

UV Lights that use high output UV-LEDs



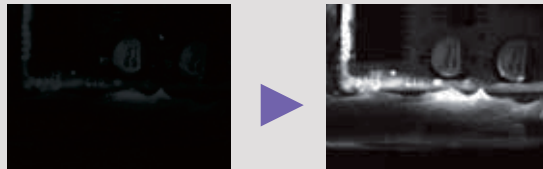
Applications

Detecting seal material through fluorescent excitation, reading invisible code, inspections using differences in spectral reflectivity, inspections using differences in scattering rates, etc.

Using High Output UV-LEDs

The high output UV-LEDs achieved enhanced output power significantly higher than that of conventional products.

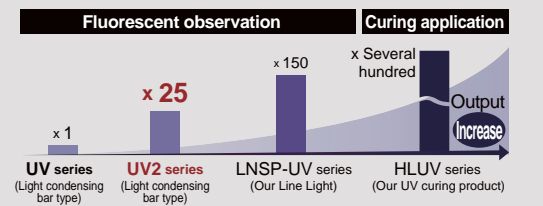
Comparison of imaging with conventional product



The conventional product lacks output and fluorescent observation is difficult.

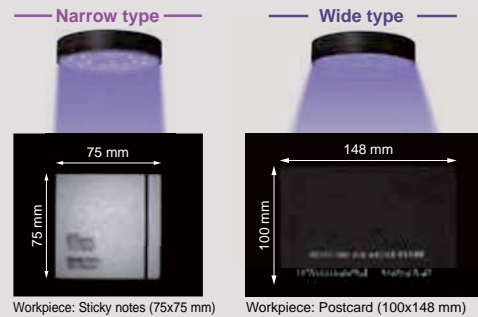
The increased output of the high output UV Light allows for fluorescent observation.

Image comparing output of UV Lights by application

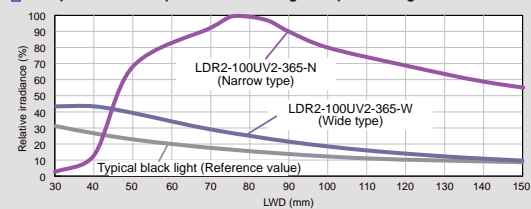


Narrow Type to Irradiate a Narrow Area

The product lineup includes wide type and narrow type Light Units to irradiate a respective extent. Select an optimum Light Unit to meet the purpose of use.



Comparison of output between a high output UV Light and a black light



The data included is for reference only and the results may vary.

Custom Orders

Please contact your sales representative.

E.g.: Different shape

Format/material

Created a format to match the needs



Customizable items

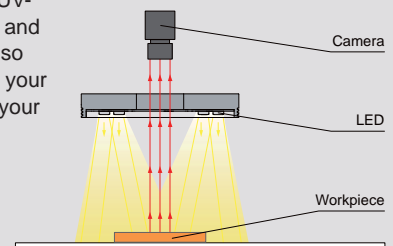
- External/internal diameter
- Wavelength/color
- Increase output
- Cable length
- Illuminating angle
- Format/material
- Connector format
- Installation/mounting

Etc.

Example Configuration

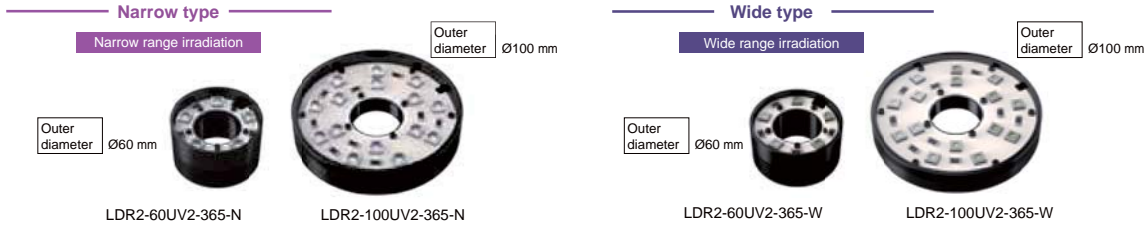
Ring Lights that use high output UV-LEDs. Bar types and spot types are also available. Select your format to match your needs.

