

High-illuminance compact Line Lights

The light emitting tip is shifted to one side of the Light Unit body



We will accept custom orders for 100 to 3,000 mm length units in steps of 100 mm.



LNSP2-300SW-NDF

LNSP2-300SW

Applications

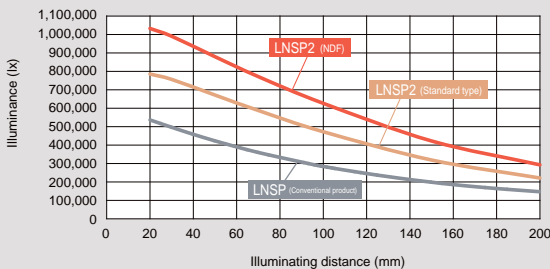
Inspection for stains and scratches on glass; visual inspection of films, circuit boards, and electronic parts; inspection for stains on non-woven fabrics; visual inspection of non-woven fabrics and textured metal surface; etc.

Achieves an Illuminance of Approx. 900,000 lx*

* Measured using NDF type

This high-illuminance Line Light (NDF type) achieves an illuminance of approx. 900,000 lx.

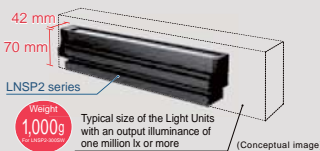
Graph of the change in illuminance



Actual measurement values at the center of the emitting surface, at each illuminating distance, 100% intensity. Results for individual products may vary.

Achieving both high output and compact space

We achieved a compact design compared to general, high output (one million lx or more) LED Lights for line sensors.



Two Types Are Available to Match Your Needs

Standard type, which can be used for a wide range of applications, and NDF type, which is optimum for dark field inspection usage are offered.

Standard type

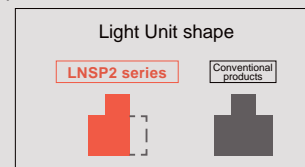
NDF type



A diffusion sheet is included. Diffusion sheet is not included.

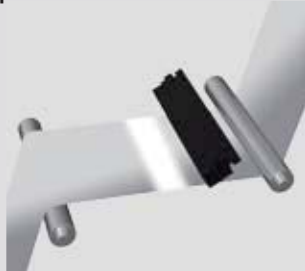
Optimum Light Unit shape for use at the inspection sites

For use at the site of inspection, the Light Unit shape is optimized with its light emitting tip shifted to one side of the Light Unit body. As a result, the camera view is not blocked during illumination, and the Light Unit can be installed close to the workpiece.



Applications

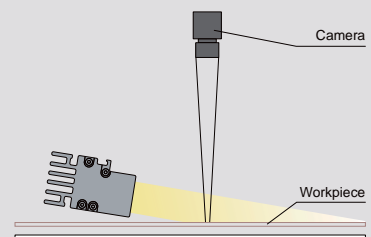
Visual inspection of metal foil sheets



Example Configuration


For use at the site of inspection, the Light Unit shape is optimized with its light emitting tip shifted to one side of the Light Unit body. High-illuminance and compact Line Lights.

LNSP2 series




Different Imaging Results of the Typical Workpieces


These workpieces were processed by for sample imaging.



Non-woven fabrics





Textured metal surface



Glass

← Light dispersing Glaring (reflective) →

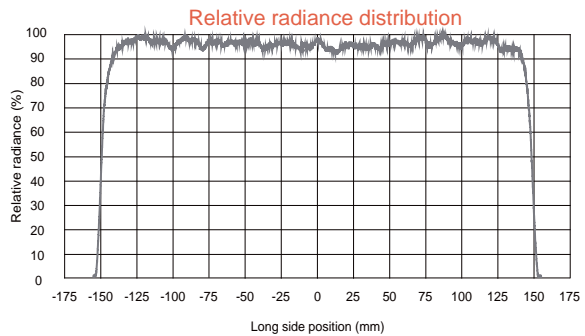
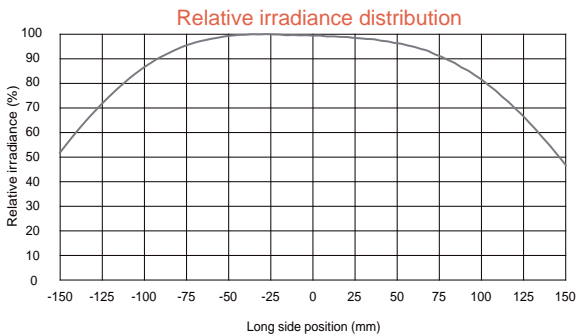
 Standard type	Bright field	Foreign material	Scratches	* See the note below.
	Dark field	Foreign material	Scratches	Scratch
 NDF type	Bright field	Foreign material	* See the note below.	* See the note below.
	Dark field	Foreign material	Scratches	Scratch

Note: The vertical lines in the above images with an asterisk mark (*) were caused by reflections of light from LEDs.

