

Smallest Laser Diode



AI Overview

The smallest commercially available laser diode modules have housing diameters as small as 3.3 mm, offering compact, low-power solutions for a variety of applications.

Overview of Small Laser Diodes

Several manufacturers offer ultra-compact laser diode modules designed for space-constrained applications:

- FLC - Frankfurt Laser Company** offers the ML-ARX-YYY-ZZ series, which are among their smallest modules. These are available in wavelengths of 635 nm, 650 nm, 780 nm, and 850 nm, with output powers ranging from 1 mW to 5 mW, suitable for low-cost and volume applications.
- Laser Components** provides the LC-LMD series, with the smallest dot laser module featuring a 3.3 mm housing diameter. These modules include the laser diode, drive electronics, and optics in a compact metal housing, available at 635/650 nm and 780/850 nm.
- ProPhotonix** offers compact laser modules starting at 8 mm in diameter for elliptical beams and 9 mm for line or cross-generating lasers. These modules are highly efficient, battery-operable, and configurable for CW or TTL modulation.
- EIT Lasertechnik** produces 635 nm and 650 nm mini lasers that are lightweight, low-power, and compact, designed for industrial alignment, machine vision, laser sighting, and portable devices.

Key Features

- Compact Size:** Housing diameters range from 3.3 mm to 9 mm, making them ideal for handheld or integrated systems.
- Low Power Consumption:** Typically 0.9 mW to 5 mW, suitable for battery-powered devices.
- Wavelength Options:** Commonly 635 nm and 650 nm (red), 780 nm and 850 nm (infrared), with some green options at 515–520 nm.
- Applications:** Industrial alignment, machine vision, medical devices, laser sights, bar scanning, and portable optical systems.
- Integrated Design:** Many modules include built-in optics, drive electronics, and adjustable focus, reducing the need for external components.

Conclusion

For the smallest laser diode modules, the 3.3 mm housing diameter dot lasers from Laser Components represent the most co...

Article Content

VLM2, 635 nm, 0.95 mW, Circular Beam, Miniature

Miniature diode laser modules provide the smallest package size and best value. Included inside every module are complete electronics to manage the constant

635nm and 650nm Mini LasersMini Laser diode • EIT

Mini Laser diode Lightweight, low power (<5mW) for industrial alignment, measurement, and portable devices. Wide wavelength range (450-850nm).

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The Smallest OEM Laser Modules – The LC LMD Series

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Compact Laser Diode Modules

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Low Cost OEM Modules

Low Cost OEM Modules Low-Cost Red and NIR Dot Lasers The world"s smallest modules contain the laser diode, drive electronics, and optics all in a metal housing.

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World's Smallest OEM Laser Sources for Portable, Handheld

The MatchBox series of DPSS and Diode Lasers, was originally designed as a compact, all-in-one laser source for Raman spectroscopy, microscopy, LiDAR, and other portable applications.

Best Laser Cutters and Engravers 2026: Diode, CO2

Best Portable Laser Designed with craft vendors in mind, this diode/IR Galvo laser engraver is super portable and can easily customize jewelry or various ornaments.

Low-Cost Red and NIR Dot Lasers

Low-Cost Red and NIR Dot Lasers The world's smallest modules contain the laser diode, drive electronics, and optics all in a metal housing.

Low Cost OEM Modules

As an inexpensive alternative to FLEXPOINT ® laser modules Laser Components offers a series of the smallest laser modules. Both dot lasers in 10 differently-sized housings and a line laser are available.

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405nm Laser Diode Market Report: Trends, Forecast and Competitive Analysis to 2031 - The future of the global 405nm laser diode market looks promising with opportunities in the

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Compact Laser Modules

Compact laser modules are extremely small, economic, efficient and reliable laser diode modules ideal for applications where space is a key consideration.

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Laser Diode Technology

Laser Diode Technology The commercial and industrial use of laser diodes has dramatically increased recently. The optical characteristics, small size, and ruggedness of laser diodes have allowed many

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