LDR2-100UV2-365-W

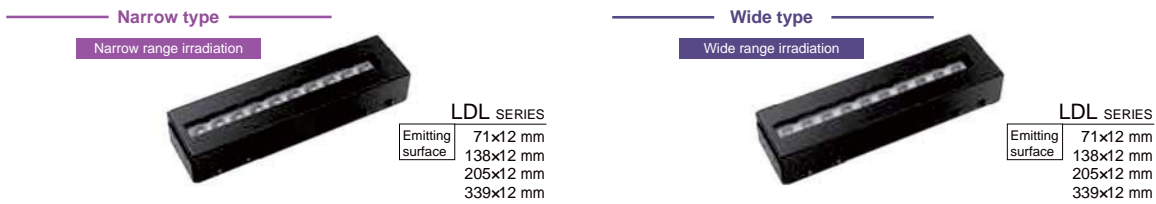


➤ Lineup

Ring Lights



Bar Lights



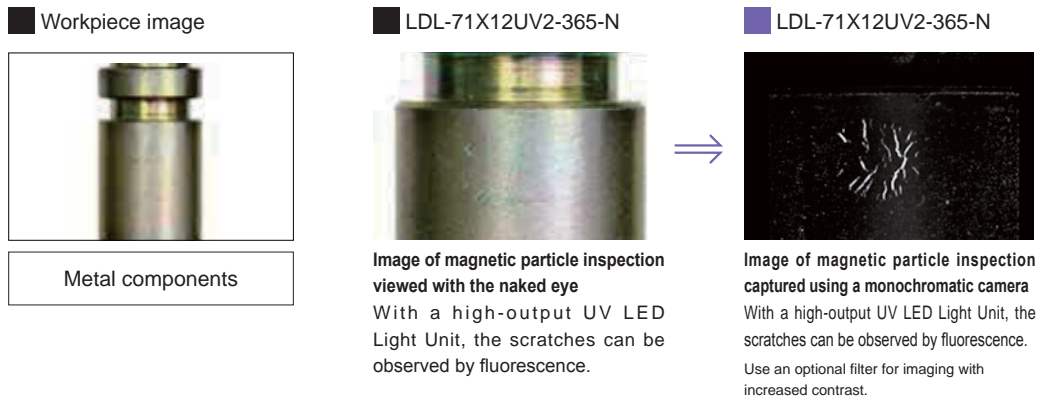
Bar Lights (Light Condensing)



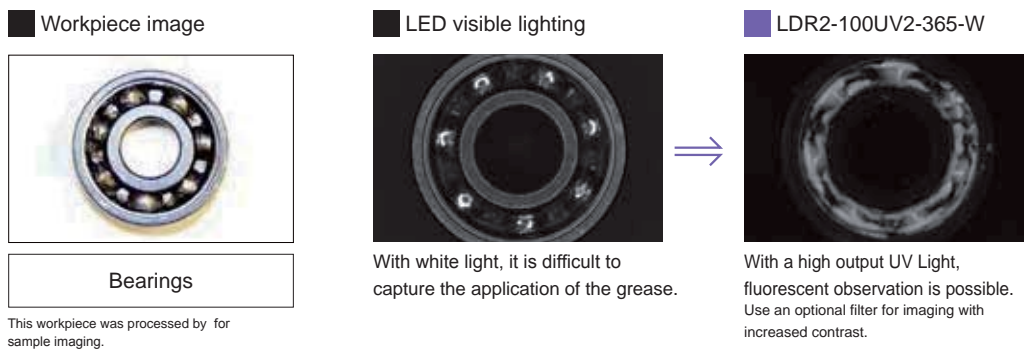
Spot Light



➤ Imaging Example: Imaging for Scratches by Magnetic Particle Inspection



➤ Imaging Example: Imaging Grease Application on Bearings



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
Compared Lighting	MSU MFU
Strobe Lighting	PF
Water-proof	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Intensely Infrared	IR2
Control Lighting	IU
Spot Lighting, Etc.	HLV3 HLV2 LV LSP HFS/HFR HLV3-NR HLV3-3M-RGB-4 HLV2-NR HLV2-3M-RGB-3W 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 LNIS LNIS-FN
Lenses	Telecentric Lens Macro Lens

UV2 Series



Imaging Example: Imaging Text on the Bottom Surface of Aluminum Cans

Workpiece image



Aluminum cans

LED visible lighting



With white light, it is difficult to capture the printed text at the bottom of the can.