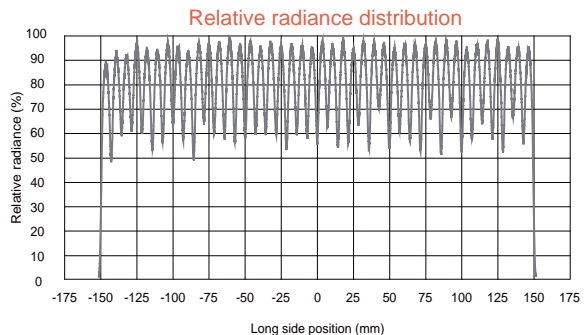
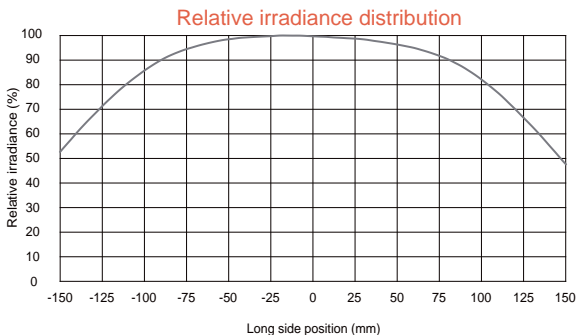
Data (Representative Example)

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

LNSP2-300SW



LNSP2-300SW-NDF



Direct Lighting	LDR2
	LDR2-LA
	LDR-LA1
	SQR
	SQR-TP
Diffused Lighting	HPR2
	LFR
	LKR
	FPR
	FPQ2
Direct Lighting	LDL2
	LDLB
	HLDL2
	HL
	TH
	TH2 (5 types)
	TH
Diffused Lighting	LFL
	HPD2
	LDM2
	LAV
	PDM
	LFX3
	LFX3-PT
	LFV3
Coaxial Lighting	MSU
	MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/
	HSL-PCL
Ultraviolet Lighting	UV2
	UV
	LNSP-UV-FN
Infrared	IR2
Intensity Control	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	LNSD
	LND2
	HLND
	LT
	LNV
Oblique/Angled Lighting	LNDG
	LNIS2
	LNIS
	LNIS-FN
Lenses	Telecentric Lens
	Macro Lens

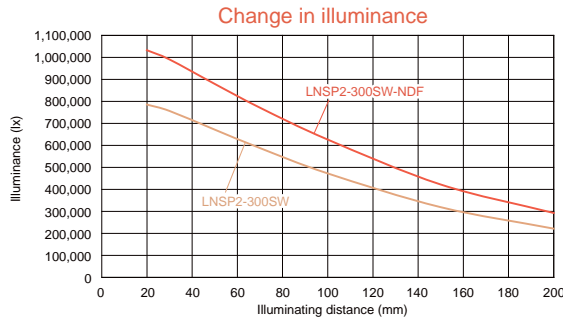
LNSP2 Series



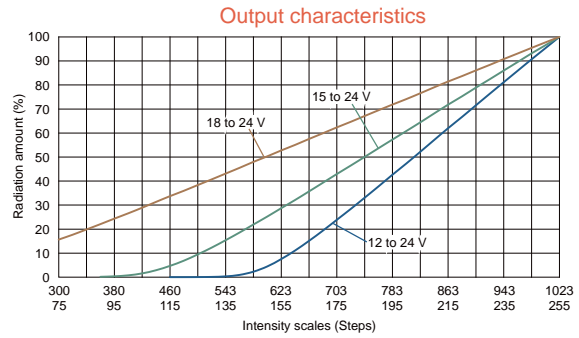
Data (Representative Example)

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

LNSP2-300SW / LNSP2-300SW-NDF



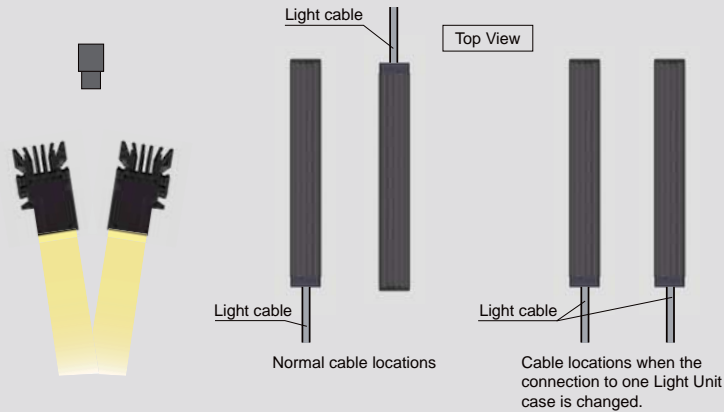
Actual measurement values at 100% intensity in each illuminating distance. Results for individual products may vary.



