

250 mA , 3.3 V Ultra-Stable Constant Current Laser Diode Drivers

Features

- Low Current Noise ($<1 \mu\text{A}_{\text{RMS}}$)
- Low Temperature Drift
- On-Board 12-Turn Laser Current Control
- External Input for Laser Current Control
- Monitor Outputs for Laser Current and Photodiode Current
- Laser Disable Pin
- Slow-Start Circuit for Laser Protection

Specifications

- **Drive Current:** 0.2 - 250 mA
- **Current Noise:** $<1 \mu\text{A}_{\text{RMS}}$
- **Output Current Drift:** $2 \mu\text{A}/^\circ\text{C}$
- **Current Control Input:** 0 - 5 V (50 mA/V)
- **Laser Current Monitor:** 10 mV/ mA
- **Monitor Photodiode Transimpedance Gain:** 1000 $\mu\text{V}/\mu\text{A}$
- **Photodiode Monitor:** 1V/ mA
- **Power Requirements:** ± 8 to ± 12 VDC, 300 mA
- **Signal Bandwidth:** 1.2 kHz

The LD1255 series low-noise, ultra-stable, constant current laser diode driver supplies up to 250 mA of drive current, supports laser pin configurations A and D, and is ideally suited for demanding diode laser applications such as operating a laser diode in an external cavity tunable laser.

This second-generation laser diode driver measures 2.45" x 1.03" (62.2 x 25.4 mm) and includes on-board Zener and Schottky diode protection as well as a disable pin.

The op-amp and voltage reference design enables more precise laser current control.

A power cable assembly (LD1255-CAB) is available to connect the LD1255R driver to Thorlabs' PS-12DC-US power supply (± 12 VDC).



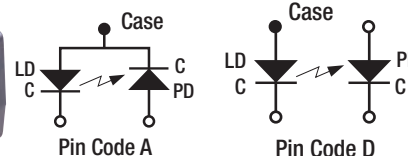
LD1255R

Shown Mounted on an LD1255P (LD1255P and Power Supply Not Included)

PS-12DC-US
 ± 12 VDC
Power Supply



Supported Pin Configurations by LD1255R



ITEM #	\$	£	€	RMB	DESCRIPTION
LD1255R*	\$ 142.00	£ 102.24	€ 123.54	¥ 1,131.74	250 mA Ultra-Stable Constant Current Laser Diode Driver, RoHS
LD1255P	\$ 23.00	£ 16.56	€ 20.01	¥ 183.31	Mounting Plate for LD1255R
LD1255-CAB	\$ 16.10	£ 11.59	€ 14.01	¥ 128.32	LD1255R Power Cable Assembly
PS-12DC-US	\$ 64.00	£ 46.08	€ 55.68	¥ 510.08	± 12 VDC Power Supply, 100/120 VAC
PS-12DC-EU	\$ 68.00	£ 48.96	€ 59.16	¥ 541.96	± 12 VDC Power Supply, 220/240 VAC

*Power supply sold separately

2.5 A, 7.7 V Ultra-Stable Constant Current Laser Diode Drivers

The LD3000R driver is a higher-power version of our popular LD1255R ultra-stable, low-noise laser diode driver featured above. It utilizes high-current components and supplies 2.5 A. The aluminum housing allows additional heat sinking, which results in a highly stable laser diode driver in a relatively small package (see drawing below for dimensions). This device can operate both LEDs and laser diodes. The LD3000R driver supports PIN configurations A and D.

Features

- Low-Noise, Stable Constant Current Source
- On-Board 12-Turn Laser Current Control
- External Input for Laser Current Control
- Monitor Outputs for Laser Current and Photodiode Current
- Slow-Start Circuit for Laser Protection
- Low Noise 12 μA_{RMS} @ 1.0 A

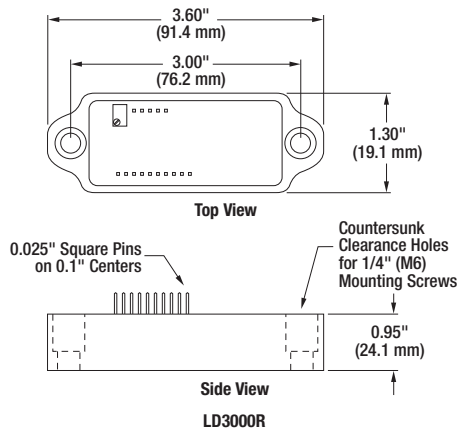
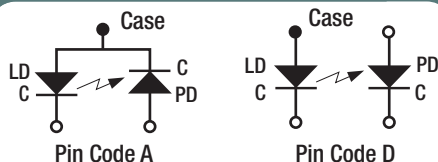


Power Supply Not Included

Specifications

- **Output Current:** 0.02 mA - 2.5 A
- **Current Control Input:** 0 to 5 V (500 mA/V)
- **Monitor Photodiode Transimpedance Gain:** 1 V/A
- **Photodiode Monitor:** 1 V/mA
- **Signal Bandwidth:** 1.1 kHz
- **Power Requirements:** ± 8 to ± 12 VDC / 2.5 A

Supported Pin Configurations by LD3000R



ITEM #	\$	£	€	RMB	DESCRIPTION
LD3000R	\$ 152.00	£ 109.44	€ 132.24	¥ 1,211.44	2.5 A Ultra-Stable Constant Current Laser Driver, RoHS