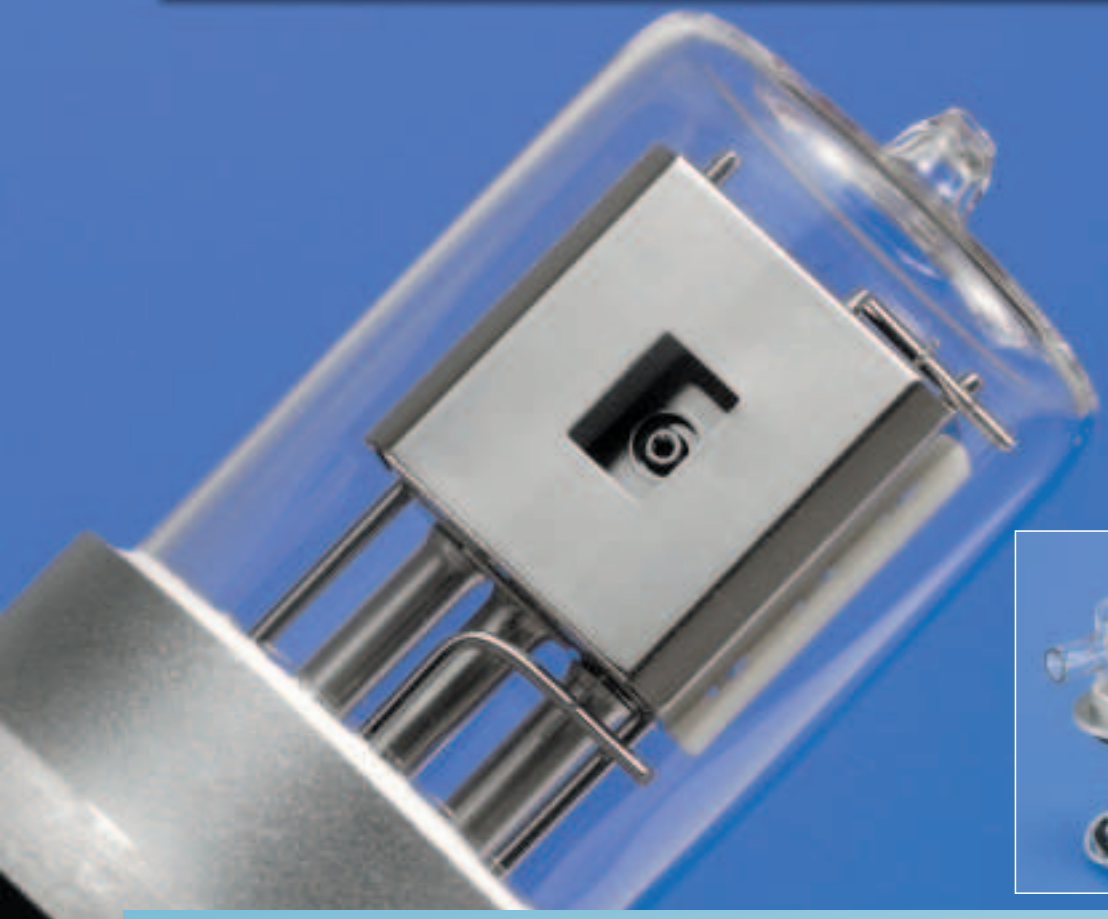
X2D2® LAMP

HIGH BRIGHTNESS DEUTERIUM LAMP

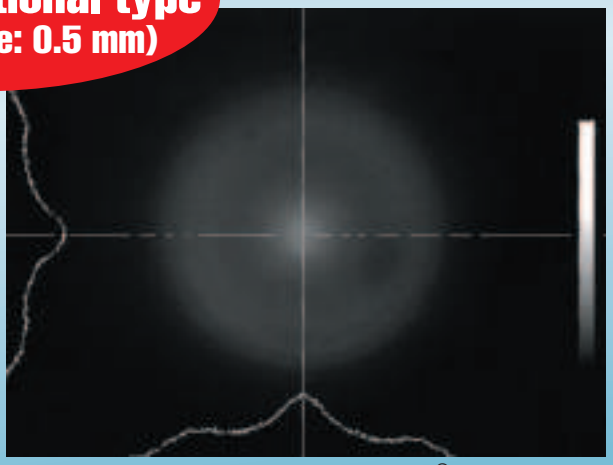


HIGH BRIGHTNESS

■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

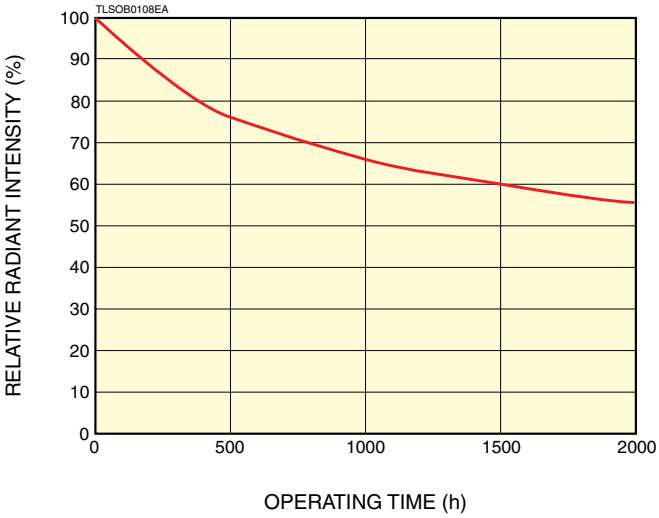
The X2D2® lamp (brightness of new deuterium lamp) is two times higher than conventional deuterium lamp (ϕ0.5 mm aperture type).
