

DUV-LED Spot Light Source



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Hamamatsu provides a DUV-LED light source that emits deep UV light at a wavelength of 280 nm. This DUV-LED light source is capable of driving 4 heads independently, yet compactly designed to fit in the palm of your hand. Promising applications include sterilization by deep UV light with strong sterilization effect and various types of analysis, as well as UV adhesive curing and UV ink drying (tack removal) in combination with 365 nm UV light.

NOTE: This DUV-LED spot light source is not compatible with the LIGHTNINGCURE LC-L1V5 UV-LED spot light sources and so cannot be used with the L14310/L14311 series LED head units, C14052 series controllers, and A14978 series LED head unit extension cables.

■ Features

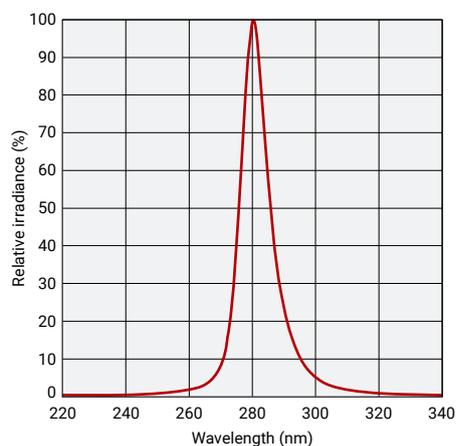
- Compact and lightweight
- Driving 4 heads independently
- High stability
- Low power consumption

■ Applications

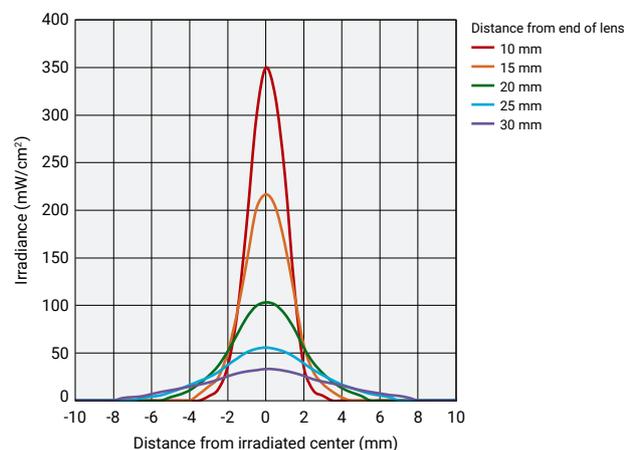
- UV adhesive curing and UV ink drying (Tack*¹ removal)
- UV sterilization
- Various analysis

*1: Tack is stickiness that occurs when UV adhesive or UV ink is cured using only 365 nm UV light.

■ Spectral distribution (Typ.)



■ Irradiance distribution (Typ.)*¹



*1: The center of the external dimensions of the LED head unit may not coincide with the center of the irradiated light. Adjust the installation position as needed. The shape of the irradiated light varies depending on the irradiation distance, for example, becomes close to a square. There are individual differences in the irradiance distribution between LED head units due to variations in the emission intensity of LED elements.

■ Specifications

• LED head unit L16665-110

Parameter		Description / Value	Unit
Focal length		10	mm
Irradiation area *1		Approx. Φ3	mm
Wavelength		280	nm
UV irradiance *2		350	mW/cm ²
LED design life *3		5000	h
Cooling method		Not required	-
Operating temperature range		+5 °C to +40 °C	-
Storage temperature range		-10 °C to +60 °C (no freezing)	-
Operating humidity range		20 % to 80 % (no condensation)	-
Storage humidity range		Below 80 % (no condensation)	-
Applicable standards	Safety standards	IEC 61010-1/A1	-

*1: Irradiation area measured at the focal length.

*2: Maximum UV irradiance within the irradiated area measured at the focal length.

*3: Average time required for UV irradiance to reach 70 % of the initial value at an operating temperature of 25 °C.

• Controller C16659 series

Parameter		C16659-0-□□ *4	C16659-1-□□ *4	C16659-2-□□ *4	Unit
Input voltage (AC)		100 V to 240 V, single phase 50 Hz / 60 Hz *5			-
Power consumption *6	Max.	25			W
Cooling method		Not required			-
Operating temperature range		+5 °C to +40 °C			-
Storage temperature range		-10 °C to +60 °C (no freezing)			-
Operating humidity range		20 % to 80 % (no condensation)			-
Storage humidity range		Below 80 % (no condensation)			-
External control		Irradiation control, irradiation signal, various error signals			-
		N/A	Control via USB	Control via RS-232C	
Communication control		-	Irradiation control, irradiation signal, accumulation / display / reset of irradiation time, program setting in auto irradiation, various error signals		-
Applicable standards	EMC standards	IEC 61326-1 Emission limits: CISPR 11 Group 1 Class A Immunity requirements: Table 2			-
	Safety standards	IEC 61010-1/A1			-

*4: The square symbol □ in each type number indicates a suffix that represents the specifications of the AC adapter.

