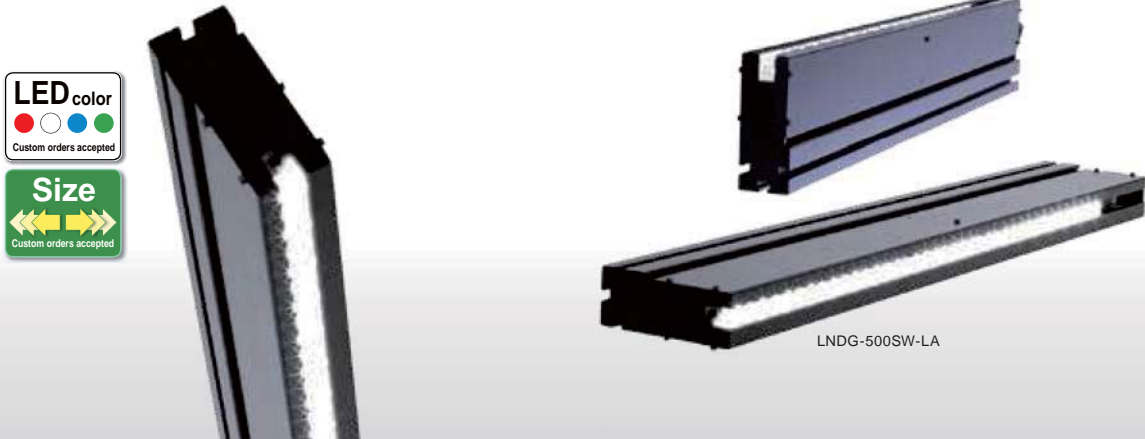


Achieves angled illumination using an original optical design  
Bumps and subtle vertical wrinkles can be detected



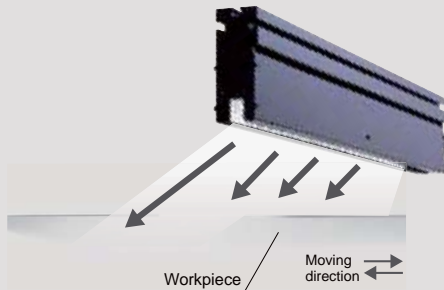
LNDG-500SW-LA

**Applications** Inspection for vertical wrinkles in paper, vertical striations in cardboard, vertical wrinkles and folding in non-woven fabric, wrinkles in bonded sheets, etc

➤ **Achieves Angled Illumination**

The LNDG series enables detection of bumps and subtle vertical wrinkles, which were difficult to detect with conventional line sensor lights, in paper or non-woven fabric that disperses light.

■ **Conceptual image of angled illumination**



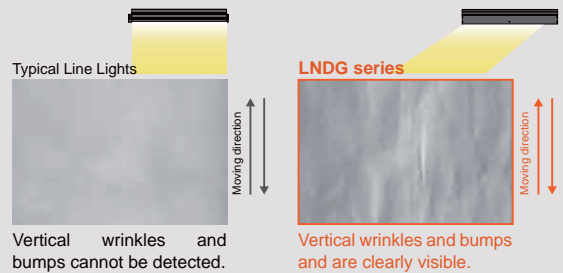
■ **Other features**

- 1) Fan-less (Natural air cooling)
  - 2) Error detection support
  - 3) Emitting surface 300 to 3,000 mm long (can be made in units of 100 mm)
- Error detection is a function included with the PSCC series, the recommended Control Units.

➤ **Bumps and Subtle Vertical Wrinkles Can Be Detected**

■ **Imaging samples**

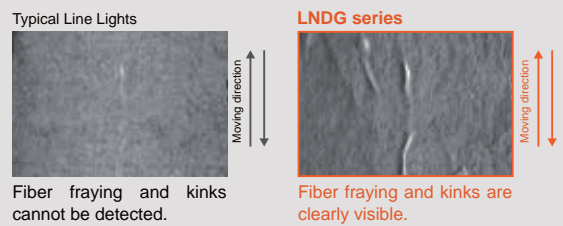
**Inspections for vertical wrinkles in paper labels**



Vertical wrinkles and bumps cannot be detected.

Vertical wrinkles and bumps are clearly visible.

**Inspecting non-woven fabric for defects**



Fiber fraying and kinks cannot be detected.

Fiber fraying and kinks are clearly visible.

➤ **Applications**

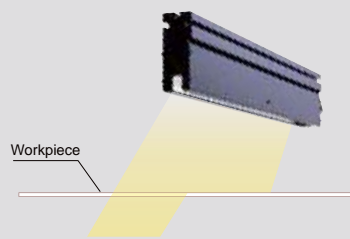
■ **Inspection for vertical wrinkles in paper labels**



➤ **Example Configuration**

Achieves angled illumination using an original optical design. This is a line sensor light perfect for detecting moving-direction bumps and subtle vertical wrinkles.

