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Find the *Martek Power / Spectra Diode Labs SDL 830* at our website: *Click HERE*

Martek Power Laser Drive

LASER DIODE DRIVER LDI-830

The LDI-830 is a high current general purpose laboratory laser diode driver. CW or Quasi-cw laser diodes, or similar devices, requiring up to 50 Amp drive current at up to 6 Volts may be safely operated with the LDI-830. Current control mode, transient suppression, diode protection circuits and over-current limit are provided to protect your laser diode. The Replica feature allows one LDI-830 to control the pulse timing of other LDI-830 units to support complex digital waveforms.





Laser Drive is an innovative international company dedicated to the quality design, manufacture and support of power supplies for various laser and light sources. Laser Drive provides world class designs and support for all your power supply needs.

Some of our laser products include power supplies for Argon, HeNe and Diode Lasers. Our light products include Capacitor Charging Power Supplies for Dye and Excimer Lasers, Deuterium Lamp Power Supplies, CW Arc Lamp Power Supplies, Tungsten Lamp Power Supplies and a variety of Flash Lamp Power Supplies.

Laser Drive has been in business since 1976 and today is a growing international company based in the Pittsburgh, Pennsylvania area. Our manufacturing quality system is ISO 9001:2008 certified and provides the highest quality products available today. We are a full service provider of power supply design, manufacturing and support.

Specifications

- Current Range 0 to 50 Amp
- Current Limit Range 0 to 50 Amp
- Compliance Voltage up to 6 Volts
- Pulse Width Ranges
  - 10 to 1000 msec
  - 0.15 to 15 msec
- Transition Time 10 µsec typical
- Pulse Rate 5 to 500 Hz
- Analog Modulation DC to 5 KHz
- Trigger In is Positive Edge TTL / 5V
- Modes
  - DC Drive for CW operation
  - Internal – Internal Rate and Width Control
  - External - External Rate and Internal Width
  - Replica – External Rate and Width
- Manual Trigger Button on Front and Rear of Unit
- Trigger Out is Digital Form of Drive Pulse
- Current Monitor is 10 Amp / Volt ±1%
- Temperature Range 10°C to 40°C
- Input Voltage
  - 90-130 VAC
  - 180-250 VAC
- Dimensions 6” x 17” x 17”

The information contained in this document is for reference only and subject to change without notice.

(724) 443-7688 ▪ www.laserdrive.com ▪ lasersales@martekpower.com

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LDI-830
S E R I E S

Specifications

Amplitude	
Range	0 to 50 A
Display Resolution	0.1 A
Accuracy	0.2 A + 2% of reading. When the laser is off, the displayed value is the amplitude setpoint (or current limit); when the laser is on, the displayed value is the actual current. The specification only applies to the actual current.
Noise	Typically less than 50 mA p-p
Current Limit	
Range	0 to 50 A
Display Resolution	0.1 A
Pulse Width	(Two ranges are provided)
Range 1	10 to 1000 msec
Display Resolution	1 msec
Accuracy	2 msec + 2% of reading. Pulse widths greater than 200 msec are intended for use only with external and single trigger modes.
Range 2	0.15 to 15 msec
Display Resolution	0.01 msec
Accuracy	0.02 msec + 2 % of reading.
Pulse Rise Time (both ranges)	10 µsec (typical)
Pulse Rate	
Range	5 to 500 Hz
Display Resolution	1 Hz
Accuracy	2 Hz + 2 % of reading
Trigger In	
Type	Positive edge trigger
Signal Input	Accepts TTL or 5 V CMOS, 50 µs minimum width
Input Impedance	10 k ohms nominal.
Modes	DC DRIVE (used for cw), INTERNAL (rate and width internal), EXTERNAL (rate external, width internal) and REPLICA (rate and width external)
Manual Trigger	
Type	Front panel push button and rear panel switch input are active in EXTERNAL (width internal) and REPLICA (pulse lasts as long as manual trigger, 50 msec minimum).
Trigger Out	
Type	Digital form of the drive pulse (high if DC DRIVE)
Output Impedance	100 ohms nominal, one LSTTL or 5 V CMOS load.
Analog Modulation	
Bandwidth	DC to 5 kHz
Scale Factor	10 A/V, 50 A at 5 V
Compliance	
Range	0 to 6 V
Display Resolution	0.1 V
Accuracy	0.1 V + 1% of reading.
Current Monitor	
Type	10 A/V, 5 V at 50 A. Typically within 1% of the displayed actual current.
Remote Interlock	
Open Circuit Voltage	5 VDC nominal, referenced to safety ground
Short Circuit Current	1 mA nominal
Type	Switch contact closure or TTL or 5 V CMOS compatible.
General	
Operating temperature	10 to 40 °C, noncondensing
Storage temperature	-40 to 75 °C
Power	90-130, 180-250 VAC, 48-66 Hz 750 W maximum @ 120 VAC 1000 VA maximum @ 120 VAC
Size (H x W x D)	6" x 17" x 17" (155 mm x 435 mm x 435 mm)
Weight	22 lbs. (10 kg)

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