

# SUPER-QUIET XENON FLASH LAMPS

Semiconductor

FA

Information

Medical

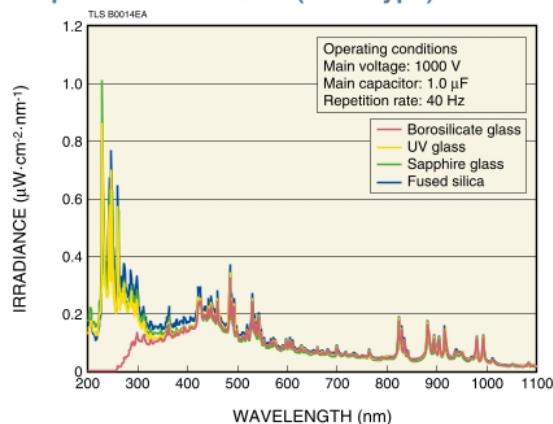
Environment

Analysis

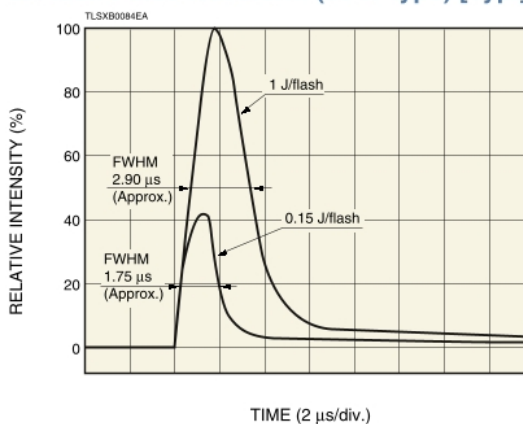
Xenon flash lamps emit a brilliant continuous spectrum from UV to infrared and feature a compact construction and less heat generation compared to continuous mode lamps. Hamamatsu super quiet xenon flash lamps are ideally suited for precision photometry because of outstanding characteristics such as higher light output stability and longer service life due to the improved electrode construction and material. Hamamatsu provides 5 types of super quiet xenon lamps: the SQ type using a high performance BI cathode, the general-purpose HQ type having characteristics similar to the SQ type, the built-in reflector type that emits light output 4 times higher than conventional lamps, the 20 W / 60 W high power type constructed with a metal can package and built-in reflector type 60 W high power type constructed with a metal can package. Our product lineup includes compact lamp modules with lamp, trigger socket and power supply all integrated into one unit.



## Spectral Distribution (20 W Type)



## Flash Pulse Waveform (60 W type) [Typ.]



## Xenon Flash Lamp Modules

Easy-to-use lamp modules with built-in xenon flash lamp, power supply and trigger socket. Hamamatsu provides a wide product lineup of compact 2 W types and 5 W types. The 5 W types include a side-on type, head-on type, high output type having double the light output, silent type, and high precision type.

### LINE-UP

Type No. (series)	Type	Arc size (mm)	Main Discharge Capacitor (μF)	Maximum Input Energy [per flash] (mJ)	Window Material	Main Discharge Voltage Adjustable (V)	Max. Average Input [continuous] (W)	Input Voltage Range (V)	Dimensions (W × H × D) (mm)	
L12336 <sup>Ⓐ</sup>	2 W	1.0	0.141 0.094 0.047 0.020	25	UV Glass	400 to 600	2	11 to 15	42 × 37 × 42	
L9455 <sup>Ⓐ</sup>	5 W Side-on	1.5	0.22 0.11	50	UV Glass / Borosilicate Glass / Synthetic Silica	400 to 600	5	11 to 28	44 × 35 × 98	
L9456		3.0	0.047 0.28							
L11035 <sup>Ⓐ</sup>	5 W Head-on	1.5	0.22 0.11	50						
L11036		3.0	0.047 0.28							
L11316 <sup>Ⓐ</sup>	5 W	1.5	0.2	100						500 to 1000
L11317	High output	3.0	0.1							

NOTE: <sup>Ⓐ</sup> SMA fiber adapter types are also available.

## Related Products

Power supplies, trigger sockets, shield box and cooling jacket are also available. Please refer to the individual catalog for details.

