

**NEW**

# SPOLD<sup>®</sup> (built-in process monitor)

## LD Irradiation Light Source L14140-21M

LD  
Irradiation  
Light  
Source

“Visualization” of laser processing  
with real time monitoring  
system.

The “key” of management  
solution for laser process-  
ing.



### ■ Features

- Transmitted laser light and thermal information with a single fiber simultaneously
- Thermal information of laser irradiation point can be acquired without any adjustment
- Compatible with galvano mirror system
- High speed 1 millisecond sampling to detect an instantaneous change
- Simplified processing peripheral parts by compact irradiation unit

### ■ Applications

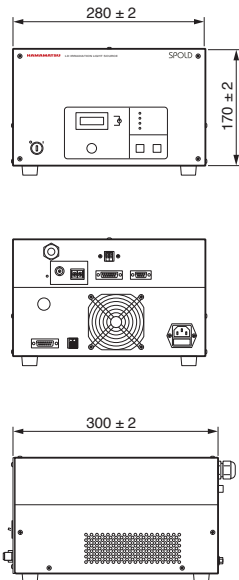
- Plastic welding
- Adhesive thermal curing
- Soldering
- Other process or principle using laser as heat source

**Specifications**

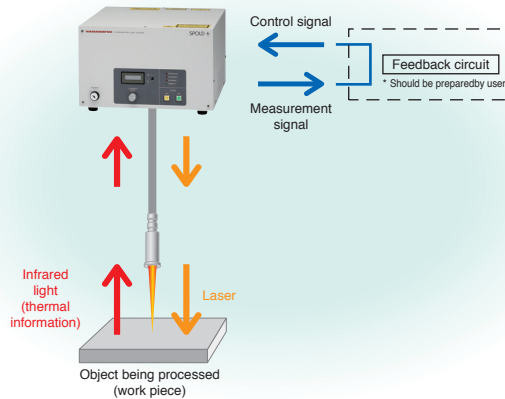
Items	Specifications
Model No.	L14140-21M
Light output (with maximum current setting, at the focal spot of irradiation unit)	8.5 W (min.)
Laser type	Laser diode (LD)
Peak oscillation wavelength (25 °C)	915 nm± 20 nm
Cooling method	Air cooling
Safety function	Interlock <sup>(2)</sup>
External control	D-sub 15 pin (main unit, process monitor)
Power consumption	Less than 160 V · A
Dimensions (W × H × D)	Approx. 280 mm × 170 mm × 300 mm (excluding projecting parts)
Weight	Less than 8 kg
Measurable infrared output <sup>(1)</sup>	200 °C to 600 °C equivalent
Measurement cycle	1 ms
Output power specifications	0 V to 10 V (BNC connector) / 4 mA to 20 mA (M3 terminal screw)
Red guide beam	Including
Rated power supply voltage	Single-phase 100 V to 240 V (50 Hz/60 Hz)
Operating temperature range	+10 °C to +30 °C
Operating humidity range	Below 60 % (no condensation)
Storage temperature range	0 °C to +50 °C
<b>Laser transmitting optical fiber</b>	
Model No.	A11612-M2SS2D <sup>(3)</sup>
Fiber core diameter	φ200 μm
Fiber length	Approx. 2 m
<b>Irradiation unit</b>	
Model No.	A12803-30-10SA <sup>(4)</sup>
Light condensing diameter	Approx. φ0.2 mm
Working distance	Approx. 44 mm

\* LD Irradiation Light Source (built-in process monitor) is sold as one product which integrates main unit of LD Irradiation Light Source (built-in process monitor), laser transmitting fiber and irradiation unit. Each component cannot be removed.  
<sup>(1)</sup> When measured using a blackbody furnace (emissivity: 0.93)  
<sup>(2)</sup> This irradiation light source was designed to be built into equipment such as a laser processing device, and therefore the interlock functions for stopping the laser do not conform to safety circuits required for Class 4 lasers. Please evaluate the safety performance with the whole system and take appropriate safety measures as necessary.  
<sup>(3)</sup> Other fiber core and fiber length are available.  
<sup>(4)</sup> Standard goods. Other beam spot diameter φ0.8mm, φ3.2mm, φ6.4mm are selectable.

**Dimensions (unit: mm)**



**System**



**Safety measures for laser products**

This product is a Class 4 laser product. According to laser safety standards IEC 60825-1 which obligate manufacturers to provide preventive safety measures, Hamamatsu laser products are classified to implement appropriate safety measures and display required labels. The user should also implement safety measures in compliance with applicable regulations in the relevant country.

**Labels displayed (sample)**



Explanatory label



Warning label

●SPOLD is registered trademark of Hamamatsu Photonics K.K.

**HAMAMATSU PHOTONICS K.K. www.hamamatsu.com**

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