

A comprehensive list of ultra-large laser diode models



AI Overview

Ultra-large or high-power laser diodes typically range from 10 W to over 1 kW, available as single emitters, diode bars, or stacked modules across wavelengths from 375 nm to 2000 nm.

Overview of Ultra-Large Laser Diodes

High-power laser diodes are semiconductor devices designed for applications requiring tens to thousands of watts of optical output. They are widely used in materials processing, solid-state laser pumping, medical therapy, LIDAR, and sensing. These devices are available in multiple packaging formats, including fiber-coupled modules, copper bar mounts, and multi-emitter stacks, often with integrated cooling and monitoring features.

Common Types and Configurations

Single Emitter Modules

Output Power: 10–50 W
Wavelengths: 808 nm, 915 nm, 940 nm, 980 nm
Packaging: Basic fiber-coupled or free-space modules
Applications: Precision pumping, small-scale material processing

Diode Bars

Output Power: 50–500 W per bar
Wavelengths: 808–980 nm (near-infrared)
Features: Multi-emitter arrays on a single chip, often mounted on copper for thermal management
Applications: Pumping high-power solid-state lasers, industrial welding, cladding

Stacked Diode Modules

Output Power: 500 W–1 kW+
Wavelengths: 808–980 nm, with some systems extending to 2000 nm
Features: Multiple diode bars stacked with fiber coupling, integrated cooling, pilot lasers, and monitoring photodiodes
Applications: High-power laser systems for cutting, welding, and fiber laser pumping

Fiber-Coupled Turnkey Systems

Output Power: 50 W–1 kW+
Wavelengths: Broad range from UV (375 nm) to LWIR (17 μ m)
Features: Fully integrated modules with collimation, circularization, and thermal management
Applications: Industrial laser systems, medical devices, LIDAR, and spectroscopy

Notable Manufacturers and Suppliers

RPMC Lasers: Offers semiconduc...

Article Content

Laser Diodes | Components to Systems | UV-LWIR

Our vast selection of laser diodes includes both free-space & fiber-coupled outputs, like high-power Fiber-Coupled Multimode, high beam quality single mode, and

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Laser Diode Selection Guide (ALL MANUFACTURERS)

We try to help our community of laser scientists & engineers find the best products for their projects by hosting a free Open-Index product database with lasers from all manufacturers. Manufacturers can

High Power Lasers Diodes (10W ~ 1kW)

There is a list which gives some general pricing information so that you have an understanding of what a particular type of laser might cost as well as a list of all

Laser Diodes - Buyer's Guide & Supplier List | RP Photonics

This buyer's guide for laser diodes provides technical background, comparison of major types, selection criteria, and an overview of suppliers.

Laser Diodes

A laser diode is a semiconductor device that converts electrical current into a narrow, coherent beam of light. Current passing through the diode's p-n junction drives electron-hole recombination, releasing

Multimode Laser Diodes

We offer only diode lasers, laser modules, solid state lasers and amplifiers, ultra-short pulse lasers, microchip lasers, fiber lasers and amplifiers, and laser power measurement sensors and meters.

The latest products for diode lasers in 2024 | Electro

The ability of diode lasers to convert electrical energy directly into laser light has led them to become an increasingly popular choice in a number of industries and

High Power Laser Diode at 808, 915 or 976 nm

Large form factor (141*55*18 mm) for 200-400 W very high power models (915 or 976 nm coupled in a 135 μ m core 155 μ m clad fiber) All these high power laser

Laser Diode Modules - Buyer's Guide & Supplier List

This buyer's guide for laser diode modules provides technical background, comparison of major types, selection criteria, and an overview of suppliers.

Best laser engravers of 2026 | Tested for speed

I reviewed the best laser engraving machines for precision, speed, and performance in the home, studio, or workshop. These are my top recommendations.

High Power Lasers Diodes (10W ~ 1kW)

HIGH POWER LASER DIODE PRICE GUIDE » LIST OF ALL HIGH POWER LASER DIODE MANUFACTURERS » SHOP TURN-KEY HIGH POWER LASER

Laser diode

Laser diodes form a subset of the larger classification of semiconductor p - n junction diodes. Forward electrical bias across the laser diode causes the two

T 9 Dictionary | PDF

The document lists hundreds of proper names starting with letters from A to A, including names of people, places, mythological figures and more. It does not

Laser Diode Selector

The laser diode selector allows you to specify the wavelength, power and package and download datasheets for a wide range of high quality laser diodes.

48 Laser Diode Manufacturers in 2026

48 Laser Diode Manufacturers in 2026 This section provides an overview for laser diodes as well as their applications and principles. Also, please take a look at the list of 48 laser diode manufacturers and

Laser Diodes, Modules | Optoelectronics | DigiKey

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Laser Diode Selection Guide

The table below lists all laser diodes available from stock, sorted by wavelength and then output power. Key specifications are provided; clicking on the Item # opens a popup that allows you to the item to

All the Top Laser Diode Brands & Wavelengths (SHOP

LASER DIODE SOURCE , Wavelengths 370nm to 15,000nm, Shop ALL THE LEADING LASER DIODE BRANDS, Selection Guide & Online Shop

Laser Diode Selection Guide (ALL MANUFACTURERS)

This allows users to compare laser diodes from all manufacturers and find their best options.

1550 nm laser diode 10 models up to 500mW -SHIPS

These fiber-coupled 1550 nm laser diodes are offered as stock items or associated with a CW or Pulsed Laser Diode Driver. 8 DFB models are single-frequency

Rick Astley

The official video for “Never Gonna Give You Up” by Rick Astley. Never: The Autobiography **OUT NOW!** Follow this link to get your copy and listen to Rick's ...

Laser Diodes – Mouser

Mouser offers inventory, pricing, & datasheets for Laser Diodes.

Laser Diodes by Wavelength

The Laser Diode Selection Guide provides a comprehensive list of all laser diodes available from stock, along with key specifications.

Contact Us

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