LDL-138X12UV2-365-N



With a high output UV Light, fluorescent observation is possible. Use an optional filter for imaging with increased contrast.

Imaging Example: Imaging Packing Tapes on Films

Workpiece image



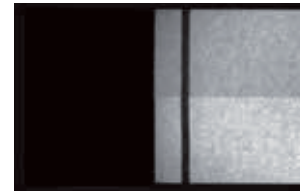
Sticky notes

LED visible lighting



With white light, it is difficult to capture the sticky notes and the packing tape with high contrast.

LDR2-100UV2-365-N



With a high output UV Light, fluorescent observation is possible. Use an optional filter for imaging with increased contrast.

Data: Relative Irradiance Graph and Uniformity (Representative Example)

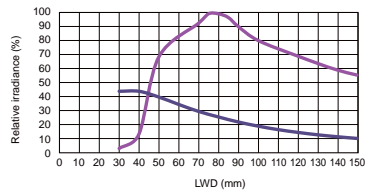
The data included is for reference only. Actual values may vary.

LDR2-100UV2-365-N



Relative irradiance graph ^{*1}
(LWD characteristics) ^{*2}

^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



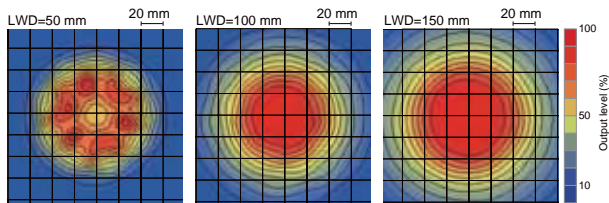
At short distances, uniformity of irradiation from narrow type Light Units is reduced. This may affect imaging depending on the type of workpiece.

LDR2-100UV2-365-W

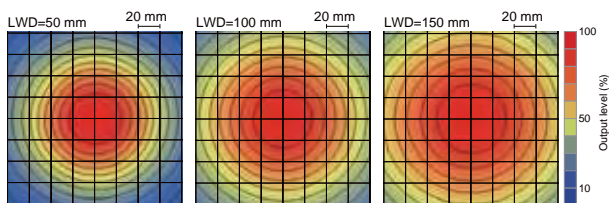


Uniformity (Relative irradiance)

LDR2-100UV2-365-N



LDR2-100UV2-365-W



Data: Relative Irradiance Graph and Uniformity (Representative Example) The data included is for reference only. Actual values may vary.

LDL-205X12UV2-365-N

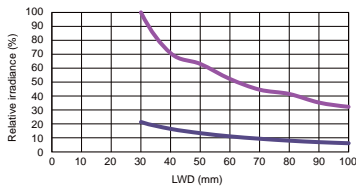


LDL-205X12UV2-365



Relative irradiance graph ^{*1}
(LWD characteristics) ^{*2}

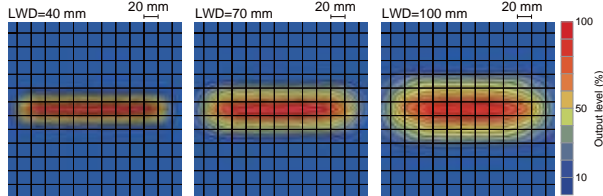
^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



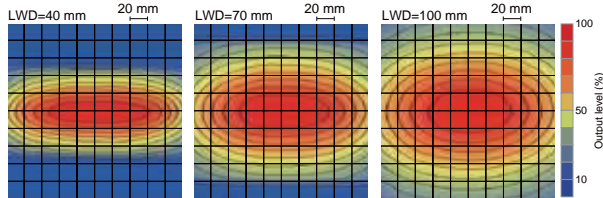
At short distances, uniformity of irradiation from narrow type Light Units is reduced. This may affect imaging depending on the type of workpiece.

