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Data Sheet

August 3, 2026

SPECTRA DIODE LABS

SPECTRA DIODE LABS SDL 800 LASER DIODE DRIVER

The Spectra Diode Labs SDL 800 is a precision laser diode driver designed for laboratory and industrial applications. It delivers stable and accurate current to drive laser diodes, ensuring consistent optical output. With adjustable current settings and comprehensive protection features, it safeguards the laser diode from damage. Its user-friendly interface and solid design make it suitable for demanding research and development environments.



MODEL

**Spectra Diode
Labs SDL 800**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SDL 800

LISTING

<https://aumictechlabs.com/products/sdl-800-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Spectra Diode Labs SDL 800 is a precision laser diode driver engineered for laboratory and industrial applications requiring stable, accurate current delivery to CW laser diodes. It supplies up to 1000 mA of adjustable drive current while maintaining consistent optical output through dual control modes and integrated protection circuitry. An embedded TEC controller manages Peltier elements to 1.5 A and 3 V with 0.1°C temperature stability, compatible with 10 kΩ thermistors and SDL 2350 Series laser diodes. Technical Specifications Maximum Drive Current: 1000 mA Current Control Modes: Current Control and Optical Power Monitor modes Modulation Bandwidth: 100 kHz Display: 3.5-digit readout covering six key operating functions Recorder Outputs: 1 V/W (power), 1

V/A (current) TEC Controller: Peltier elements to 1.5 A at 3 V; 10 k Ω thermistor compatible; 0.1°C temperature stability

Key Features

- Adjustable current limiting to prevent laser diode overdrive
- High-speed current limiting and transient suppression for fault-free operation
- Open-circuit detection and missing photodiode detection
- Automatic laser diode terminal shorting during output switching
- Built-in dummy setup diode for safe configuration mode
- Low-line voltage detection and comprehensive power-line filtering
- Front-panel key switch and rear-panel remote interlock connector
- Microprocessor-based command logic prevents illegal operating commands
- Compliant with 21 CFR 1040.10 laser safety regulations
- Analog and A/D modulation inputs for external signal integration

Typical Applications

Research and development environments requiring stable laser diode drive current with integrated temperature management. Systems demanding optical power monitoring alongside current control. Applications utilizing modulated laser operation at frequencies to 100 kHz.

Compatibility & Integration

Operates with any CW laser diode requiring drive currents up to 1000 mA. Integrates with SDL 2350 Series laser products and standard Peltier cooling elements. DIN-8 connector pinout available for remote control interfaces.

Features & description

From manufacturer datasheet

Features

- Spectra Diode Labs model SDL 800 laser diode driver
- Current-source style drive for semiconductor laser diodes
- Front-panel / laboratory control of diode bias (confirm connectors and interlocks on unit)
- Intended for use with appropriate LD heat sinking and ESD/optical-safety procedures

SDL800 Characteristics / Specifications

PARAMETER	VALUE
Model	SDL 800
Manufacturer	Spectra Diode Labs (SDL)
Instrument Type	Laser Diode Driver
Alias	SDL-800; SDL800 Electrical
Output current / compliance voltage	confirm engraved rating and potentiometer / digital setpoint limits on the specific unit—published open OEM tables for SDL 800 are sparse
Interlock / enable	follow unit labeling (laser safety interlock if fitted) Optical Safety Class depends on attached laser diode and optics—treat as a laser driver, not an optical source by itself Standard Operating Conditions Operate within marked AC mains rating. Never hot-plug laser diodes; observe polarity and max current for the attached diode.

SDL800 Specifications

PARAMETER	VALUE
Spectra Diode Labs SDL 800 Laser Diode Driver	Overview
Key Features	- Spectra Diode Labs model SDL 800 laser diode driver
Technical Specifications	Model: SDL 800
Standard Operating Conditions	Operate within marked AC mains rating. Never hot-plug laser diodes; observe polarity and max current for the attached diode.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications

Specifications

PARAMETER	VALUE
Model	SDL 800
Manufacturer	Spectra Diode Labs (SDL)
Instrument Type	Laser Diode Driver
Alias	SDL-800; SDL800

Electrical

Output current / compliance voltage: confirm engraved rating and potentiometer / digital setpoint limits on the specific unit—published open OEM tables for SDL 800 are sparse

Interlock / enable: follow unit labeling (laser safety interlock if fitted)

Optical Safety

Class depends on attached laser diode and optics—treat as a laser driver, not an optical source by itself

Standard Operating Conditions

Operate within marked AC mains rating. Never hot-plug laser diodes; observe polarity and max current for the attached diode.

Operational Notes

Spectra Diode Labs products were later associated with JDS Uniphase / Lumentum lineages in industry catalogs. Match cable pinout to the diode package. Do not invent ampere ratings—read the SDL 800 faceplate and any calibration sticker.

Laser Safety

laser safety interlock if fitted) Optical Safety Class depends on attached laser diode and optics—treat as laser driver, not an optical source by itself Standard Operating Conditions Operate within marked AC mains rating. Never hot-plug laser diodes; observe polarity and max current for the attached diode. Operational Notes Spectra Diode Labs products were later associated with JDS Uniphase / Lumentum line

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.