

Calibrated Lamp Light Source

L7810-03 Make to order



The L7810-03 is a calibrated lamp light source that delivers extremely high levels of stability and reproducibility. It is available in a convenient set including a xenon lamp, lamp housing and power supply to allow easy operation and stable light output with high reproducibility. It emits light over a wide spectral distribution from 200 nm to 800 nm and is supplied with a calibration certificate with a JCSS (Japan Calibration Service System) logo mark.

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 equipment, imaging equipment, etc)

The Quality Headquarters, Quality Management Dept. of Hamamatsu Photonics K. K. was accredited as a calibration company in the "Light" field on May 21, 1999, and then became a registered company on August 4, 2009 according to the legal revisions. Hamamatsu 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.

Specifications

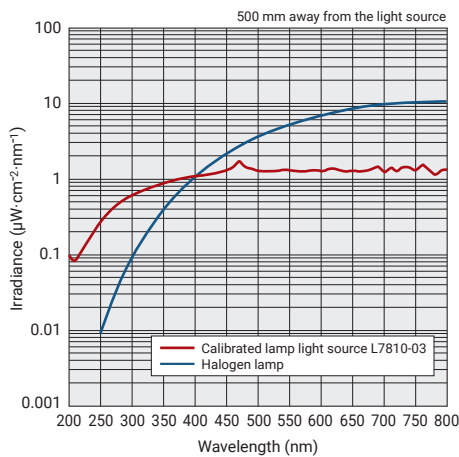
Parameter			Description / Value	Unit
Installed lamp			150 W xenon lamp	–
Focus lens	Material		Synthetic silica glass	–
	Dimension		Φ28	mm
Spectral distribution			185 to 2000	nm
Calibration type			Spectral irradiance ($\mu\text{W}\cdot\text{cm}^{-2}\cdot\text{nm}^{-1}$) *1	–
Calibrated wavelength range			200 nm to 800 nm (10 nm intervals)	–
Recalibration interval *2			100 h in operation	–
Light output stability	Drift	Typ.	± 0.5	%/h
	Fluctuation (p-p)	Max.	1.0	%
Guaranteed lamp life *3			500	h
Input voltage (AC)			100 V to 240 V, single phase 50 Hz / 60 Hz	–
Warm-up time		Min.	10	min
Power consumption		Max.	220	VA
Cooling method			Forced air cooling by fan	–
Operating temperature range			0 °C to +40 °C	–
During calibration			+21 °C to +25 °C	–
Storage temperature range			-10 °C to +65 °C (no freezing)	–
Operating humidity range			20 % to 70 % (no condensation)	–
Storage humidity range			Below 85 % (no condensation)	–
Applicable standards	EMC standards		IEC 61326-1	Emission limits: CISPR 11 Group 1 Class A Immunity requirements: Table 2
				IEC 62471 Risk Group 3
	Safety standards			IEC 61010-1/A1

*1: Spectral irradiance is measured at a point 500 mm away from the reference plane of the lamp housing.

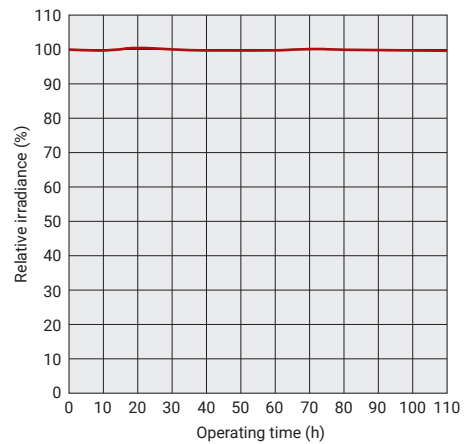
*2: This is a general guide for recalibration to maintain calibration reliability. Please contact our sales office for recalibration fee.

*3: This is the total amount of time that the lamp can be recalibrated to serve as a calibrated light source.

Spectral irradiance (Typ.)

