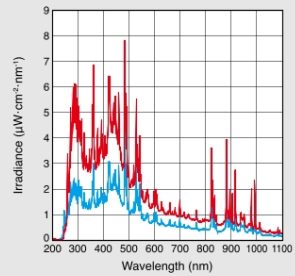


15 W xenon flash lamps

These 15 W xenon flash lamps integrate a reflector to deliver higher output, yet these lamps are also compact and generate less heat. The built-in reflector is available with a choice of converging type and collimating type. The converging type is ideal for applications where the output light must be guided to an optical light guide.



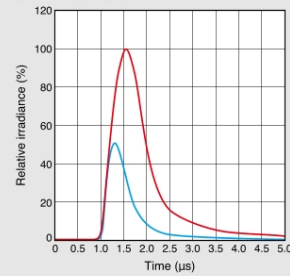
Spectral distribution (Typ.)



Built-in reflector
 — Converging type (L4633) — Collimating type (L4634)

Measurement conditions
 Window material: Borosilicate glass
 Main discharge voltage: 1000 V
 Main discharge capacitance: 0.3 μF
 Repetition rate: 100 Hz
 Detector: Photomultiplier tube (Cs-Tl photocathode) (200 nm to 320 nm)
 Photomultiplier tube (Multialkali photocathode) (280 nm to 720 nm)
 Si photodiode (680 nm to 1100 nm)
 Measurement distance: 500 mm

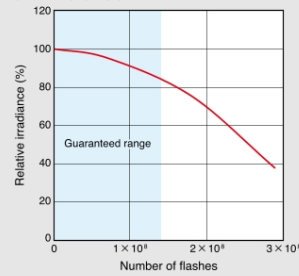
Emission pulse waveform (L4633) (Typ.)



Main discharge capacitance
 — 0.3 μF — 0.1 μF

Measurement conditions
 Main discharge voltage: 1000 V
 Detector: Biplanar phototube R1328U-52 (185 nm to 650 nm)

Life characteristics (L4633) (Typ.)



Measurement conditions
 Main discharge voltage: 1000 V
 Main discharge capacitance: 0.3 μF
 Repetition rate: 100 Hz
 Detector: Si photodiode S1336-8BQ (190 nm to 1100 nm)

Specifications

Parameter	L4633		L4634		Unit
	Converging type		Collimating type		
Built-in reflector	Converging type		Collimating type		—
Window material	Borosilicate glass				—
Side tube material	Borosilicate glass				—
Spectral distribution	240 to 2500				nm
Main discharge voltage range	500 to 1000				V
Recommended main discharge voltage range	700 to 1000				V
Maximum lamp input energy (per flash)	See operating condition examples				mJ
Maximum repetition rate ①	100				Hz
Maximum average lamp input (continuous)	See operating condition examples				W
Light output stability ②	Typ.	0.5		% CV	
		2.9		% p-p	
		1.0		% CV	
Max.	5.0		% p-p		
	1.4 × 10 ⁸ to 5 × 10 ⁸				flashes
Guaranteed life ③	1.4 × 10 ⁸ to 5 × 10 ⁸				flashes
Trigger voltage	5 to 7				kV p-p
Cooling method	Not required				—
Operating temperature range	+5 to +40				°C
Storage temperature range	-40 to +90				°C
Operating humidity range	Below 85 % (no condensation)				—
Storage humidity range	Below 95 % (no condensation)				—
Trigger socket (sold separately) ④	E4370-01				—

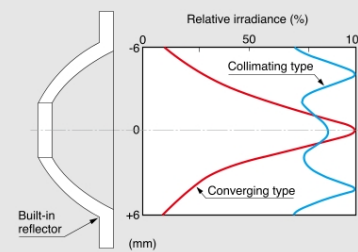
NOTE: ① To ensure highly stable operation, 10 Hz or more repetition rate is recommended.
 ② Light output stability (at a repetition rate of 10 Hz or more)
 Light output stability (% CV) = light output standard deviation / average light output × 100
 Light output stability (% p-p) = (maximum light output - minimum light output) / average light output × 100
 ③ Measured with a Hamamatsu Si photodiode S1336-8BQ. The life is defined as the time at which the light output at 190 nm to 1100 nm decreases to 50% of the initial output level or the light output fluctuation exceeds the specified maximum value when the lamp is operated at a lamp input energy of 0.15 J to 0.05 J.
 ④ See page 24 for information on trigger sockets.

Operating condition examples

Main discharge capacitance (μF)	Main discharge voltage (V)	Maximum lamp input energy (per flash) ③ (mJ)	Maximum repetition rate ⑥ (Hz)	Maximum average lamp input (continuous) ⑦ (W)	Power supply ④ (sold separately)
0.3	1000	150.0	100	15.0	C13316-03
	700	73.5	100	7.4	
0.2	1000	100.0	100	10.0	C13316-02
	700	49.0	100	4.9	
0.1	1000	50.0	100	5.0	C13315
	700	24.5	100	2.5	

NOTE: ③ Maximum lamp input energy (per flash) (J)
 $E = 1/2 \times C \times V^2$; C: Main discharge capacitance (F); V: Main discharge voltage (V)
 ④ P = E × f; E: Maximum average lamp input energy (per flash) (J); f: Repetition rate (Hz)
 ⑤ To ensure highly stable operation, 10 Hz or more repetition rate is recommended.
 ⑥ ⑦ See pages 26 to 27 for information on power supplies.

Directivity (light distribution)



Measurement method

The Directivity (light distribution) of the converging type is measured by placing an opal glass plate at the focal point of the reflector. The Directivity (light distribution) of the collimating type is measured by placing an opal glass plate at a position 10 mm away from the lamp.