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

E.g.: The location where the light cable comes out of the Light Unit case can be changed to match your environment.



(Conceptual image)

- Direct Lighting
- 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
- LFV3
- MSU
- MFU
- PF
- HLDR-IP/ HSL-PCL
- UV2
- UV
- LNSP-UV-FN
- IR2
- IU
- HLV3
- HLV2
- LV
- LSP
- HFS/HFR
- HLV3-NR
- HLV3-3M-RGB-4
- HLV2-NR
- HLV2-3M-RGB-3W
- PFBR
- PFB3
- PFB2
- LNLP
- LNSP2**
- LNSP
- Coaxial Units
- LNSP-FN
- LN/LN-HK
- LNSD
- LND2
- HLND
- LT
- LNV
- LNDG
- LNIS2
- LNIS
- LNIS-FN
- Telecentric Lens
- Macro Lens

Lineup

Model name	LED color	Power consumption	Correlated color temperature	Extension cables	Recommended Control Units	Weight
Standard type (Standard products)	White	LNSP2-100SW	6,600 K	FCB-EL2	PSB4-30024-PEI PD3-10024-8*1	400 g
		LNSP2-200SW				700 g
		LNSP2-300SW				1,000 g
		LNSP2-400SW				1,300 g
		LNSP2-500SW				1,600 g
		LNSP2-600SW				1,900 g
		LNSP2-700SW				2,200 g
		LNSP2-800SW				2,500 g
		LNSP2-900SW				2,800 g
		LNSP2-1000SW				3,100 g
Standard type (Special order)	White	LNSP2-1100SW	6,600 K	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7 x 2 *2	PSB4-30024-PEI x 2 *2	3,400 g
		LNSP2-1200SW				3,700 g
		LNSP2-1300SW				4,000 g
		LNSP2-1400SW				4,300 g
		LNSP2-1500SW				4,600 g
		LNSP2-1600SW				4,900 g
		LNSP2-1700SW				5,200 g
		LNSP2-1800SW				5,500 g
		LNSP2-1900SW				5,800 g
		LNSP2-2000SW				6,100 g
		LNSP2-2100SW				6,400 g
		LNSP2-2200SW				6,700 g
		LNSP2-2300SW				7,000 g
		LNSP2-2400SW				7,300 g
		LNSP2-2500SW				7,600 g
		LNSP2-2600SW				7,900 g
		LNSP2-2700SW				8,200 g
		LNSP2-2800SW				8,500 g
		LNSP2-2900SW				8,800 g
		LNSP2-3000SW				9,100 g
NDF type (Standard products)	White	LNSP2-100SW-NDF	6,600 K	FCB-EL2	PSB4-30024-PEI PD3-10024-8*1	400 g
		LNSP2-200SW-NDF				700 g
		LNSP2-300SW-NDF				1,000 g
		LNSP2-400SW-NDF				1,300 g
		LNSP2-500SW-NDF				1,600 g
		LNSP2-600SW-NDF				1,900 g
		LNSP2-700SW-NDF				2,200 g
		LNSP2-800SW-NDF				2,500 g
		LNSP2-900SW-NDF				2,800 g
		LNSP2-1000SW-NDF				3,100 g
NDF type (Special orders)	White	LNSP2-1100SW-NDF	6,600 K	FCB-1.25SQ-ME7 FCB-20-2.0SQ-ME7 x 2 *2	PSB4-30024-PEI x 2 *2	3,400 g
		LNSP2-1200SW-NDF				3,700 g
		LNSP2-1300SW-NDF				4,000 g
		LNSP2-1400SW-NDF				4,300 g
		LNSP2-1500SW-NDF				4,600 g
		LNSP2-1600SW-NDF				4,900 g
		LNSP2-1700SW-NDF				5,200 g
		LNSP2-1800SW-NDF				5,500 g
		LNSP2-1900SW-NDF				5,800 g
		LNSP2-2000SW-NDF				6,100 g
		LNSP2-2100SW-NDF				6,400 g
		LNSP2-2200SW-NDF				6,700 g
		LNSP2-2300SW-NDF				7,000 g
		LNSP2-2400SW-NDF				7,300 g
		LNSP2-2500SW-NDF				7,600 g
		LNSP2-2600SW-NDF				7,900 g
		LNSP2-2700SW-NDF				8,200 g
		LNSP2-2800SW-NDF				8,500 g
		LNSP2-2900SW-NDF				8,800 g
		LNSP2-3000SW-NDF				9,100 g

Extension Cables ▶ P.308

List of Control Unit Specifications ▶ P.253

*1 Custom products with a PWM frequency of 500 kHz are available for Digital Control Unit PD3 series.