Uniformity (Relative irradiance)

LDL-205X12UV2-365-N



LDL-205X12UV2-365



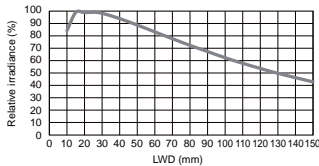
LN-195UV2-365



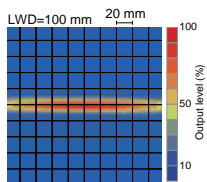
(Light condensing)

Relative irradiance graph ^{*1}
(LWD characteristics) ^{*2}

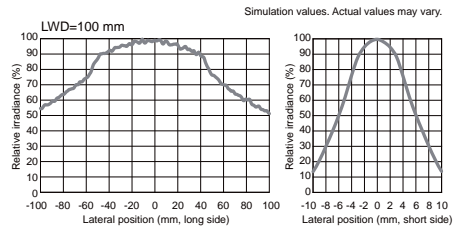
^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



Uniformity
(Relative irradiance)



Relative irradiance distribution

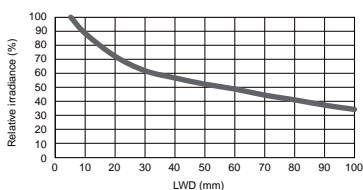


HLV2-24UV2-365

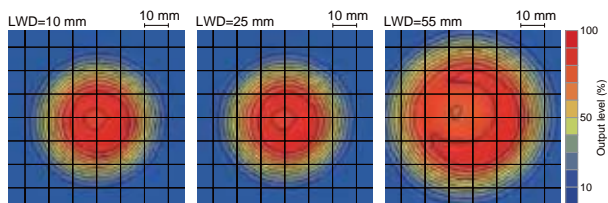


Relative irradiance graph ^{*1}
(LWD characteristics) ^{*2}

^{*1} Irradiance on the optical axis
^{*2} Illuminating distance from the Light Unit to the workpiece



Uniformity (Relative irradiance)



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 Lighting	HLDR-IP/ HSL-PCL
Ultraviolet Lighting	UV2 UV LNSP-UV-FN
Intensely 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 LNS2 LNIS LNIS-FN
Lenses	Telecentric Lens Macro Lens



Lineup

Model name	Type	LED color	Power consumption	Peak wavelength	Options	Extension cables	Recommended Control Units	Weight		
LDR2-60UV2-365-N	Narrow	Ultraviolet	24 V / 7.6 W	365 nm	Band-pass filters Ultraviolet cutting filters Ultraviolet transmission filters	FCB*5 Straight Cable FCB-W*6 2-branch Cable FCB-F 4-branch Cable FRCB Robot Cable	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024*1 <input type="checkbox"/> PSB	170 g		
LDR2-100UV2-365-N			24 V / 23 W				250 g			
LDR2-60UV2-365-W	Wide		24 V / 7.6 W				170 g			
LDR2-100UV2-365-W			24 V / 23 W				250 g			
LDL-71X12UV2-365-N	Narrow	Ultraviolet	24 V / 7.6 W	365 nm			Band-pass filters Ultraviolet cutting filters Ultraviolet transmission filters	FCB*5 Straight Cable FCB-W*6 2-branch Cable FCB-F 4-branch Cable FRCB Robot Cable	<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024*2 <input type="checkbox"/> PSB*3	300 g
LDL-138X12UV2-365-N			24 V / 16 W						500 g	
LDL-205X12UV2-365-N			24 V / 23 W						700 g	
LDL-339X12UV2-365-N			24 V / 38 W						1,090 g	
LDL-71X12UV2-365	Wide		24 V / 7.6 W						300 g	
LDL-138X12UV2-365			24 V / 16 W						500 g	
LDL-205X12UV2-365			24 V / 23 W						700 g	
LDL-339X12UV2-365			24 V / 38 W						1,090 g	
LN-61UV2-365	-	Ultraviolet	24 V / 7.6 W	365 nm	Band-pass filters Ultraviolet cutting filters Ultraviolet transmission filters	FCB*5 Straight Cable FRCB Robot Cable			<input type="checkbox"/> PD3 <input type="checkbox"/> CC-ST-1024*4 <input type="checkbox"/> PSB	450 g
LN-128UV2-365			24 V / 16 W						750 g	
LN-195UV2-365			24 V / 23 W						1,050 g	
HLV2-24UV2-365	-	Ultraviolet	0.7 A / 3.2 W	365 nm					Band-pass filters Ultraviolet cutting filters Ultraviolet transmission filters	FCB*5 Straight Cable FRCB Robot Cable