■ **LNDG series**

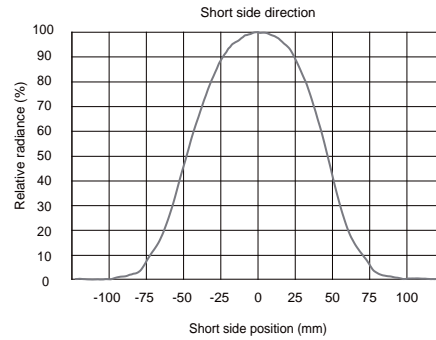
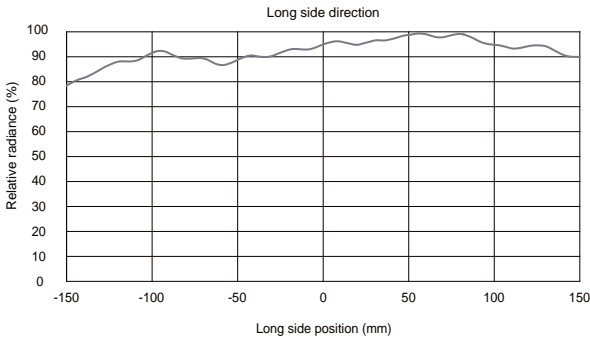


**Data** (Representative Example)

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

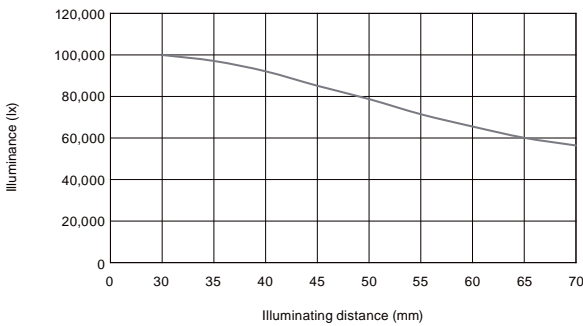
**LNDG-500SW-LA**

Relative radiance distribution



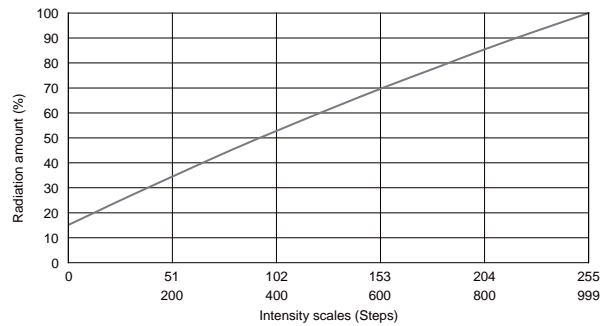
The graph included is for reference only. Actual values may vary.

Change in illuminance



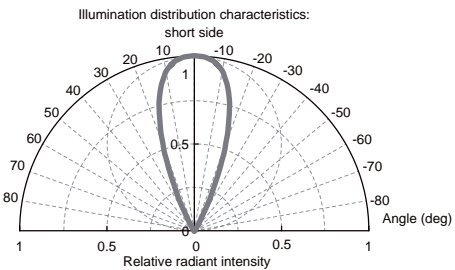
Actual measurement values at 100% intensity, in the center part of emission in each illuminating distance. Results for individual products may vary.

Graph of the correlation between intensity and output



Actual measurement values using the Analog Control Unit PSCC-30048(A). Results for individual products may vary.

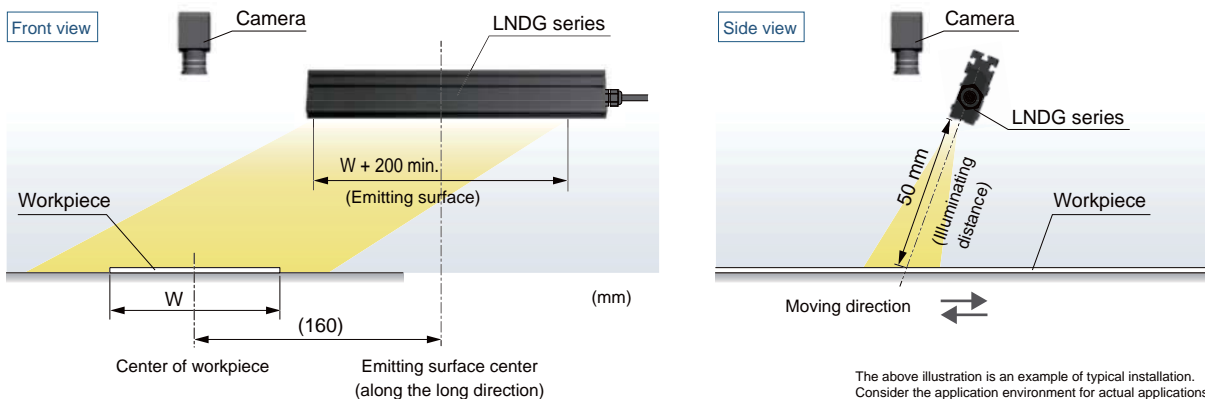
Characteristic of the illumination distribution



