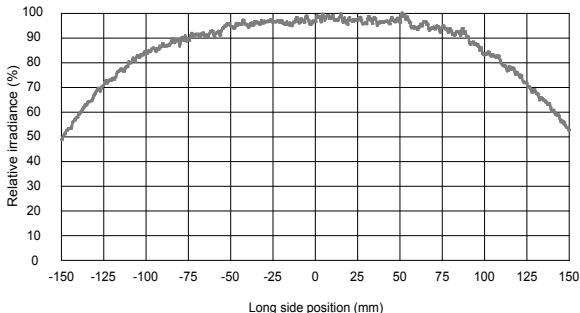
Download here.
<http://www.ccs-grp.com/dl/>

Data (Representative example)

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

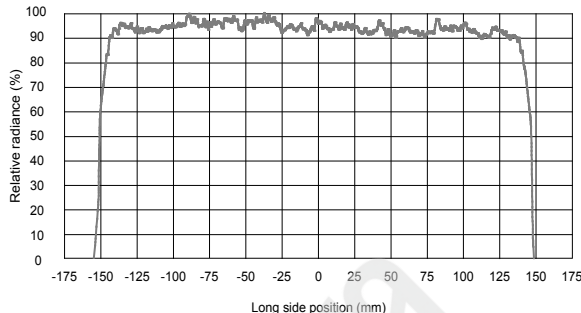
LNSP-300SW

Relative irradiance distribution



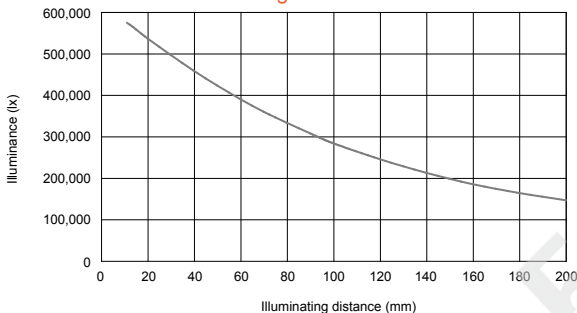
Actual measurement values at 100% intensity in 100 mm illuminating distance. Results for individual products may vary.

Relative radiance distribution



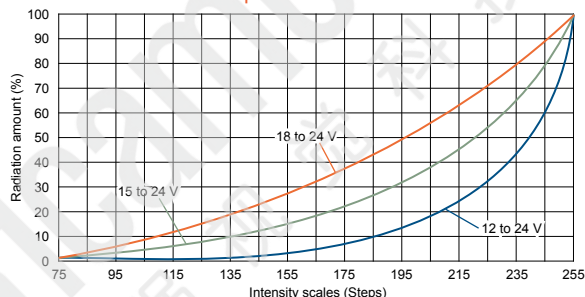
The graph included is for reference only. Actual values may vary.

Change in illuminance



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

Output characteristics



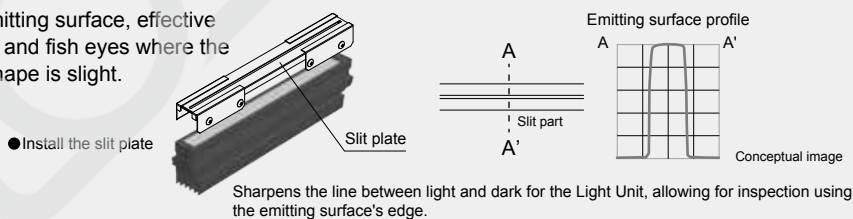
Actual measurement values using the Analog Control Unit PSB3-30024. Results for individual products may vary. Measured in each voltage range because the Analog Control Unit PSB3-30024 has a switching function for the lower limit of the output voltage.

Custom orders

Please contact your CCS sales representative.

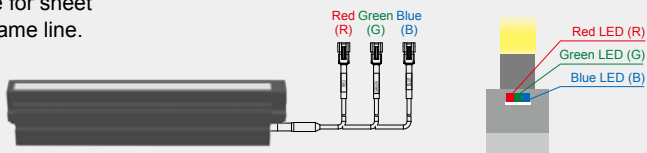
Example 1: Slit specifications (Install a slit plate on the emitting surface)

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.



