

# NEW

# CALIBRATED LAMP LIGHT SOURCE SERIES

## L7810, L7810-02 (Xenon Lamp)

## L7820, L7820-02 (Deuterium Lamp)

## Easy to reproduce highly stable light!!

L7810, L7810-02



Left: Lamp Housing  
Right: Power Supply

TL50F0151

L7820, L7820-02



Left: Lamp Housing  
Right: Power Supply

TL50F0159

These light sources deliver the extremely high levels of "stability" and "repeatability" essential to calibrated light sources. These are available as an optimal set including a lamp, lamp housing and power supply, so that anyone can easily reproduce a highly stable light output.

The L7810-02 xenon lamp light source is calibrated over a wide spectral range from 200 nm to 800 nm, while the L7820-02 deuterium lamp light source is calibrated in the UV range from 200 nm to 400 nm.

Since we are certified as an ASNITE-Calibration laboratory, we are capable of calibrating spectral irradiance over a wide range from 200 nm to 800 nm (L7810-02).

The spectral range at wavelengths shorter than 250 nm is calibrated based on the ASNITE calibration system (Accreditation System of National Institute of Technology and Evaluation), while the spectral range at wavelengths longer than 250 nm is calibrated based on the JCSS (Japan Calibration Service System).

As of June 2005, Hamamatsu Photonics is the only company certified as an ASNITE-Calibration laboratory in the "Light" field.

Manufactured upon receiving your order.

## APPLICATIONS

- Light level control of light source
- Sensitivity control of optical sensor
- Light intensity measurement and studies of photoreactions (Light resistance, light curing, etc.)
- Quality control of photometric equipment (Medical analysis equipment, semiconductor inspection systems, imaging devices, etc)