It can realize high resolution and high throughput of the instruments.

Applications

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

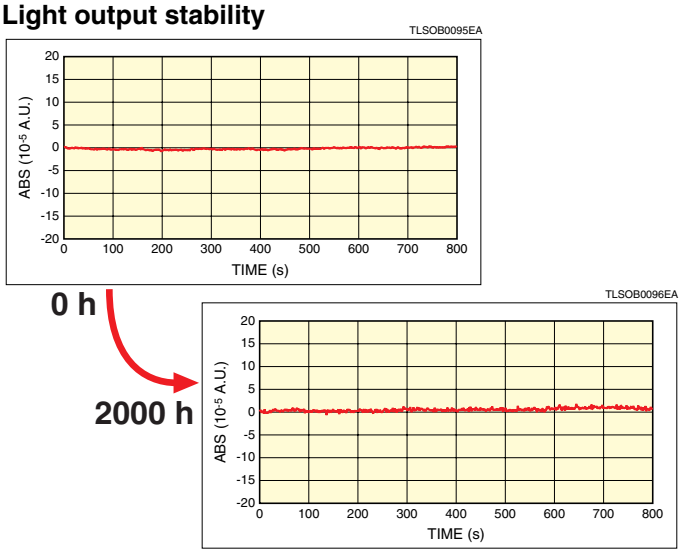
Long life: 2000 hours

Life Characteristics (at 230 nm)



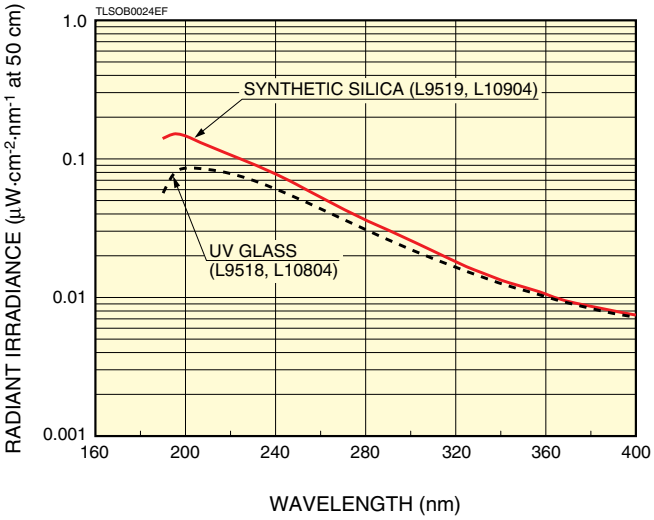
High stability: Fluctuation 0.005 % (p-p) Typ. (Equivalent to 2 × 10^{-5} A.U.)