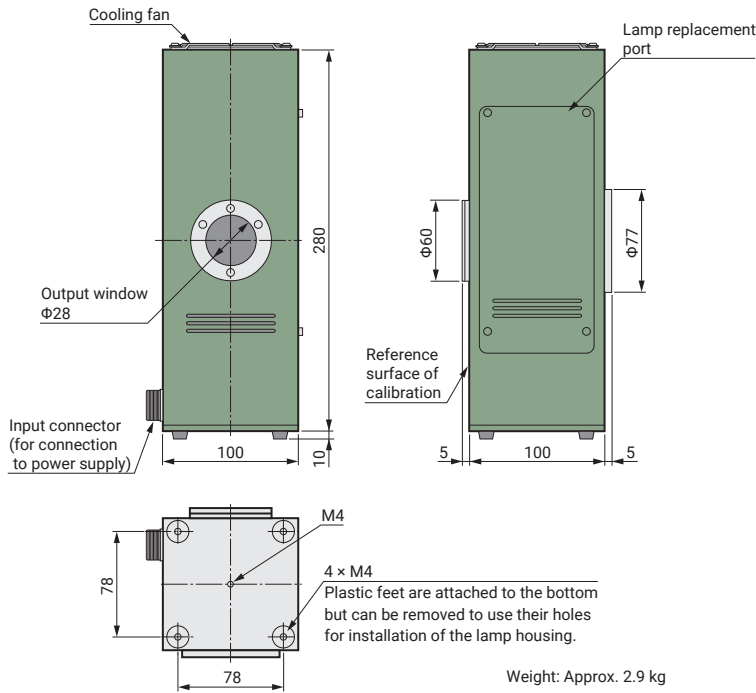


Light output stability (Typ.)

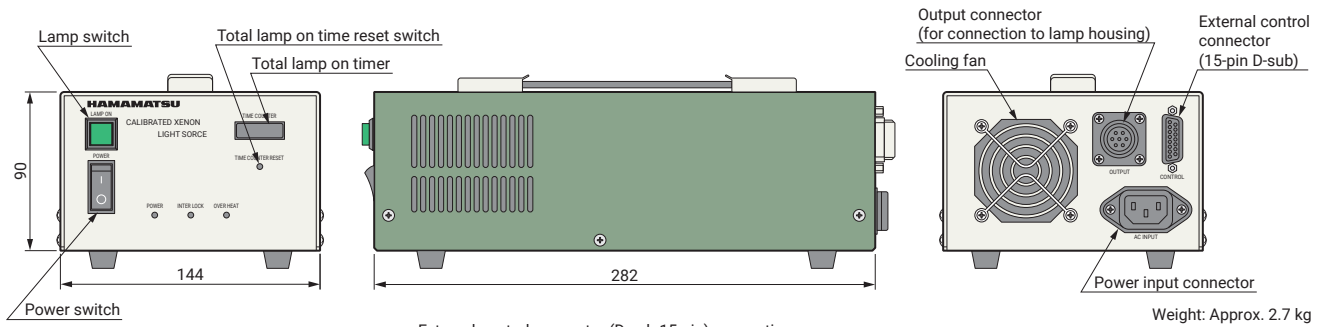


Dimensional outlines (Unit: mm)

Lamp housing



Power supply



External control connector (D-sub 15-pin) connection

Pin No.	Signal		Pin No.	Signal	
1	Auto start setting	Input	9	GND.	-
2	Irradiation control signal (Lamp ON)	Input	10	GND.	-
3	Irradiation control signal (Lamp OFF)	Input	11	No connection	-
4	Overheat signal	Output	12	No connection	-
5	Irradiation signal	Output	13	No connection	-
6	Interlock signal	Output	14	No connection	-
7	Interlock signal	-	15	No connection	-
8	Auxiliary power (+24 V)	Output			

Accessories

- Carrying case
- AC cable (2 m)
- Output cable (2 m)
- Installation plate
- Holder (4 pieces)
- Instruction manual
- Certification of accreditation
- CD-ROM (CSV data of spectral irradiance)

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. ©2025 Hamamatsu Photonics K.K.

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