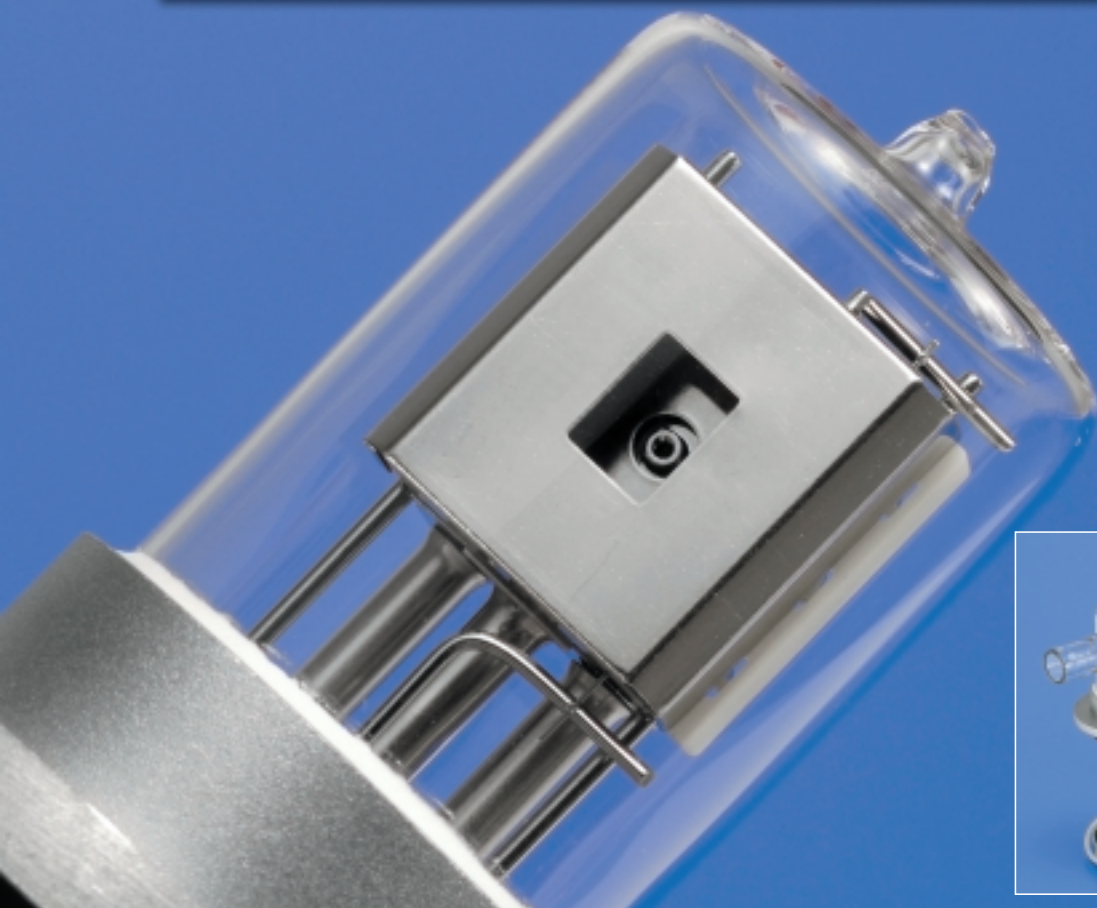


X2D2[®] LAMP

HIGH BRIGHTNESS DEUTERIUM LAMP



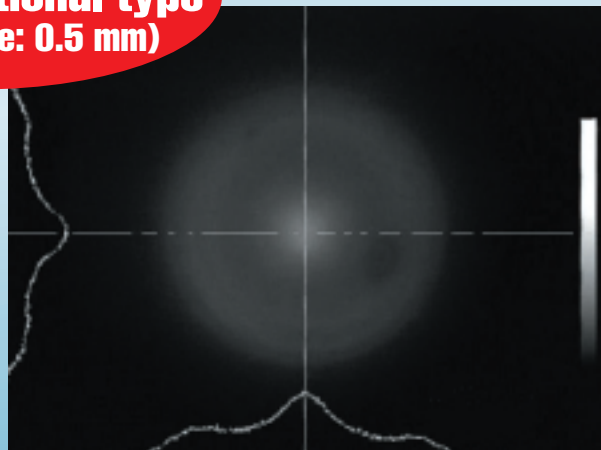
HIGH BRIGHTNESS

■ Arc Distribution

**2 times higher
than conventional type
(Aperture size: 0.5 mm)**



X2D2[®] Lamp



Conventional type (L2D2[®] Lamp)

HAMAMATSU

PHOTON IS OUR BUSINESS

X2D2[®] LAMP

Over View

The X2D2[®] lamp (brightness of new deuterium lamp) is two times higher than conventional deuterium lamp ($\phi 0.5$ mm aperture type).