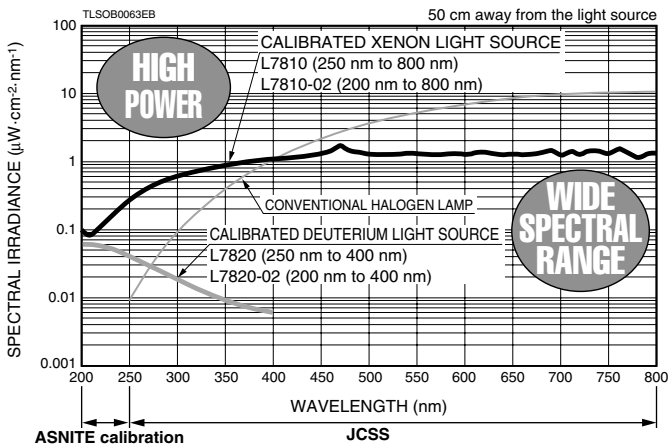
# HAMAMATSU

# SPECIFICATIONS

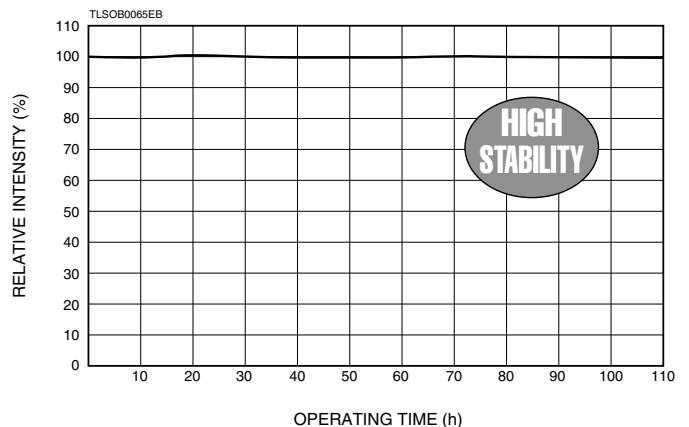
Type No.	L7810	L7810-02	L7820	L7820-02
Lamp	Xenon lamp		Deuterium lamp	
Input Wattage	150 W		30 W	
Spectral Distribution	185 nm to 2000 nm		185 nm to 400 nm	
Calibrated Range ①	ASNITE Calibration	—	200 nm to 245 nm (5 nm intervals)	—
	JCSS	250 nm to 800 nm (10 nm intervals)		250 nm to 400 nm (10 nm intervals)
Type of Calibration	Spectral irradiance			
Calibration Unit	$\mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$			
Calibration Inaccuracy	200 nm	—	$\pm 8\%$	—
	205 nm	—	$\pm 9\%$	—
	210 nm to 225 nm	—	$\pm 8\%$	—
	230 nm to 245 nm	—	$\pm 7\%$	—
	250 nm to 350 nm	$\pm 8\%$	—	$\pm 7\%$
	360 nm to 400 nm	$\pm 7\%$	—	$\pm 6\%$
	410 nm to 800 nm	$\pm 7\%$	—	—
Output Window Material (Lamp Housing)	Synthetic quartz			
Output Window Diameter	$\phi 28$ mm		$\phi 25$ mm	
Optical Axis Height	140 mm (150 mm including vibration-proof rubber feet)			
Warm-up Time	10 minutes or more			
Timer	Hour display (power supply)		Hour display (lamp housing)	
Input Voltage (AC)	100 V to 240 V (100 V / 200 V auto switchable), single phase 50 Hz / 60 Hz			
Power Consumption	350 V·A		90 V·A	
Cooling (Lamp Housing, Power Supply)	Forced air cooling			
Ambient Operating Temperature	0 °C to 40 °C			
Operating Range During Calibration	Temperature	23 °C to 27 °C		
	Humidity	20 % to 70 % (no condensation)		
Dimensions (excluding projecting parts) (W × H × D)	Lamp Housing	100 mm × 280 mm × 100 mm		
	Power Supply	144 mm × 90 mm × 282 mm	117 mm × 90 mm × 200 mm	
	Carrying Case ②	480 mm × 380 mm × 205 mm		
Weight	Lamp Housing	Approx. 3.5 kg		—
	Power Supply	Approx. 3 kg	—	
	Total Weight ③	Approx. 12 kg	—	
Recalibration Interval ④	100 hours of operation			
Guaranteed Lamp Service Life ⑤	500 hours			

- NOTE:** ① Spectral irradiance is measured at a point 50 cm away from the reference plane of the lamp housing.  
 ② Carrying case specially designed to contain one set of calibrated lamp light source and accessories.  
 ③ Total weight including a set of calibration lamp light source and carrying case.  
 ④ This is a general guide for recalibration to maintain calibration reliability. Please contact our sales office for recalibration fee.  
 ⑤ This is the total amount of time that the lamp can be recalibrated to serve as a calibrated light source.

## COMPARISON OF SPECTRAL IRRADIANCE (Reference Data)



## LIGHT INTENSITY DRIFT (Typ.)



This is the logo mark for the Accreditation System of National Institute of Technology and Evaluation (ASNITE), an independent administrative agency in Japan. NITE independently implements calibration standards based on international standards.

ASNITE is the comprehensive accreditation system operated by National Institute of Technology and Evaluation (NITE) according to the international and foreign national standards where there are no relevant national standards in Japan. (JCSS does not meet those international standards.) The Planning Engineering Dept. of Hamamatsu Photonics K. K. was accredited as an ASNITE calibration company in the "Light" field on May 7, 2004 and is entitled to issue calibration certificates bearing the ASNITE logo mark (ASNITE accreditation symbol).