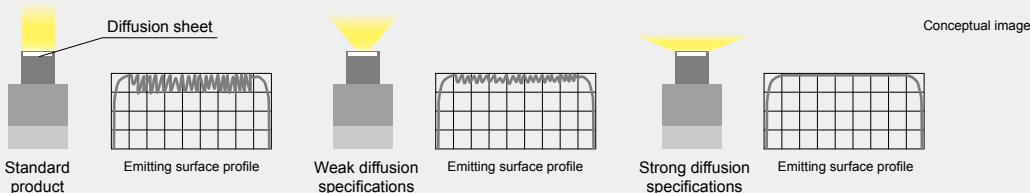
Example 2: Full color (RGB) specifications

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 LDL2 LDLB HLDL2 HL TH2 (5 types) TH LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFX2 LFV3
Direct Lighting	MSU MFU
Colimated Lighting	PF
Strobe Lighting	HLDL-IP/ IQ/HSL-PCL
Water-proof Lighting	UV2 UV LNSP-UV-FN
Ultraviolet Lighting	IR2
Infrared Lighting	IU
Intensity Control	HLV2 LV LSP HFS/HFR HLV2-NR HLV2-3M-RGB-3W PFBR PFB2
Spot Lighting, Etc.	LNL2 LNSP2 LNSP Coaxial Units LNSP-FN LN/LN-HK
Convergent Lighting	LNSD LND2 HLND LT LNV/HLDN
Diffused Lighting	LNDG LNIS LNIS-FN
Oblique Angled Lighting	Telecentric Lens Macro Lens

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Lineup

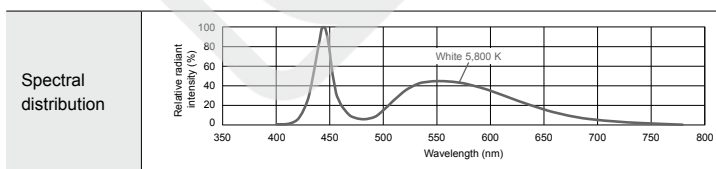
Model name	LED color	Power consumption	Correlated color temperature	Extension cables	Recommended Control Units	Weight
Standard products	White	24 V / 21 W	5,800 K	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7	PSB3-30024	430 g
		24 V / 41 W				760 g
		24 V / 61 W				1,090 g
		24 V / 81 W				1,420 g
		24 V / 101 W				1,740 g
		24 V / 121 W				2,070 g
		24 V / 142 W				2,400 g
		24 V / 162 W				2,730 g
		24 V / 182 W				3,050 g
		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	PSB3-30024	3,700 g
		24 V / 242 W				4,000 g
		24 V / 263 W				4,300 g
		24 V / 283 W				4,600 g
		24 V / 299 W				4,900 g
		24 V / 324 W				5,300 g
		24 V / 344 W				5,700 g
		24 V / 364 W				6,100 g
		24 V / 384 W				6,500 g
		24 V / 404 W				6,900 g
		24 V / 424 W		7,300 g		
		24 V / 444 W		7,700 g		
		24 V / 464 W		8,100 g		
		24 V / 484 W		8,500 g		
		24 V / 505 W		8,900 g		
		24 V / 526 W		9,300 g		
		24 V / 541 W		9,700 g		
		24 V / 562 W		10,100 g		
		24 V / 582 W		10,500 g		
		24 V / 598 W		10,900 g		

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

PSB3-30024 Product Page ▶ P.269

The emitting surface is available in sizes of 100 mm units. For details about other sizes, inquire with your CCS sales representative. In addition, we accept custom orders, such as changes to the LED color (red/blue/IR, etc.) and size changes. Inquire at your CCS 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.181

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

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP
- HPR2
- LFR
- LKR
- FPR
- FPQ2
- LDL2
- LDLB
- HLDL2
- HL
- TH2 (5 types)
- TH
- LFL
- HPD2
- LDM2
- LAV
- PDM
- LFX3
- LFX3-PT
- LFX2
- LFV3
- MSU
- MFU
- PF
- HLDR-IP/ IQ/HSL-PCL
- UV2
- UV
- LNSP-UV-FN
- IR2
- IU
- HLV2
- LV
- LSP
- HFS/HFR
- HLV2-NR
- HLV2-3M-RGB-3W
- PFBR
- PFB2
- LNL
- LNSP2
- LNSP
- Coaxial Units
- LNSP-FN
- LN/LN-HK
- LNSD
- LND2
- HLND
- LT
- LNV/HLND
- LNDG
- LNIS
- LNIS-FN
- Telecentric Lens
- Macro Lens