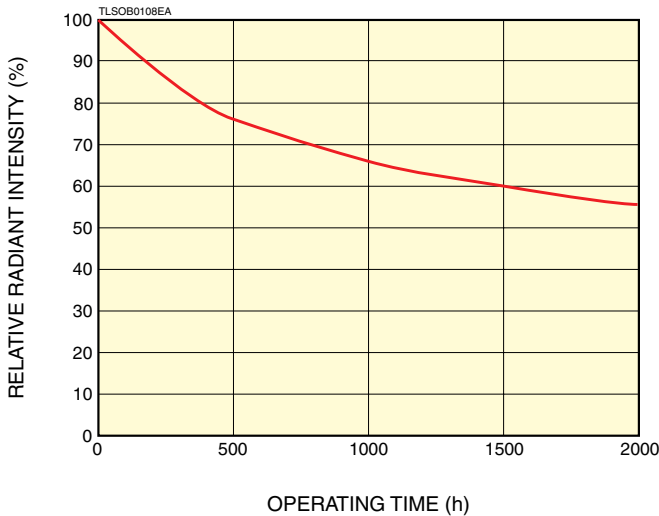
It can realize high resolution and high throughput of the instruments.

Applications

- HPLC (High Performance Liquid Chromatography)
- UV-VIS Spectrophotometer
- CE (Capillary Electrophoresis)
- Film Thickness Measurement
- SO_x/NO_x Analyzer
- Environmental Analysis
- Photoionization Light Source
- Excitation Light Source
- Semiconductor Inspection

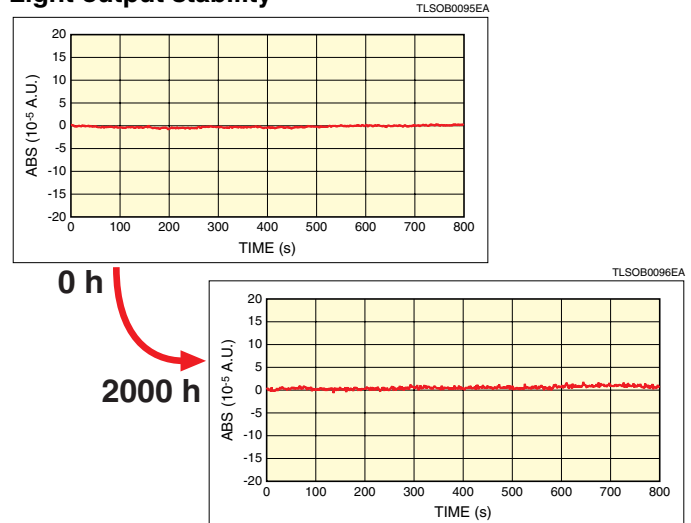
Long life: 2000 hours

Life Characteristics (at 230 nm)



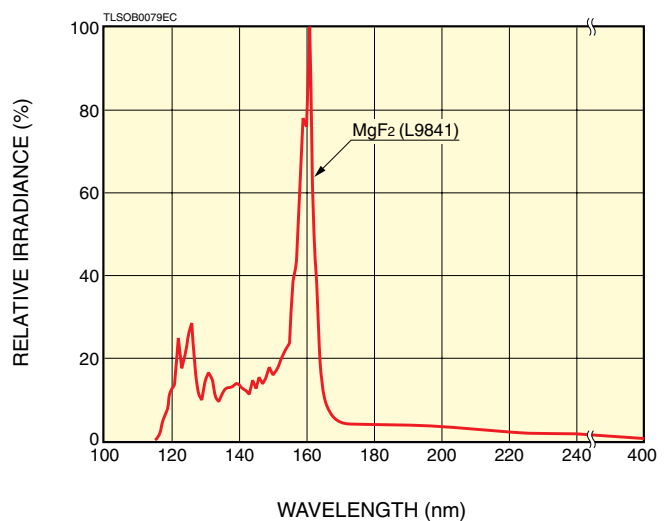
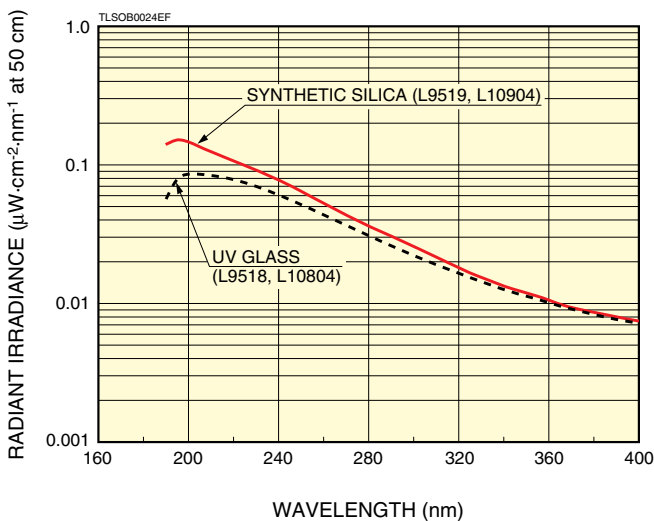
High stability: Fluctuation 0.005 % (p-p) Typ. (Equivalent to 2×10^{-5} A.U.)