Please inquire if you want to use the Light Unit in combination with a Strobe Control Unit (overdrive type).

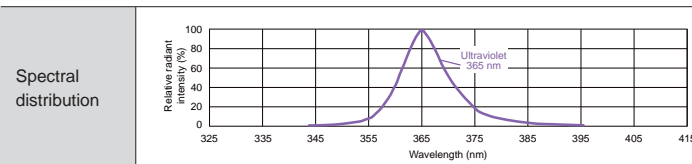
Extension Cables ▶ P.308

Control Unit Selection Guide ▶ P.251

List of Control Unit Specifications ▶ P.253

*5 The cables with a model name that ends with "-ME7", "-EL2", "-PF", or "-PF-EL9" are not included. *6 The cables with a model name that ends with "-EL2" are not included.

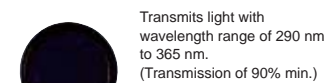
LED Properties



Offers you the most suitable lens filter for each wavelength. For details about the lens filter, refer to P.299.

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



Band-pass filter
F-BP324

Model name	Size
F-BP324	25 sizes (Refer to the pages on optional products.)

▶ P.299

Other various band-pass filters used for different wavelengths are available. For details, refer to the pages on optional lens filters.

▶ P.299



Ultraviolet cutting filter
L42 series

Model name	Size
L42-25	M25.5 P0.5
L42-27	M27.0 P0.5
L42-30	M30.5 P0.5
L42-40	M40.5 P0.5
L42-46	M46.0 P0.75

▶ P.301



Ultraviolet transmission filter
U340 series

Model name	Size
U340-25	M25.5 P0.5
U340-27	M27.0 P0.5
U340-30	M30.5 P0.5
U340-40	M40.5 P0.5
U340-46	M46.0 P0.75

▶ P.301

Cautionary Information regarding UV Products

- Do not expose your eyes or skin to direct UV irradiation.
- When using an UV illumination, be sure to wear UV blocking eye wear and avoid looking at irradiating parts (emitting parts).
- Do not turn on UV-LED irradiating parts (emitting parts) if they are facing someone's eyes.
- Wear long sleeves and gloves to protect your skin from UV irradiation.
- Thoroughly educate all those involved near the product about the dangers of UV LEDs.

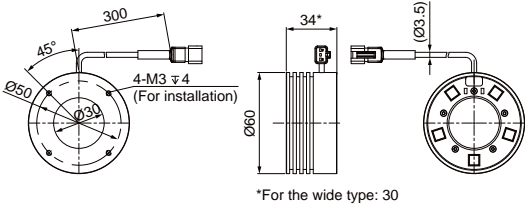


E.g.: UV blocking eye wear

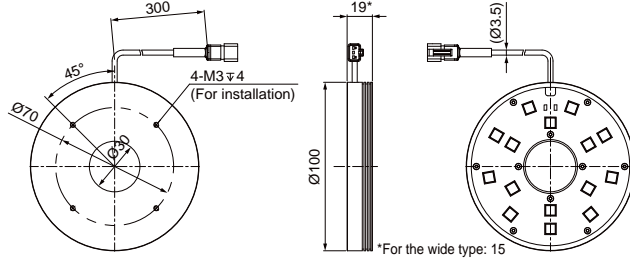
Dimensions (mm)