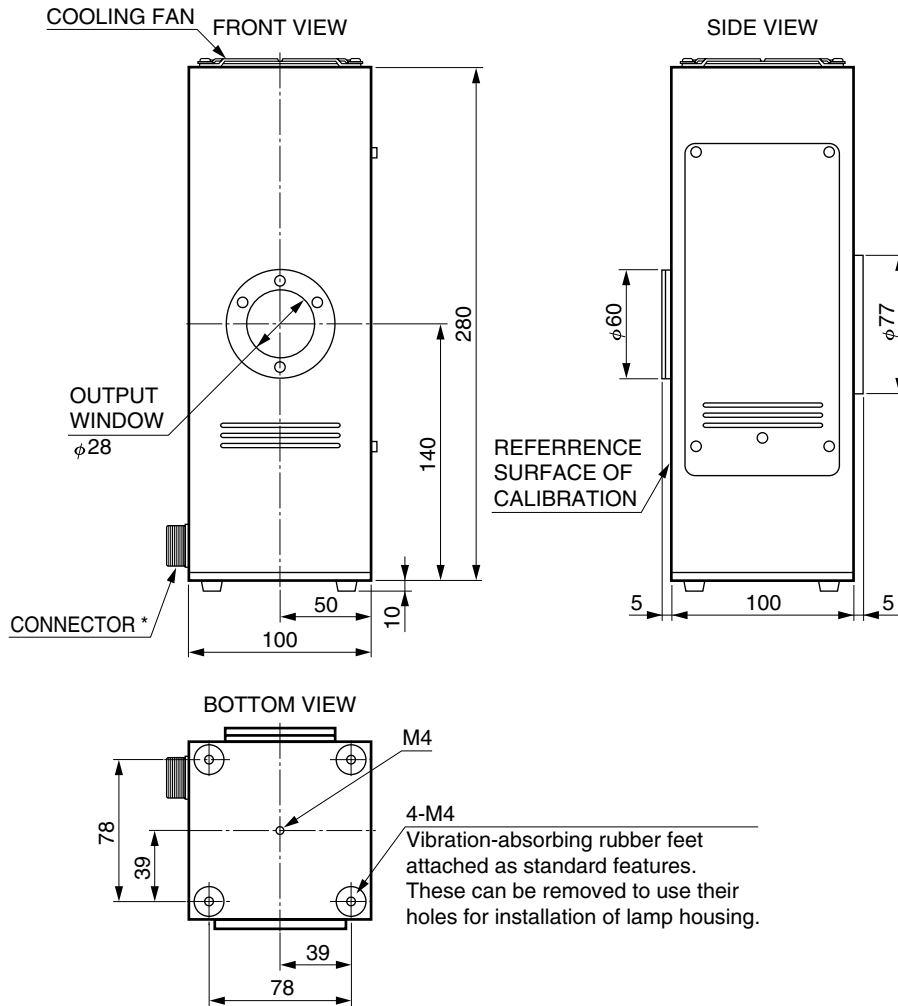
This is the logo mark for the traceability system approved by the Japan Calibration Service System (JCSS) based on the Measurement Law.

The Planning Engineering Dept. of Hamamatsu Photonics K. K. was accredited as a calibration company in the "Light" field on May 21, 1999 and is entitled to issue calibration certificates bearing the JCSS logo mark (JCSS accreditation symbol). Those calibration certificates assure the traceability to National Measurement Standards and can be used, for example, as a traceability certificate for ISO9000 series.

# DIMENSIONAL OUTLINES (Unit: mm)

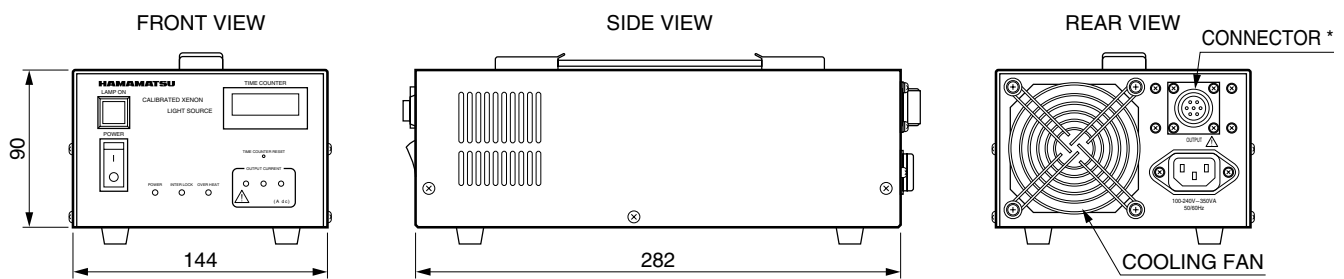
## L7810, L7810-02 (Xenon Lamp)