These graphs are for reference only. Actual values may vary.

**Select a Light Unit That Is Longer Than the Width of the Workpiece.**

The LNDG-series Light Unit emits light at an angle to enable detecting "vertical wrinkles and bumps." When you select a Light Unit, select one that is at least 200 mm longer than the width of the workpiece to be inspected. We recommend a illuminating distance of 50 mm to obtain sufficient illumination.



The above illustration is an example of typical installation. Consider the application environment for actual applications.

You can inquire using our website.

- Sample Testing
- Light Unit Selection
- Free Product Trial
- Custom Orders
- Product Details
- Pricing/Quotation
- Discontinued Products

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 Lighting	IR2
Intensity Control Lighting	IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-3W 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 LNS2 LNS1 LNS1-FN
Lenses	Telecentric Lens Macro Lens



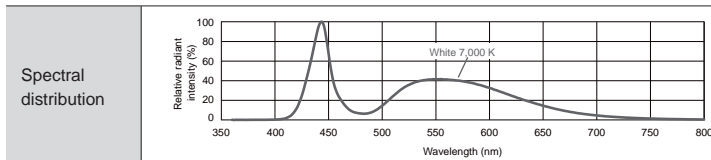
## Lineup

Model name	LED color	Power consumption	Correlated color temperature	Extension cables	Recommended Control Units	Weight
LNDG-300SW-LA	White	39 W	7,000 K			1,600 g
LNDG-400SW-LA		52 W				2,000 g
LNDG-500SW-LA		65 W				2,400 g
LNDG-600SW-LA		78 W				2,800 g
LNDG-700SW-LA		91 W				3,200 g
LNDG-800SW-LA		104 W				3,600 g
LNDG-900SW-LA		117 W				4,000 g
LNDG-1000SW-LA		130 W				4,400 g
LNDG-1100SW-LA		143 W				4,800 g
LNDG-1200SW-LA		156 W				5,200 g
LNDG-1300SW-LA		169 W				5,500 g
LNDG-1400SW-LA		182 W				5,900 g
LNDG-1500SW-LA		195 W				6,300 g
LNDG-1600SW-LA		208 W				6,700 g
LNDG-1700SW-LA		221 W				7,100 g
LNDG-1800SW-LA		234 W				7,500 g
LNDG-1900SW-LA		247 W				7,900 g
LNDG-2000SW-LA		260 W				8,300 g
LNDG-2100SW-LA		273 W				8,700 g
LNDG-2200SW-LA		286 W				9,100 g
LNDG-2300SW-LA		299 W				9,500 g
LNDG-2400SW-LA		312 W				9,900 g
LNDG-2500SW-LA		325 W				10,300 g
LNDG-2600SW-LA		338 W				10,700 g
LNDG-2700SW-LA		351 W				11,100 g
LNDG-2800SW-LA		364 W				11,500 g
LNDG-2900SW-LA		377 W				11,900 g
LNDG-3000SW-LA		390 W				12,300 g

PSCC Series Product Page ▶ P.293

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

- LDR2
- LDR2-LA
- LDR-LA1
- SQR
- SQR-TP
- HPR2
- LFR
- LKR
- FPR
- FPO2
- 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-3W
- 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

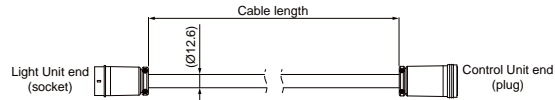
## Extension Cables

Necessary when connecting the Light Unit to the recommended Control Unit, the PSCC Series.

