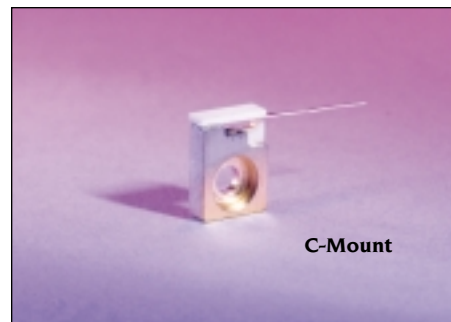
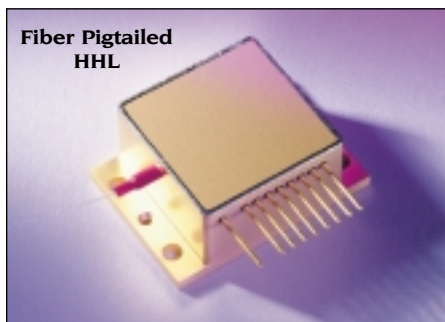


High-Power Laser Diodes

Key Features

- Longer laser diode lifetime due to aluminum free device structures*
- Visible, near IR and infrared laser diodes with center wavelengths of 670, 808, 980 and 1930 nm
- Device CW power levels of up to 20 W
- Laser diodes available in C-mount, TO-3 and high heat load (HHL) package styles
- High heat load package available with free-space and fiber coupled outputs

* Except for 1930 nm devices and all fiber pigtailed HHL packaged devices.



Newport's high efficiency, high-power laser diodes consist of single laser diode stripes emitting at center wavelengths of 670, 808, 980 and 1930 nm and linear array bars emitting at 808 nm.

The Aluminum-free laser diode material used in most of these devices* results in longer laser diode lifetime due to the lack of oxidation at the device facets, which is the leading failure mechanism in laser diodes. The InGaAsP material used in these devices also shows improved performance in areas such as resistance to dark-line defects, sudden failures and gradual degradation.

Devices with CW power of 200 mW to 20 W are available in C-mount, TO-3 and high heat load (HHL) package styles, with free-space outputs. Several models with CW power of 100 and 200 mW are available in

fiber coupled HHL packages, featuring a 200 μ m, 1 meter fiber pigtail. Termination with SMA, ST or FC connector styles is optional for these models.

High-Power laser diodes are suited for both R&D and OEM applications such as solid-state laser pumping, printing, medical diagnostics, pattern recognition, and test measurement and inspection systems.

Optimal laser diode operation and wavelength control can be achieved by using one of Newport's laser diode drivers, temperature controllers and medium or high-power mounts, providing time tested laser diode protection features. For more information on our laser diode instrumentation, please see the Laser Diode Instrumentation section of this catalog.

Model Number	Center Wavelength (nm)	CW Power (mW)	Threshold Current (mA) (min/max)	Operating Current (mA) (min/max)	Max. Beam Divergence (deg. FWHM)	Package Style Output	Free-Space/Fiber Pigtail
LD-670-HHL200	670 ± 5	200	300/400	1100/1200	—	HHL	200 µm Fiber
LD-808-500C-C	808 ± 3.5	500	250/380	800/1200	10 × 40	C-Mount	Free-Space
LD-808-500C-T	808 ± 3.5	500	250/380	800/1200	10 × 40	TO-3	Free-Space
LD-808-500C-H	808 ± 3.5	500	250/380	800/1200	10 × 40	HHL	Free-Space
LD-808-1000C-C	808 ± 3.5	1000	250/380	1100/1500	10 × 40	C-Mount	Free-Space
LD-808-1000C-T	808 ± 3.5	1000	250/380	1100/1500	10 × 40	TO-3	Free-Space
LD-808-1000C-H	808 ± 3.5	1000	250/380	1100/1500	10 × 40	HHL	Free-Space
LD-808-2000C-C	808 ± 3.5	2000	500/800	2400/3200	10 × 40	C-Mount	Free-Space
LD-808-2000C-T	808 ± 3.5	2000	500/800	2400/3200	10 × 40	TO-3	Free-Space
LD-808-2000C-H	808 ± 3.5	2000	500/800	2400/3200	10 × 40	HHL	Free-Space
LD-808-15C-30-A	808 ± 3.5	15000	4000/9000	21000/28000	10 × 40	1 cm Bar	Free-Space
LD-808-20C-30-A	808 ± 3.5	20000	4000/9000	27000/30000	10 × 40	1cm Bar	Free Space
LD-810-HHL200	810 ± 10	1000	250/350	1800/2000	—	HHL	200 µm Fiber
LD-980-1000C-C	980 ± 10	1000	200/400	1300/1600	10 × 35	C-Mount	Free-Space
LD-980-1000C-T	980 ± 10	1000	200/400	1300/1600	10 × 35	TO-3	Free-Space
LD-980-1000C-H	980 ± 10	1000	200/400	1300/1600	10 × 35	HHL	Free-Space
LD-980-2000C-C	980 ± 10	2000	250/450	2400/3000	10 × 35	C-Mount	Free-Space
LD-980-2000C-H	980 ± 10	2000	250/450	2400/3000	10 × 35	HHL	Free-Space
LD-980-HHL200	980 ± 20	1000	250/350	1800/2000	—	HHL	200 µm Fiber
LD-1930-250-T	1930 ± 40	250	250/350	2200/2500	8 × 45	TO-3	Free-Space
LD-1930-250-HHL	1930 ± 40	250	250/350	2200/2500	8 × 45	HHL	Free-Space
LD-1930-HHL100	1930 ± 40	100	250/350	1800/2100	—	HHL	100 µm Fiber

WARNING— Radiation emitted by laser devices can be dangerous to the eyes and appropriate precautions must be taken in use. (ref BS EN 60825, HD 482 S1 & IEC 825) VISIBLE LASER RADIATION



NOTE— Laser Diodes are very susceptible to damage by electrostatic discharge (ESD). Please use ESD protective measures when unpacking and handling these devices.

A large variety of additional laser diodes, having different center wavelengths, wavelength tolerances and output power levels can be ordered on a Special Order basis, with typical delivery times of 6 weeks. Parameters to select from include:

Center Wavelength Range: 650–665, 670–695, 780–995, 1880–1960 nm

Center Wavelength Tolerance: ±3, ±5, ±10 nm

Package Type: TO-3, HHL, Butterfly

Please call our Application Sales Engineers for price and delivery information on these items.

Warranty

All of Newport's laser diodes are backed by a 30-day limited warranty.

C-Mount