## ■ Characteristics

Type No.	Type	Arc Size (mm)	Dimensional Outline	Bulb Shape	Window Material	Spectral Distribution (nm)	Recommended Supply Voltage (V dc)	Trigger Voltage p-p (kV)	Max. Average Power (Continuous) (W)	Max. Average Energy per Flash (J/Flash)	Repetition Rate Max. (Hz)	Output Stability <sup>(A)</sup> Output Fluctuation Max. (%) <sup>(D)</sup>	Guaranteed Life Min. (Number of Flashes) <sup>(A)</sup>	Suitable Trigger Socket
L4644	10 W HQ Type	3.0	①-a	Hemisphere	UV Glass	185 to 2000	700 to 1000	5 to 7	10	0.1	100	3 <sup>(D)</sup>	1.0 × 10 <sup>9</sup>	E2418 E6188
L4646				Flat	Borosilicate Glass	240 to 2000								
L4645				①-a										
L4647		1.5	②-b	Hemisphere	UV Glass	185 to 2000	700 to 1000	5 to 7	10	0.1	100	3.5 <sup>(D)</sup>	1.0 × 10 <sup>9</sup>	E2442 E6186
L4642				Flat	Borosilicate Glass	240 to 2000								
L4641				①-b										
L4643	②-b	Flat												
L2358	15 W SQ Type	3.0	③-b	Flat	Synthetic Silica	160 to 2000	700 to 1000	5 to 7	15	0.15	100	2.5 <sup>(D)</sup>	1.2 × 10 <sup>9</sup>	E2361 Series
L2359					UV Glass	185 to 2000								
L2360					Borosilicate Glass	240 to 2000								
L4633	15 W Built-in Reflector Type	1.5	④	Converging	Borosilicate Glass	240 to 2000	700 to 1000	5 to 7	15	0.15	100	5 <sup>(D)</sup>	5.0 × 10 <sup>8</sup>	E4370-01
L4634				Collimating										
L11957	20 W Type	3.0	⑤-a	Flat	UV Glass	185 to 2000	700 to 1000	5 to 7	20	0.5	300	2 %CV <sup>(E)</sup>	1.0 × 10 <sup>8</sup>	E10978
L11956				Flat	Borosilicate Glass	240 to 2000								
L11937		1.5	⑤-b	Flat	UV Glass	185 to 2000								
L11936				Flat	Borosilicate Glass	240 to 2000								
L11967	20 W Built-in Reflector Type	3.0	⑤-a	Flat <sup>(C)</sup>	UV Glass	185 to 2000	700 to 1000	5 to 7	20	0.5	300	2 %CV <sup>(E)</sup>	1.0 × 10 <sup>8</sup>	E10978
L11966				Flat <sup>(C)</sup>	Borosilicate Glass	240 to 2000								
L11947		1.5	⑤-b	Flat <sup>(C)</sup>	UV Glass	185 to 2000								
L11946				Flat <sup>(C)</sup>	Borosilicate Glass	240 to 2000								
L6604	60 W Type	3.0	⑥	Flat	Borosilicate Glass	240 to 2000	700 to 1000	5 to 10	60	1	60	3 <sup>(B,D)</sup>	8.0 × 10 <sup>7</sup>	E6647
L6605					Sapphire Glass	190 to 2000								
L7684	60 W Built-in Reflector Type	3.0	⑥	Flat <sup>(C)</sup>	Borosilicate Glass	240 to 2000	700 to 1000	5 to 10	60	1	60	3 <sup>(B,D)</sup>	8.0 × 10 <sup>7</sup>	E6647
L7685					Sapphire Glass	190 to 2000								

(A) Measured with supply voltage of 1000 V, main discharge capacitor of 0.1 μF, repetition rate of 50 Hz and wavelength of 400 nm.

(B) Measured with supply voltage of 1000 V, main discharge capacitor of 2 μF, repetition rate of 10 Hz and wavelength of 400 nm.

(C) Built-in reflector

(D) Output stability (%) =  $\frac{(\text{Max. output} - \text{Min. output})}{\text{Average output}} \times 100$

(E) Light output stability (%CV) =  $\frac{\text{Light output standard deviation}}{\text{Average light output}} \times 100$

(F) Please refer to the individual catalog for detailed information.

## ■ Dimensional Outline Unit: mm