### QCBM

(mm)

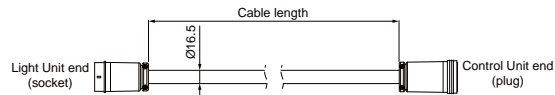
Model name	Cable length	Weight	Applicable Control Unit
QCBM-2	2 m	800 g	PSCC-30048(A)
QCBM-3	3 m	1,000 g	
QCBM-5	5 m	1,500 g	
QCBM-10	10 m	2,700 g	
QCBM-20	20 m	5,000 g	



Cable permitted bending radius: 75.6 mm

### QCB

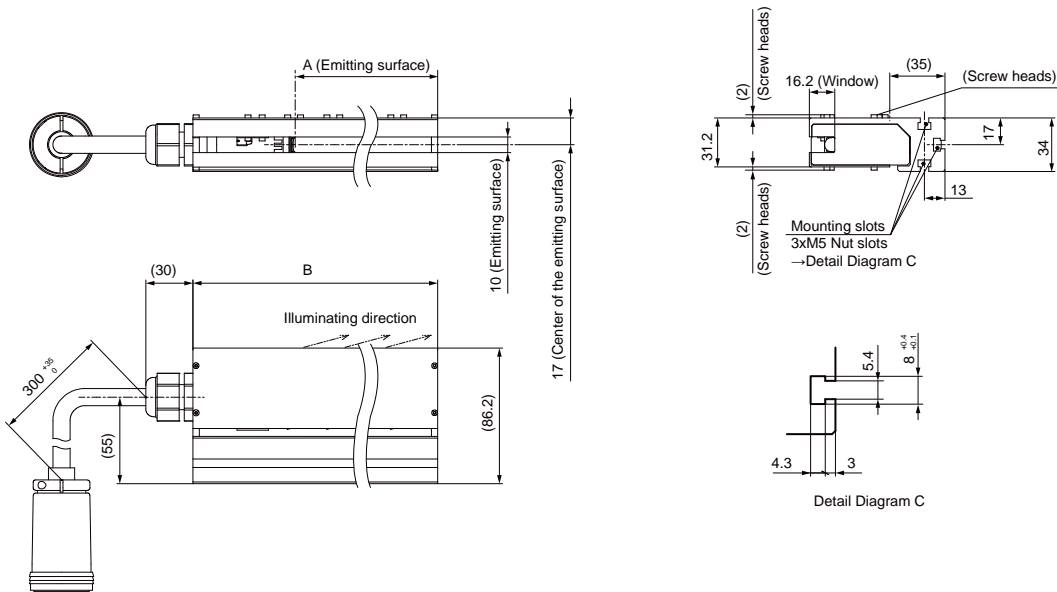
Model name	Cable length	Weight	Applicable Control Unit
QCB-2	2 m	1,100 g	PSCC-60048(A)
QCB-3	3 m	1,500 g	
QCB-5	5 m	2,400 g	
QCB-10	10 m	4,600 g	
QCB-20	20 m	8,900 g	



Cable permitted bending radius: 99 mm

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

## Dimensions (mm)



Model name	A (Emitting surface)	B (Full length)	Model name	A (Emitting surface)	B (Full length)
LNDG-300SW-LA	300	365	LNDG-1700SW-LA	1,700	1,765
LNDG-400SW-LA	400	465	LNDG-1800SW-LA	1,800	1,865
LNDG-500SW-LA	500	565	LNDG-1900SW-LA	1,900	1,965
LNDG-600SW-LA	600	665	LNDG-2000SW-LA	2,000	2,065
LNDG-700SW-LA	700	765	LNDG-2100SW-LA	2,100	2,165
LNDG-800SW-LA	800	865	LNDG-2200SW-LA	2,200	2,265
LNDG-900SW-LA	900	965	LNDG-2300SW-LA	2,300	2,365
LNDG-1000SW-LA	1,000	1,065	LNDG-2400SW-LA	2,400	2,465
LNDG-1100SW-LA	1,100	1,165	LNDG-2500SW-LA	2,500	2,565
LNDG-1200SW-LA	1,200	1,265	LNDG-2600SW-LA	2,600	2,665
LNDG-1300SW-LA	1,300	1,365	LNDG-2700SW-LA	2,700	2,765
LNDG-1400SW-LA	1,400	1,465	LNDG-2800SW-LA	2,800	2,865
LNDG-1500SW-LA	1,500	1,565	LNDG-2900SW-LA	2,900	2,965
LNDG-1600SW-LA	1,600	1,665	LNDG-3000SW-LA	3,000	3,065

Direct Lighting	LDR2 LDR2-LA LDR-LA1 SQR SQR-TP
Diffused Lighting	HPR2 LFR LKR FPR FFQ2
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Water-proof Lighting	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
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Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-3W HLV2-NR HLV2-3M-RGB-3W PFBR PFB3 PFB2
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Oblique Angled Lighting	LNDG
Lenses	LNIS2 LNIS LNIS-FN Telecentric Lens Macro Lens