

Power Supply Series

This is the power supply (supporting CW and pulse) for driving the laser diode (LD). The power supply for driving a Peltier element and cooling unit all-in-one type required for driving LD is also part of our lineup.



Simple Operation

Electric current limit setting and integrated time check can be done from a handle.

Electric current limit settings

Maximum electric current can be set in parameter. It prevents LD damage deriving from malfunction.

LD Terminal Short Function

Function to short between anode and cathode of LD when power is switched OFF is equipped. By doing it, LD can be protected from static electricity, etc.

Goggle compatible white display

Letters can be displayed in white. Superior in legibility even when using laser-protect goggle.

Instantaneous power failure detection

LD can be safely protected by shutdown operation after instantaneous power failure detection, while there is electric current running after power has been cut off.

Various Alarm Functions

Alarm with screen display equipped enables prompt identification of cause and repair.

LD operation interegrator

LD operation interegrator function equipped, which is essential for LD lifecycle management. Zero reset available for LD replacement.

Full Interface

Interface equipped for setting in a system. Freely externally operable.

Power Supply for Driving Laser Diode | SLD

RoHS

Precise digital control, environmently friendly, high efficiency Laser Diode power supply

- Developed specifically to drive Laser Diode.
- Includes various function to protect LD.
- Includes alarms such as instantaneous power failure.
- Can be controlled using the front panel and by commands from a PC connected via RS232C.
- Includes I/O (Input-Output) for interfacing to external devices and for emergency stop.
- Automatic Current Control for stable operation.



SLD Series

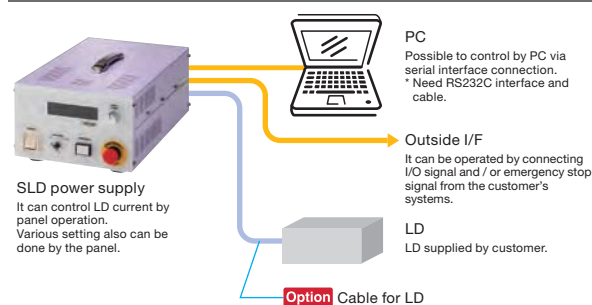
| Part Number | Max. output voltage [V] | Max. output current* [A] | Input voltage [AC V] | Apparent power [VA] |
|-------------|-------------------------|--------------------------|----------------------|---------------------|
| SLD0350 | 3 | 50 | 85 - 264 | 500 |
| SLD0450 | 4 | 50 | 85 - 264 | 600 |
| SLD0635 | 6.5 | 35 | 85 - 264 | 600 |
| SLD03A0 | 3 | 100 | 85 - 264 | 800 |
| SLD04A0 | 4 | 100 | 85 - 264 | 1000 |
| SLD0670 | 6.5 | 70 | 85 - 264 | 1000 |
| SLD1045 | 10 | 45 | 85 - 264 | 1000 |
| SLD1338 | 13 | 38 | 85 - 264 | 1000 |
| SLD06A0 | 6.5 | 100 | 170 - 264 | 1800 |
| SLD1078 | 10 | 78 | 170 - 264 | 1800 |
| SLD1365 | 13 | 65 | 170 - 264 | 1800 |
| SLD2240 | 22 | 40 | 170 - 264 | 1800 |

* Minimum current value is approximately 5% of maximum output current.

Guide

- ▶ We do handle orders for manufacturing products with special specifications, which are not shown in the catalog. Please contact our sales department for more information.

System Configuration



Option Cable for LD

For 50A

| Part Number | Cable Length [m] | Applicable Model |
|-------------|------------------|--|
| LD50-CA-05 | 0.5 | SLD0350, SLD0450, SLD0635, SLD1045, SLD1338, SLD2240 |
| LD50-CA-10 | 1.0 | |
| LD50-CA-20 | 2.0 | |

For 100A

| Part Number | Cable Length [m] | Applicable Model |
|-------------|------------------|--|
| LD100-CA-05 | 0.5 | SLD03A0, SLD04A0, SLD0670, SLD06A0, SLD1078, SLD1365 |
| LD100-CA-10 | 1.0 | |
| LD100-CA-20 | 2.0 | |



