

High-Power Laser Diode Specifications Table



Article Overview

High-power laser diodes are characterized by wavelength, optical power, pulse width, peak power, duty cycle, and fiber coupling, with specifications varying by model and application.

Key Parameters of High-Power Laser Diodes

Parameter	Description	Typical Values / Notes
Nominal Wavelength (nm)	The lasing wavelength of the diode	450, 785, 808, 830, 905, 915, 940, 980, 1064, 1470
Optical Power (W)	Continuous or peak output power	From several mW up to hundreds of W; pulsed peak power can reach 20–60 W or higher
Pulse Width (ns)	Duration of each pulse	Adjustable, typically 1–2000 ns depending on module type
Peak Power (W)	Maximum instantaneous power during a pulse	20–60 W for standard pulsed modules; multi-Watt peak power for high-speed modules
Duty Cycle (%)	Ratio of pulse duration to repetition period	0.1–10%, depending on pulse width and peak power
Repetition Rate (kHz)	Frequency of pulse emission	Adjustable; depends on module and application
Fiber Coupling	Output fiber core diameter and type	Standard: 105 μm core, 62.5 μm available on request; SMA905 connector common
Rise/Fall Time (ns)	Time for optical power to rise/fall	Down to 1 ns for high-speed modules
Temperature Control	Junction or case temperature regulation	Often includes TEC (thermoelectric cooler) and air-cooled options
Safety Classification	Eye safety and handling	Must follow IEC 60825-1; infrared diodes are hazardous to eyes

Notes on Usage and Selection...



Article Content

High Power Visible Laser Diodes

Our selection of High-Powered Visible Diode Lasers (>1.0W) offer a few key features including: High efficiency and long lifetime.

Laser Diodes: Specification Guidelines | Lasers

For example, the high power laser diodes shown in Figure 1 need thermally compatible heat sinks that may compromise package

High Power Laser Diodes

Just select your specifications in the search mask and you get an instant overview of all the laser diodes that meet your

Laser Diodes - semiconductor, gain, index guiding, high power

Laser diodes are semiconductor lasers with a current-carrying p-n junction as the gain medium. They are the most important type of

Laser Diode Specifications & Characteristics Explained

Understand laser diode specifications and characteristics and how they relate to real circuits and applications with tips on the

High-Power-High-Speed Pulsed Laser Diode

All modules have a very high brightness with a typical output fiber core of 105 μm (62.5 μm also available as a special request). This

ADP5202 (Rev. Sp0)

The driver is able to sink current at 20 A/ns, resulting in a subnanosecond, optical rising edge when used together with most laser

High Power Laser Diode Specifications and Buying Guide?

This chart displays key specifications for High Power Laser Diodes, including output power, wavelength, efficiency, operating current,

Laser diode

Laser diodes can be arrayed to produce very high power outputs, continuous-wave or pulsed. Such arrays may be used to efficiently

High Power Laser-Diode Family for Commercial Range Finding

High Power Laser-Diode Family for Commercial Range Finding Excelitas' pulsed laser diodes produce very high peak optical pulses

Laser Diode Specifications

Laser Diode Specifications ... For more technical informations about working with our laser diodes you can get Operating manual in

High Power Laser Arrays

Laser Diode Source, powered by the LaserLabSource marketplace platform, gives customers the power to shop & buy directly

High Power Laser Diodes

Our range of high-power laser diode products continues to increase. We offer both free-beam designs and fiber-coupled high-power

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.gmarkconstruction.co.za>

Email: sales@gmarkconstruction.co.za

Phone: +31-6-15-38-72-94

Address: Herengracht 456, 1017 BS Amsterdam, Netherlands

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