*2 For sizes 1,000 mm (emitting surface) or longer, a cable comes out of each end of the Light Unit.

The products with a model name in blue letters require the custom light cables. The products with a model name in red letters require the custom Control Unit.

In addition, 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.

You can inquire using our website.

Sample Testing

Light Unit Selection

Free Product Trial

Custom Orders

Product Details

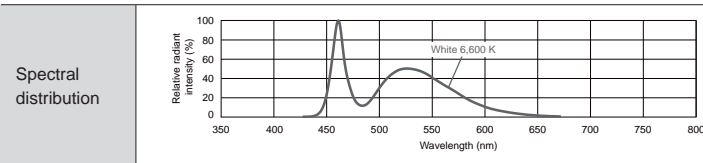
Pricing/Quotation

Discontinued Products

LNSP2 Series



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



Coaxial Unit

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

Model name	Applicable Light Unit
CU-LNSP2-100-GL	LNSP2-100SW (-NDF)
CU-LNSP2-200-GL	LNSP2-200SW (-NDF)
CU-LNSP2-300-GL	LNSP2-300SW (-NDF)
CU-LNSP2-400-GL	LNSP2-400SW (-NDF)
CU-LNSP2-500-GL	LNSP2-500SW (-NDF)

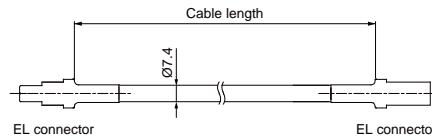
CU-LNSP2 Product Page ▶ P.191

Extension Cables

Necessary when connecting the Light Unit to the recommended Control Unit.

FCB-EL2

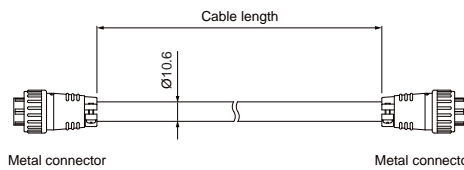
Model name	Cable length	Model name	Cable length
FCB-1-EL2	1 m	FCB-5-EL2	5 m
FCB-2-EL2	2 m	FCB-10-EL2	10 m
FCB-3-EL2	3 m	FCB-15-EL2	15 m



Cable permitted bending radius: 29.6 mm

FCB-1.25SQ-ME7

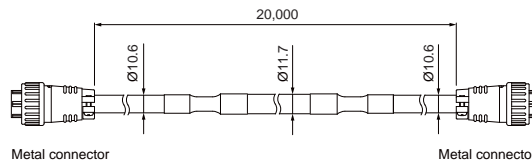
Model name	Cable length	Weight
FCB-2-1.25SQ-ME7	2 m	430 g
FCB-3-1.25SQ-ME7	3 m	580 g
FCB-5-1.25SQ-ME7	5 m	1,000 g
FCB-10-1.25SQ-ME7	10 m	2,000 g



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

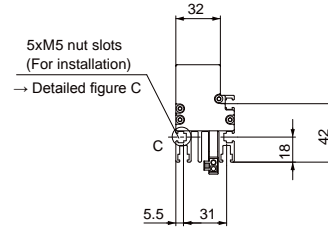
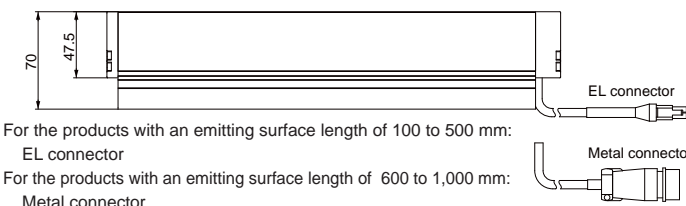
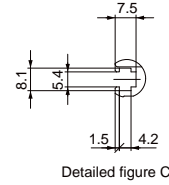
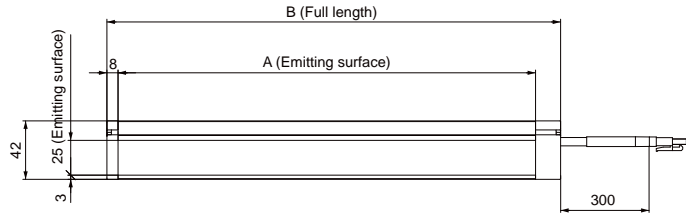