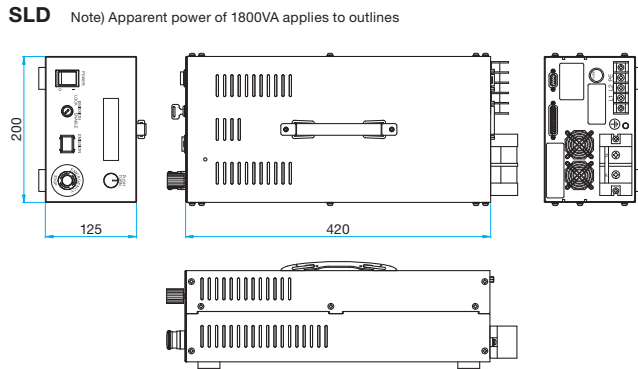
Specifications

| | |
|--------------------------------------|---|
| Control method | High-frequency switching method for CW only |
| Output terminal block | M6 |
| Current ripple | <0.1%RMS (for maximum output current) (Within the range of maximum output current x 10% or over) |
| Current setting accuracy | 0.1A |
| Output current error | <1% (for maximum output current) |
| Linearity error | <1% (for maximum output current) |
| Output current temperature character | <0.03%/°C (for maximum output current) |
| Rise time* | 1sec - |
| Fall time* | 1sec - |
| Operation ambient temperature | 0°C - 40°C |
| Storage ambient temperature | -20°C - 60°C |
| Ambient humidity | 20 - 90%RH (No condensation) |
| External dimensions | (W)200 × (H)125 × (D)420mm (Excluding projections) |
| Interface | RS232C, emergency stop interlock, emission interlock, emission etc. |
| Accessory | Jumper connector AC100V cable (For apparent power 1000VA or less only) |

* Please contact our International Sales Division to cut the Rise/Fall time.

Outline Drawing

(Units: mm)



Application Systems

Optics & Optical Coatings

Opto-Mechanics

Bases

Manual Stages

Actuators & Adjusters

MotORIZED Stages

Light Sources & Laser Safety

Index

Microscope Unit

Alignment

Interferometers

Inspection/ Observation

Bio-photonics

Laser Processing

Power Supply for Driving Laser Diode (CW or pulse output) | SMD



Precise digital control high efficiency power supply for laser diode.



- Developed specifically to drive Laser Diode.
- Pulse or CW diodes can be driven.
- Includes various function to protect LD.
- Includes alarms such as instantaneous power failure.
- Fine resolution closed loop current control.
- Arbitrary wave output is available. (30 steps)
- Output can be carried out with an output input signal only.
- Bias control function for setting idle current.

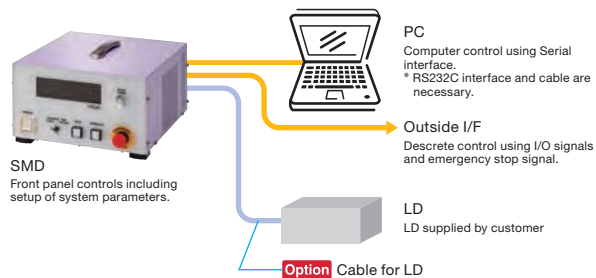
Specifications

| Part Number | SMD0460D | |
|-------------------------------|--|--|
| Voltage | 4V | |
| Output current | 60A (Duty100%) | |
| Output current (pulse) | 120A (Duty<50%, pulse width <10ms) | |
| Current ripple | <12mA (rms) | |
| Startup time | <20μs (It depends on load) | |
| Resolution of setting current | 0.1A | |
| Frequency | 1Hz - 50kHz | |
| Digits of setting frequency | 3 digits | |
| Minimum setting pulse width | 0.01ms | |
| Minimum setting duty | 0.01% | |
| Wave shape | Rectangular or arbitrary (30 steps) | |
| Start emission trigger | Internally set or external input | |
| Hour meter | Emission time | |
| Output of current monitor | 0 - 10V DC | |
| Operation temperature | 0°C - 40°C | |
| Storage temperature | -20°C - 60°C | |
| Humidity | 20 - 90%RH (No condensation) | |
| External dimensions | (W)250 × (H)140 × (D)330mm (Excluding projections) | |
| Interface | RS232C, emergency stop input, current out enable input etc. | |
| Accessories | Jumper connector, AC100V cable | |
| Control mode | CW | Output a set constant or continuous current |
| | PULSE | Output a pulse current of set current and pulse width (or frequency) |
| | WAVE | Output an arbitrary wave (set up to 30 steps) |
| Control method | FRONT PANEL | All control modes are available only from the front panel |
| | SERIAL I/F | All control modes are available only with RS232C (serial communications) |
| | ANALOG | The output current is set by the voltage of the SIGNAL IN. |
| | MOD | The output frequency is set by the frequency of the EXT MOD |
| | GATE | Control emission on or off with GATE input. |
| Monitor output signal | SYNC OUT | The current frequency is output to SYNC OUT as a pulse. |
| | CURRENT MONITOR | The current is output to CURRENT MONITOR as a voltage. |
| Protection function | Power abnormal, Inside temperature abnormal, output open, External power voltage drop etc. | |
| Fail-safe | Emergency stop, output permission key switch | |

Guide

- ▶ We do handle orders for manufacturing products with special specifications, which are not shown in the catalog. Please contact our sales department.
- ▶ For a cable for the LD, please contact our company separately.

System Configuration



Outline Drawing

(Units: mm)