•When no AC adapter supplied, no suffix is added. The user needs to prepare an AC adapter that outputs 12 V DC and 24 W or more. In that case, EMC and safety testing should be performed by the user.

•When an AC adapter supplied, a suffix is added. A1: For Japan, A2: For U.S., A3: For Europe, A4: For China, A5: For UK, A7: For Thailand
In the case of C16659-0, the "0" will be omitted and so the type number will be C16659.

*5: Input voltage to the controller should be 12 V ±0.5 V DC.

*6: Power consumption when 4 heads are operated.

Related product

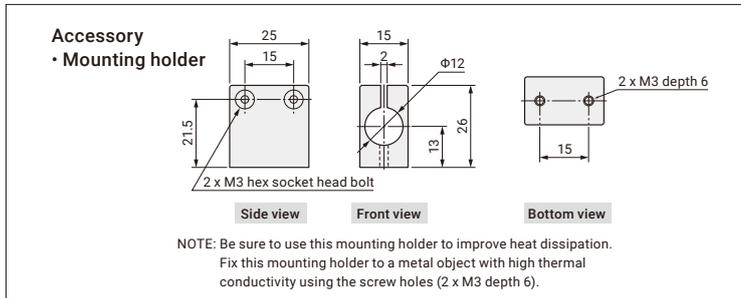
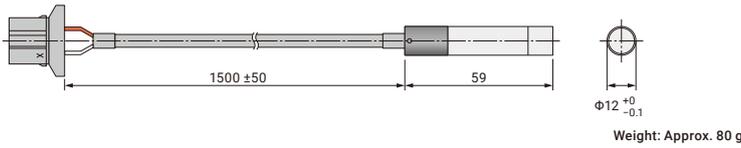
EX-PEN: Excimer lamp light source

This is the world's smallest class excimer lamp designed for easy assembly into equipment. Its compact size and light weight allow a free and flexible design to achieve equipment downsizing and higher performance. This excimer lamp is an eco-friendly product since it uses absolutely no mercury, which is designated as an environmentally harmful substance.

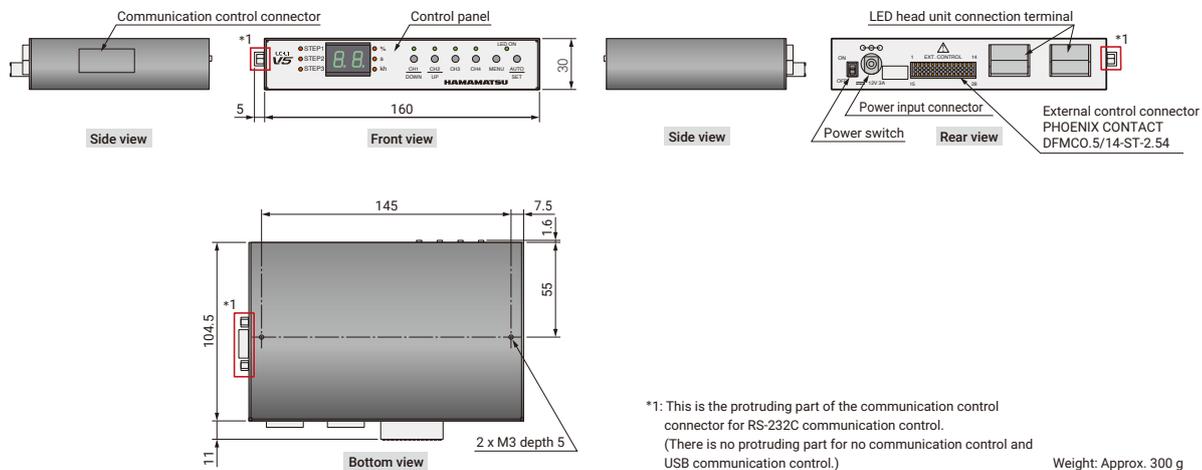


■ Dimensional outlines (Unit: mm)

• LED head unit L16665-110



• Controller C16659 series



External control connector connection

Pin No.	Signal		Pin No.	Signal	
1	EMGCY	Input	15	EMGCY	Input
2	LED head unit 1	Irradiation signal	16	LED head unit 3	Irradiation signal
3		Irradiation end signal in auto irradiation	17		Irradiation end signal in auto irradiation
4		Error signal	18		Error signal
5		Irradiation start signal in auto irradiation	19		Irradiation start signal in auto irradiation
6		Irradiation control signal in manual irradiation	20		Irradiation control signal in manual irradiation
7	GND.	-	21	GND.	-
8	LED head unit 2	Irradiation signal	22	LED head unit 4	Irradiation signal
9		Irradiation end signal in auto irradiation	23		Irradiation end signal in auto irradiation
10		Error signal	24		Error signal
11		Irradiation start signal in auto irradiation	25		Irradiation start signal in auto irradiation
12	Irradiation control signal in manual irradiation	Input	26	Irradiation control signal in manual irradiation	Input
13	GND.	-	27	GND.	-
14	Output voltage (+5 V)	Output	28	GND.	-

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