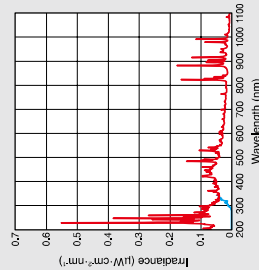


10 W xenon flash lamps

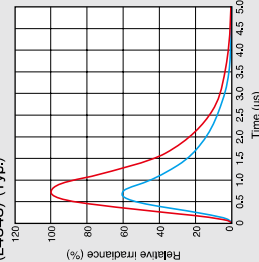
In spite of using low-cost electrodes, these 10 W xenon flash lamps feature high stability and long lifetime, making them versatile and easy to use in a wide range of applications. The lamp shape is selectable from either a hemispherical or flat window.

Spectral distribution (Typ.)



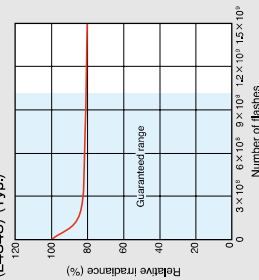
Window material
— UV glass (L4640) — Borosilicate glass (L4641)
Measurement conditions
Main discharge voltage: 1000 V
Arc size: 1.5 mm
Main discharge capacitance: 0.2 μF
Repetition rate: 100 Hz
Detector: Photomultiplier tube (Cs-Te photocathode) (200 nm to 320 nm)
Photomultiplier tube (Multialkali photocathode) (280 nm to 720 nm)
Measurement distance: 500 mm

Emission pulse waveform (L4640) (Typ.)



Main discharge capacitance
— 0.2 μF — 0.1 μF
Measurement conditions
Main discharge voltage: 1000 V
Arc size: 1.5 mm
Main discharge capacitance: 0.2 μF
Repetition rate: 100 Hz
Detector: Xenon flash lamp (F1328) L-52 (185 nm to 650 nm)
Measurement distance: 500 mm

Life characteristics (L4640) (Typ.)



Measurement conditions
Main discharge voltage: 1000 V
Arc size: 1.5 mm
Main discharge capacitance: 0.2 μF
Repetition rate: 100 Hz
Detector: Si photocell S1336-88Q (190 nm to 1100 nm)
Measurement distance: 500 mm

Specifications

Parameter	L4640	L4642	L4644	L4646	L4641	L4643	L4645	L4647	Unit
Lamp shape	Hemispherical	Flat	Hemispherical	Flat	Hemispherical	Flat	Hemispherical	Flat	—
Arc size	1.5	3.0	3.0	3.0	1.5	3.0	3.0	3.0	mm
Side tube material	UV glass	Borosilicate glass	UV glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	—
Window material	UV glass	UV glass	UV glass	UV glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	Borosilicate glass	—
Spectral distribution	185 to 2500	185 to 2500	185 to 2500	185 to 2500	240 to 2500	240 to 2500	240 to 2500	240 to 2500	nm
Main discharge voltage range	300 to 1000	300 to 1000	300 to 1000	300 to 1000	300 to 1000	300 to 1000	300 to 1000	300 to 1000	V
Recommended main discharge voltage range	700 to 1000	700 to 1000	700 to 1000	700 to 1000	700 to 1000	700 to 1000	700 to 1000	700 to 1000	V
Maximum lamp input energy (per flash)	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	mJ
Maximum repetition rate ①	100	100	100	100	100	100	100	100	Hz
Maximum average lamp input (continuous)	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	See operating condition examples	W
Light output stability ②	Typ. Max.	0.5 4.5	0.4 4.0	0.5 4.0	0.5 4.5	0.5 4.5	0.4 4.0	0.4 4.0	% CV % PP % CV % PP
Guaranteed life ③	1 × 10⁴	1 × 10⁴	1 × 10⁴	1 × 10⁴	1 × 10⁴	1 × 10⁴	1 × 10⁴	1 × 10⁴	flashes
Trigger voltage	5 to 7	5 to 7	5 to 7	5 to 7	5 to 7	5 to 7	5 to 7	5 to 7	kV PP
Cooling method	Not required	Not required	Not required	Not required	Not required	Not required	Not required	Not required	—
Operating temperature range	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	+5 to +40	°C
Storage temperature range	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +90	-40 to +90	°C
Operating humidity range	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	Below 85 % (no condensation)	—
Storage humidity range	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	Below 95 % (no condensation)	—
Trigger socket (sold separately) ④	E2442	E2442	E2442	E2442	E2442	E2442	E2442	E2442	—

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 (% PP) = (maximum light output - minimum light output) / average light output × 100

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) (mJ)	Maximum repetition rate (Hz)	Maximum average lamp input (continuous) (W)	Power supply ④ (sold separately)
0.2	1000	100.0	100	10.0	C1331 6-02
	700	49.0	100	4.9	
0.1	1000	50.0	100	5.0	
	700	24.5	100	2.5	C1331 5

NOTE: ④ Maximum lamp input energy (per flash) (J)
 $E = 1/2 \times C \times V^2$
E: Main discharge energy (J), V: Main discharge voltage (V)
C: Main discharge capacitance (F)
⑤ See page 26 to 27 for information on power supplies.

Directivity (light distribution) (Typ.)