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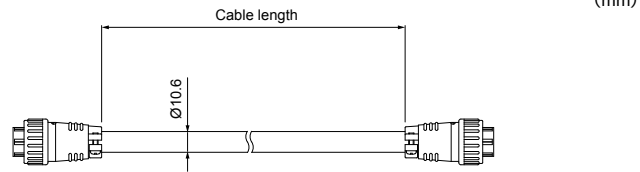
Download here. <http://www.ccs-grp.com/dl/>

Extension cables

Necessary when connecting the Light Unit to the recommended Control Unit, PSB3-30024.

FCB-1.25SQ-ME7

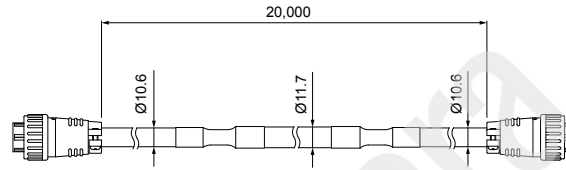
Model name	Cable length	Weight
FCB-2-1.25SQ-ME7	2 m	430 g
FCB-3-1.25SQ-ME7	3 m	580 g
FCB-5-1.25SQ-ME7	5 m	1,000 g
FCB-10-1.25SQ-ME7	10 m	2,000 g



Cable permitted bending radius: 63.6 mm

FCB-20-2.0SQ-ME7

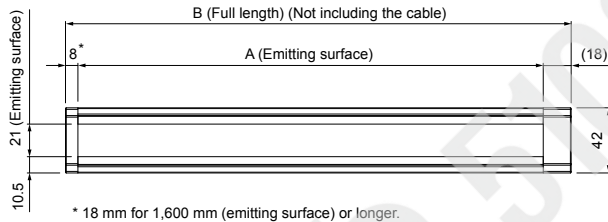
Model name	Cable length	Weight
FCB-20-2.0SQ-ME7	20 m	5,000 g



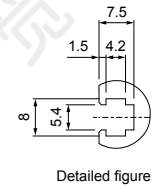
Cable permitted bending radius: 63.6 mm

The above cable permitted bending radii are reference values. Actual values may vary.

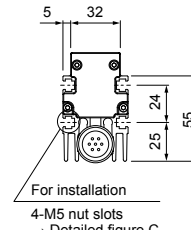
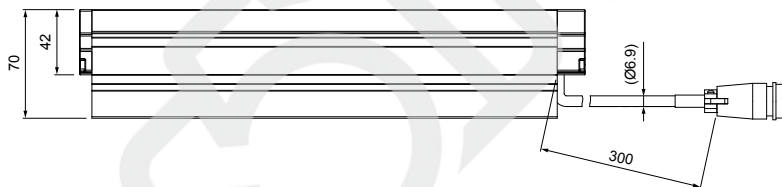
Dimensions (mm)



* 18 mm for 1,600 mm (emitting surface) or longer.



Detailed figure C



For installation
4-M5 nut slots
→ Detailed figure C

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
	TH2 (5 types)
Diffused Lighting	TH
	LFL
	HPD2
	LDM2
	LAV
	PDM
	LFX3
	LFX3-PT
	LFX2
	LFV3
Colimated Lighting	MSU
	MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/IO/HSL-PCL
	UV2
Ultraviolet Lighting	UV
	LNSP-UV-FN
Infrared Lighting	IR2
	IU
Spot Lighting, Etc.	HLV2
	LV
	LSP
	HFS/HFR
	HLV2-NR
Convergent Lighting	HLV2-3M-RGB-3W
	PFBR
	PFB2
Diffused Lighting	LNLP
	LNSP2
	LNSP
	Coaxial Units
	LNSP-FN
Oblique Angled Lighting	LN/LN-HK
	LNLD
Lenses	LND2
	HLND
	LT
Lenses	LNV/HLDN
	LNDG
	LNIS
Lenses	LNIS-FN
	Telecentric Lens
Lenses	Macro Lens