Cable permitted bending radius: 63.6 mm

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

Dimensions (mm)

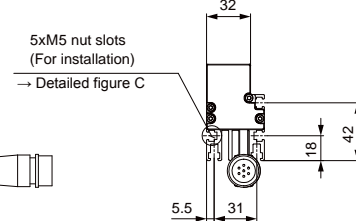
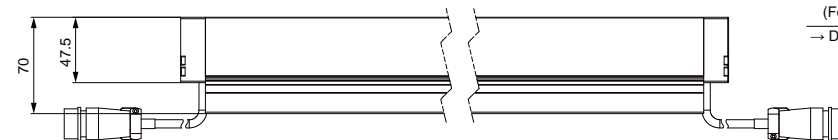
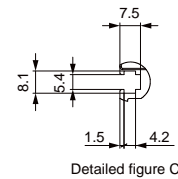
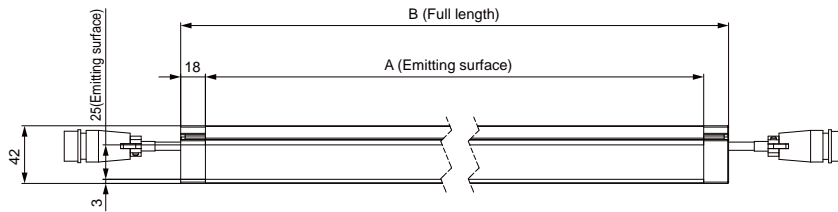
● Emitting surface length: 100 to 1,000 mm



For the products with an emitting surface length of 100 to 500 mm:
EL connector
For the products with an emitting surface length of 600 to 1,000 mm:
Metal connector

Accepts custom orders for such as the position where the light cable comes out of the case.
Please contact your sales representative for details.

● Emitting surface length: 1,100 to 3,000 mm



	Model name	A (Emitting surface)	B (Full length)	Connector	Model name	A (Emitting surface)	B (Full length)	Connector
Standard products	LNSP2-100SW (-NDF)	100	126	EL connector	Special orders	LNSP2-1600SW (-NDF)	1,600	1,636
	LNSP2-200SW (-NDF)	200	226			LNSP2-1700SW (-NDF)	1,700	1,736
	LNSP2-300SW (-NDF)	300	326			LNSP2-1800SW (-NDF)	1,800	1,836
	LNSP2-400SW (-NDF)	400	426			LNSP2-1900SW (-NDF)	1,900	1,936
	LNSP2-500SW (-NDF)	500	526			LNSP2-2000SW (-NDF)	2,000	2,036
	LNSP2-600SW (-NDF)	600	626			LNSP2-2100SW (-NDF)	5,100	2,136
	LNSP2-700SW (-NDF)	700	726			LNSP2-2200SW (-NDF)	2,200	2,236
	LNSP2-800SW (-NDF)	800	826			LNSP2-2300SW (-NDF)	2,300	2,336
	LNSP2-900SW (-NDF)	900	926			LNSP2-2400SW (-NDF)	2,400	2,436
Special orders	LNSP2-1000SW (-NDF)	1,000	1,026	Metal connector	LNSP2-2500SW (-NDF)	2,500	2,536	
	LNSP2-1100SW (-NDF)	1,100	1,136		LNSP2-2600SW (-NDF)	2,600	2,636	
	LNSP2-1200SW (-NDF)	1,200	1,236		LNSP2-2700SW (-NDF)	2,700	2,736	
	LNSP2-1300SW (-NDF)	1,300	1,336		LNSP2-2800SW (-NDF)	2,800	2,836	
	LNSP2-1400SW (-NDF)	1,400	1,436		LNSP2-2900SW (-NDF)	2,900	2,936	
	LNSP2-1500SW (-NDF)	1,500	1,536		LNSP2-3000SW (-NDF)	3,000	3,036	
								Please inquire for more information.

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
Diffused Lighting	LFL HPD2 LDM2 LAV PDM LFX3 LFX3-PT LFV3
Coaxial Lighting	MSU MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Infrared Lighting	IR2
Intensity Control	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
Oblique/Angled Lighting	LNV LNDG LNIS2
Lenses	LNIS LNIS-FN Telecentric Lens Macro Lens