Ring Lights

LDR2-60UV2-365-N/-W (Common for the narrow/wide types)

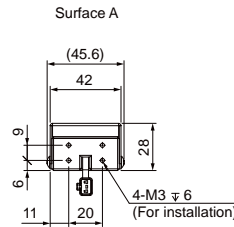
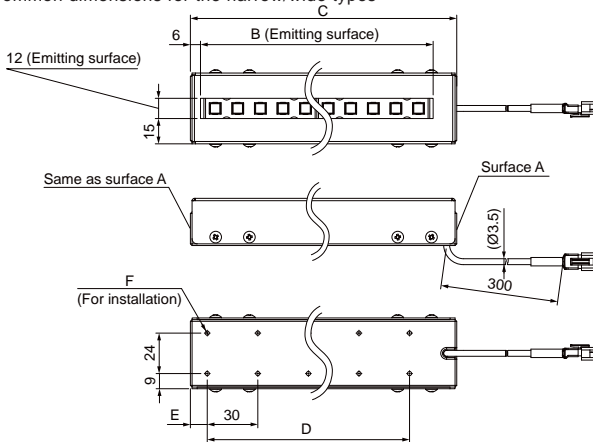


LDR2-100UV2-365-N/-W (Common for the narrow/wide types)



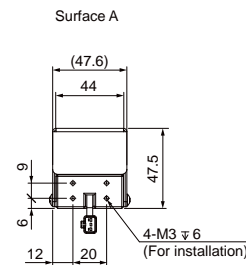
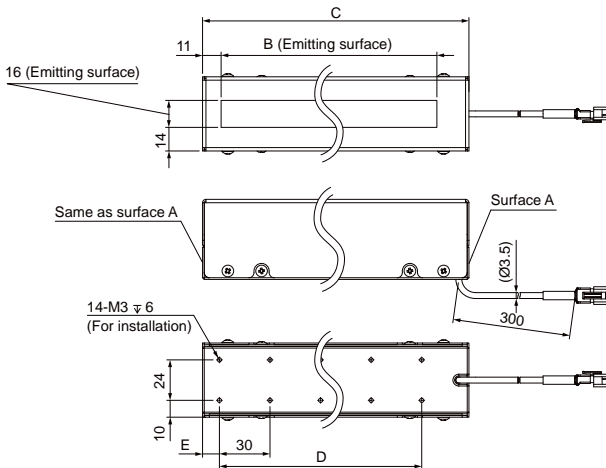
Bar Lights

Common dimensions for the narrow/wide types



Model name (narrow/wide)	B	C	D	E	F
LDL-71X12UV2-365-N/-365	71	91	P30x2=60	10	6xM3x6
LDL-138X12UV2-365-N/-365	138	158	P30x4=120	10	10xM3x6
LDL-205X12UV2-365-N/-365	205	225	P30x6=180	20	14xM3x6
LDL-339X12UV2-365-N/-365	339	359	P30x10=300	29.5	22xM3x6

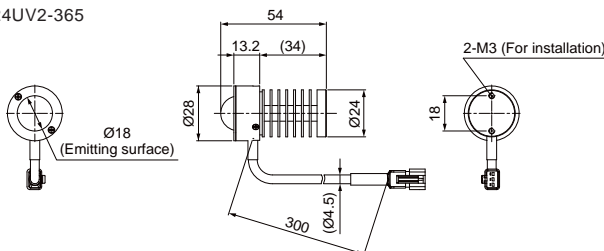
Convergent type Common dimensions



Model name	B	C	D	E
LN-61UV2-365	61	91	P30x2=60	10
LN-128UV2-365	128	158	P30x4=120	10
LN-195UV2-365	195	225	P30x6=180	20

Spot Lights

HLV2-24UV2-365



You can change the connectors of the Light Unit cable (except for the HLV2-24UV2-365). Choose between M12 connectors and flying leads. Refer to P.5 for details.

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 Ultraviolet Lighting	HLDR-IP/ HSL-PCL UV2 UV LNSP-UV-FN
Intensely 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 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 LNIS LNIS-FN
Lenses	Telecentric Lens Macro Lens