

■Features

- Energy and space saving
- No individual difference
- Ideal for mass production process
- Processing point temperature monitoring function

■Applications

- Plastic welding
  - Automotive parts
  - Medical instrument
  - Electronic components

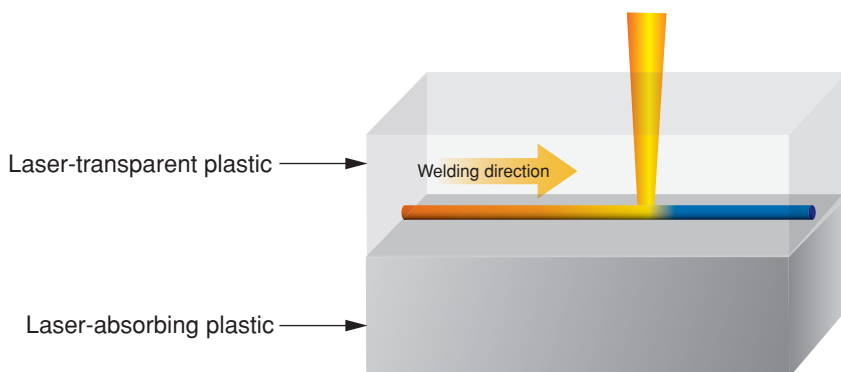


■Outline

This is a laser heating system, which consist of SPOLD® LD irradiation light source, fiber and lenses, best suited for plastic welding. It has a built-in process monitor that monitors the rise and fall of processing point temperature, making it an ideal system for mass production process at manufacturing sites that realizes "visualization" of laser processing in real time. The use of laser diode (LD) with high electro-optical conversion efficiency contributes to energy saving. In addition, plastic welding is also an environmentally friendly method with excellent recyclability because it does not use adhesives. It is possible to obtain the welding strength to the extent that the base metal is destroyed.

■Application image

Figure 1: Plastic welding



# Laser Heating System L16490-343

## General ratings

Parameter	Specification	Unit
Operating temperature *1	+10 to +30	°C
Storage temperature *2	0 to +50	°C
Storage and operating humidity *1	≤60	%
Place of use	Indoor at an altitude of ≤2000 m	—

\*1 No condensation

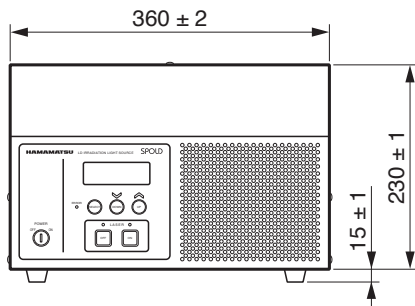
\*2 No freezing

## Specifications

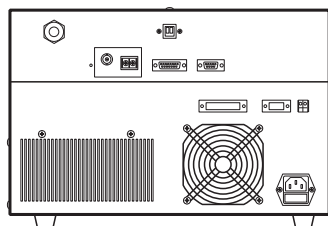
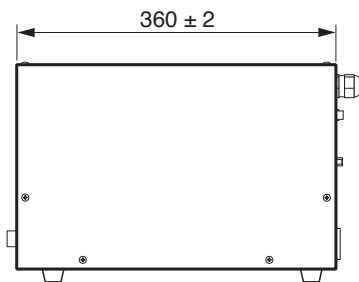
Parameter	Specification	Unit
Main laser light (at maximum current setting)	Radiant power	≥70
	Oscillation type	CW
	Peak emission wavelength	940 ± 20
Red guide light (at maximum current setting)	Radiant power	<0.001
	Oscillation type	CW
	Peak emission wavelength	650 ± 50

Figure 2: Dimensions (unit: mm)

### ●L16490-343



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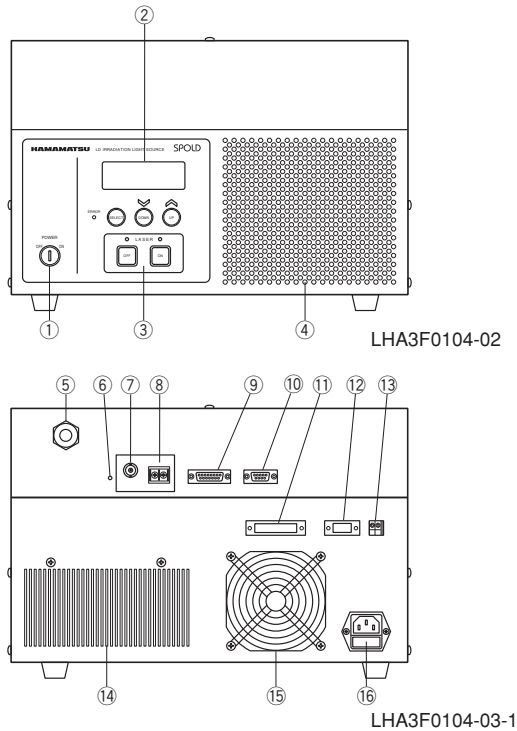


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# Laser Heating System L16490-343

Figure 3: Name and Function

## ●L16490-343



No.	Name	Functions and applications
①	Power switch (key switch)	Switching ON/OFF the power of whole system
②	Display panel	Indicates the status of this light source
③	ON/OFF switch & indicator lamp	Control and display laser irradiation
④	Air inlet	Air inlet for LD cooling
⑤	Laser transmission optical fiber outlet	Laser transmission optical fiber fixing port
⑥	LED for power on indication	Light when power on
⑦	Analog voltage output terminal	BNC connector receptacle
⑧	Analog current output terminal	Terminal block for M3 screw
⑨	Process monitor control signal input terminal	Signal input connector for process monitor
⑩	Connector for maintenance	Not used, for maintenance
⑪	Laser remote control signal I/O terminal	Terminal used to control this laser system by remote signal
⑫	Serial communication terminal	Not used
⑬	Interlock terminal	Laser irradiation stops when these terminals are opened
⑭	Cooling fan for LD	Air outlet for LD cooling
⑮	Cooling fan	Air outlet for cooling fan
⑯	AC inlet (open device)	Power cable inlet, built-in fuse (GND should be securely connected)

### Danger (Class 4 Laser)

Invisible laser radiation: Avoid eye or skin exposure to direct or scattered radiation

●Laser beam emitted from this product is an invisible laser beam that cannot be seen by the naked eye. This product is a IEC 60825-1 classification of laser products. It corresponds to "Class 4 Laser". To use this product safely, follow IEC 60825-1 regulations, etc.

Examples of labels



Class 4 laser product  
Warning label Explanatory label

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

●Information described in this material current as of May 2022. Specifications are subject to change without notice.

**HAMAMATSU PHOTONICS K.K.** [www.hamamatsu.com](http://www.hamamatsu.com)

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