Light output stability



High UV intensity

Spectral distribution



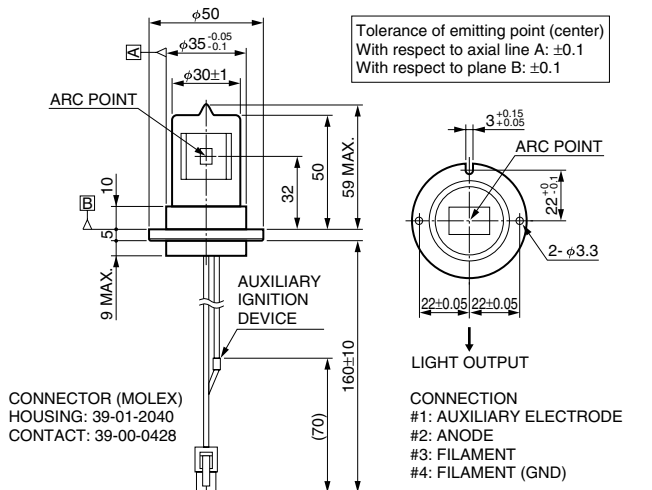
Specifications

Type No.	L9518	L10804	L9519	L10904	L9841	Unit
Type	Standard	See-through	Standard	See-through	Standard	—
Window Material	UV glass		Synthetic silica		MgF ₂	—
Spectral Distribution	185 to 400		160 to 400		115 to 400	nm
Aperture Diameter			0.5			mm
Output Stability at 230 nm	Drift Max.		±0.3			%/h
	Fluctuation (p-p) Typ.		0.005			%
Guaranteed Life at 230 nm *			2000			h
Discharge Starting Voltage Max.			400			V dc
Anode Current			300 ± 30			mA dc
Tube Voltage Typ.	90		85			V dc
Filament Ratings	Warm-up	Voltage	2.5 ± 0.25			V dc
		Current Typ.	4			A dc
		Time Min.	20			s
	Operating	Voltage	1.7 ± 0.2			V dc
		Current Typ.	3.3			A dc
Operating Ambient Temperature			+10 to +50			°C
Weight	60		65			g

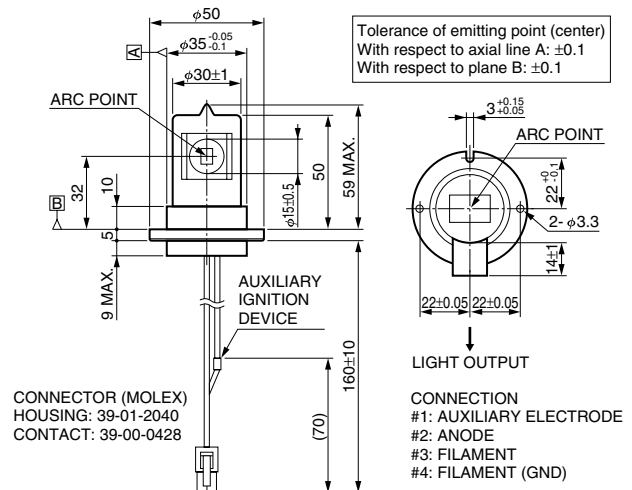
* Lamp life end is defined as the point when light output at 230 nm falls to 50 % of its initial value or when output fluctuation exceeds 0.05 % (p-p).

Dimensional outline (Unit:mm)