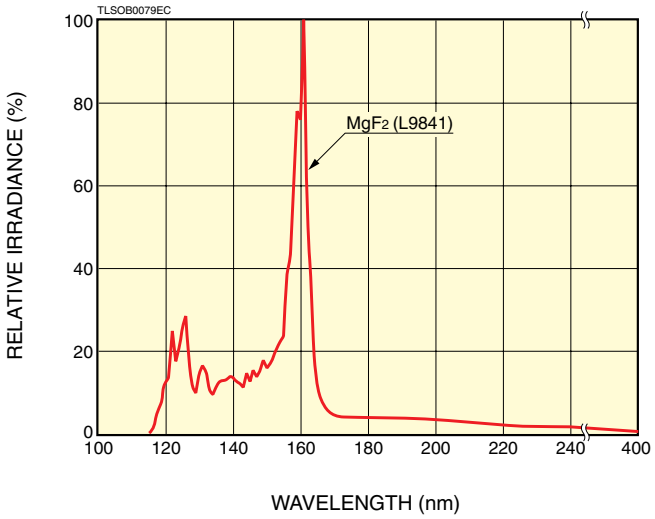
Light output stability



High UV intensity

Spectral distribution





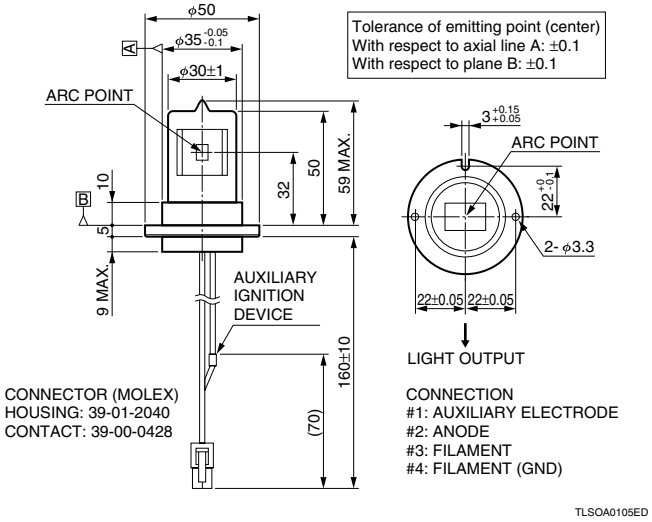
Specifications

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



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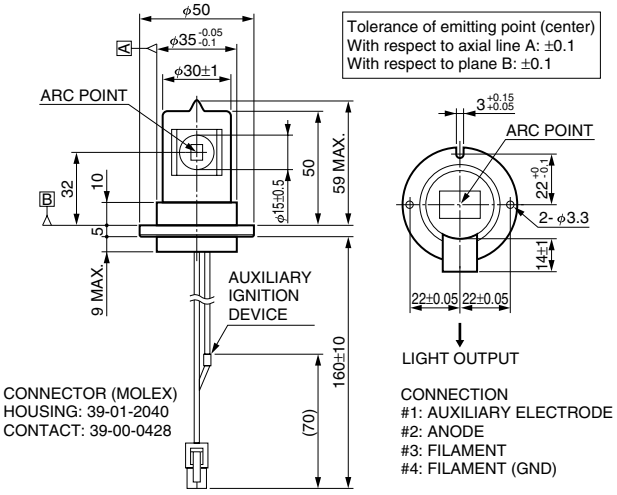
L9519, L10904



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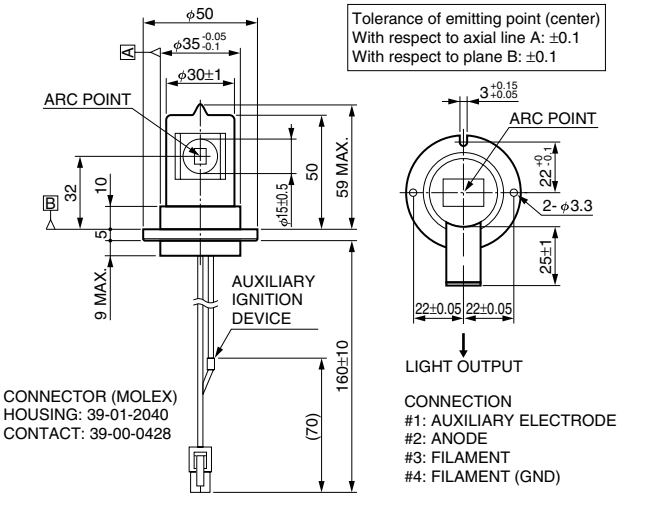
L9841



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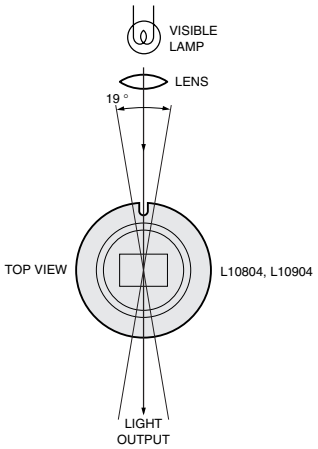
An example for optics of See-through type



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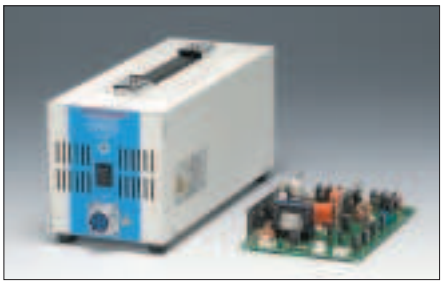
RELATED PRODUCTS

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

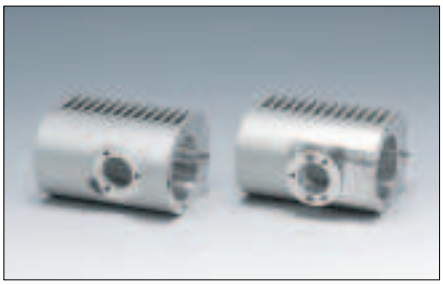
SPECIFICATIONS (Characteristics are measured at 25 °C ± 1 °C after 30 min of warming up.)

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
			Time	Approx. 20		s
		Operation	Voltage	1.7 ± 0.2		V dc
			Current (Typ.)	3.3		A dc
	Trigger Voltage (Typ.)			600		V peak
Cooling Method				—	0.3 m^3/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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