### LAMP HOUSING



TL50A0066EB

### POWER SUPPLY



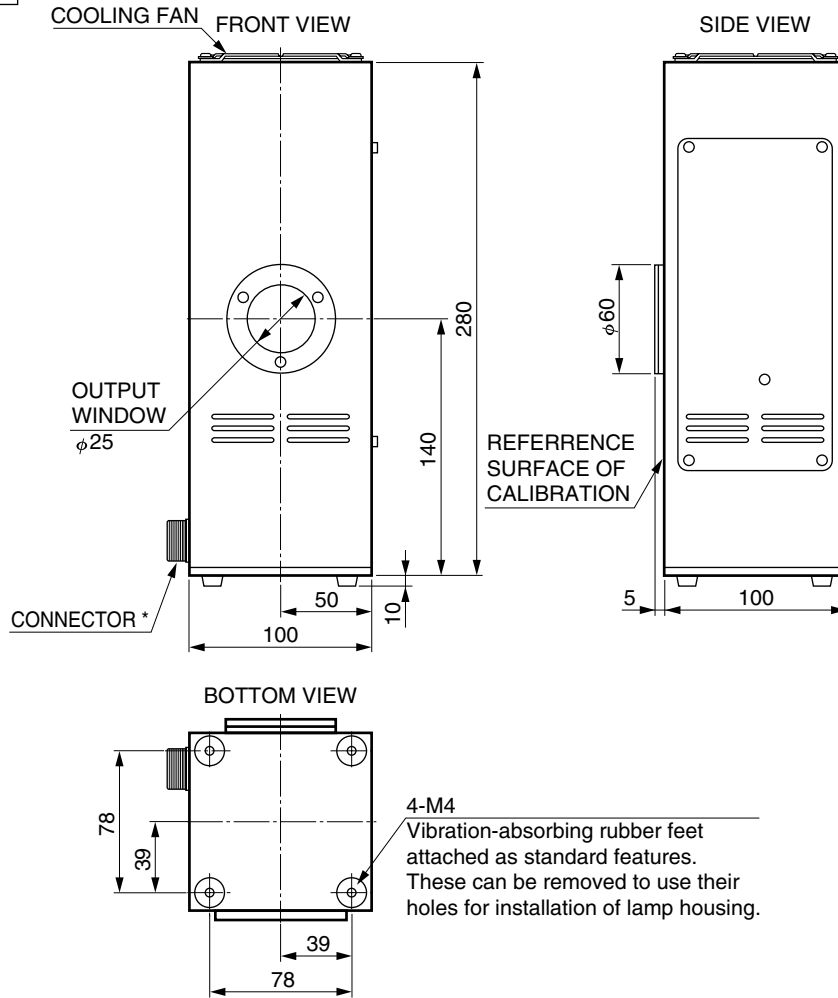
\* For cable to connect lamp housing with power supply, length: 2000

TL50A0090EA

# DIMENSIONAL OUTLINES (Unit: mm)

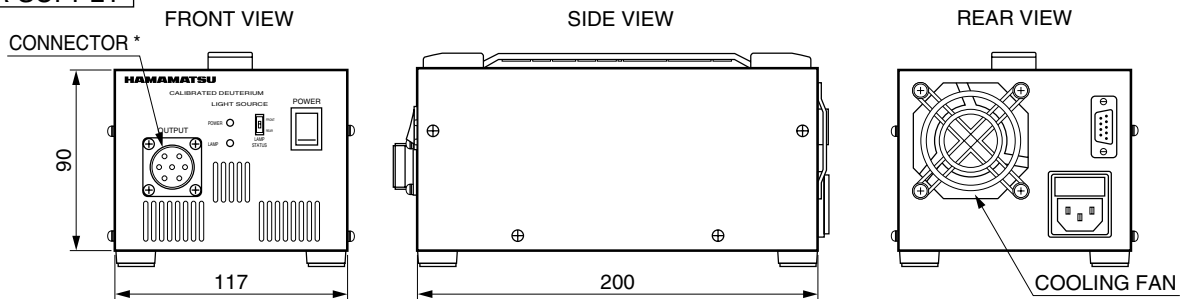
## L7820, L7820-02 (Deuterium Lamp)

### LAMP HOUSING



TL50A0072EC

### POWER SUPPLY



\* For cable to connect lamp housing with power supply, length: 1800

TL50A0091EA

### WARRANTY

Products listed in this catalog are warranted for a period of one year from the date of shipment. If a product is found to be defective within this warranty period, Hamamatsu will replace the defective product without charge.

Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office. Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2005 Hamamatsu Photonics K.K.

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