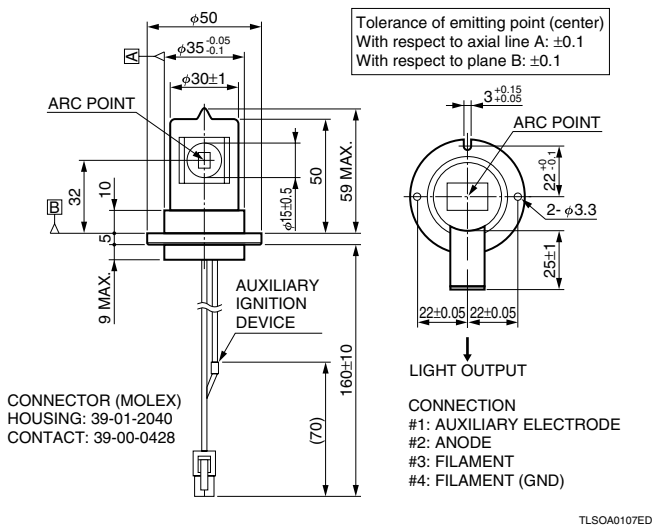
L9518, L10804



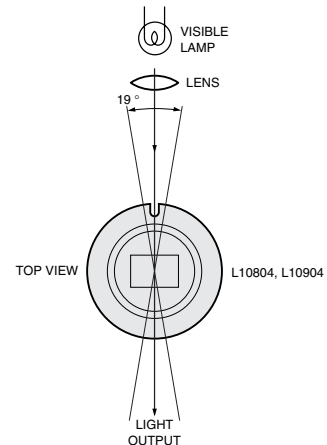
L9519, L10904



L9841



An example for optics of See-through type



RELATED PRODUCTS

POWER SUPPLY

Applications using X2D2® lamps require a very stable light output, so using a Hamamatsu dedicated power supply is recommended to operate these lamps. Our dedicated power supplies use a constant-current circuit and constant-voltage circuit that deliver stable and reliable lamp ignition.

Two types of power supplies are available: AC input (100 V to 240 V) type C9559 and 24 V dc input type M9521. Please select the power supply that matches your application.



Left: C9559, Right: M9521

SPECIFICATIONS (Characteristics are measured at 25 °C ± 1 °C after 30 min of warming up.)

Parameter		C9559	M9521	Unit	
Input	Input Voltage	100 V ac to 240 V ac (100 V/200 V Auto Switching) 50 Hz / 60 Hz	24 V dc ± 2.4 V dc	—	
	Input Current (Max.)	1.4	3	A	
Output	Output Voltage	With Load (Typ.)	85 / 90	V dc	
		Without Load (Min.)	200	V dc	
	Output Current		300 ± 30	mA dc	
	Current Fluctuation (p-p) (Typ.)		0.005	%	
	Current Drift (Typ.)		±0.02	%/h	
	Filament Ratings	Warm-up	Voltage	2.5 ± 0.2	V dc
			Current (Typ.)	4	A dc
		Operation	Time	Approx. 20	s
			Voltage	1.7 ± 0.2	V dc
			Current (Typ.)	3.3	A dc
Trigger Voltage (Typ.)		600		V peak	
Cooling Method		—	0.3 m³/min of Forced Air Cooling	—	
Operating Ambient Temperature		0 to +40		°C	
Storage Temperature		-10 to +60		°C	
Operating and Storage Humidity		Below 80 (No condensation)		%	
Dimensions (W × H × D)		110 × 145 × 310	170 × 35 × 110 (Approx.)	mm	
Weight		Approx. 2.8	Approx. 0.265	kg	
Conformance Standards	CE	Yes	Yes	—	
	UL (File No. E249677)	No	Yes	—	
External Control (LAMP ON/OFF, LAMP OPERATION SIGNAL)		Yes	Yes	—	

LAMP HOUSING

These lamp housings are designed for Hamamatsu X2D2® lamps. Despite being low cost and compact, these lamp housings also function as efficient heat radiator housings to allow stable X2D2® lamp operation.

The window and mounting surface of these lamp housings are finish-machined and have tapped holes, making it easier to install them in equipment.

These lamp housings are ideal for designing photometric equipment that uses X2D2® lamps.

E9522-50: For L9518

E9558-50: For L9519

* Custom lamp housings for see-through type lamps (L10804 and L10904) are also available.



Left: E9522-50, Right: E9558-50

PATENT: USA; 2, JAPAN; 2 PATENT PENDING: USA; 2, JAPAN; 3, EUROPE; 4

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HAMAMATSU PHOTONICS K.K., Electron Tube Division

314-5, Shimokanzo, Iwata City, Shizuoka Pref., 438-0193, Japan, Telephone: (81)539/62-5248, Fax: (81)539/62-2205

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, P. O. Box 6910, Bridgewater, N.J. 08807-0910, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-2658 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: infos@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road Welwyn Garden City Hertfordshire AL7 1BW, United Kingdom, Telephone: 44-(0)1707-294888, Fax: 44(0)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Smidesvägen 12, SE-171-41 SOLNA, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia: S.R.L.: Strada della Moia, 1/E, 20020 Arese, (Milano), Italy, Telephone: (39)02-935 81 733, Fax: (39)02-935 81 741 E-mail: info@hamamatsu.it

China: HAMAMATSU PHOTONICS (CHINA) Co., Ltd.: 1201 Tower B, Jiaming Center, No.27 Dongsanhuan Beilu, Chaoyang District, Beijing 100020, China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

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