

DBR type optical module



Overview

A DBR is a Bragg mirror, i., a light -reflecting device (a mirror) based on Bragg reflection at a periodic structure. A distributed Bragg reflector laser is a laser, where the laser resonator is made with at least one semiconductor-based distributed Bragg reflector (DBR) outside the gain medium (the active region). It is a structure formed from multiple layers of alternating materials with different refractive index, or by periodic variation of some characteristic (such as height) of a dielectric waveguide. The D2-200 laser module is a complete redesign of our robust Distributed Bragg Reflector (DBR) diode laser. The D2-200 houses a new Virtual Point Source (VPS) DBR laser. The VPS design uses a proprietary lensing system to reduce astigmatism, matching the divergence in the fast axis to that of the. These qualities make DBR lasers ideal for applications where precision is paramount – such as telecommunications, spectroscopy, and sensing. Typical geometrical sizes of the laser chip are $1000\mu\text{m} \times 500\mu\text{m} \times 200\mu\text{m}$ (length x width x height). The optical gain is provided by double. Optoprim, with its partner Photodigm, offers a choice of high performance single frequency DBR laser modules from 730 to 1090 nm, with a choice of nearly 30 wavelengths. Photodigm control all aspects of design and production.



Article Content

Jul 25, 2026

Do you know the transceiver laser types?

The optical modules of transmission distance within 40km generally use VCSEL, FP lasers; transmission distance ≥ 40 km generally use DFB lasers.

Nov 14, 2025

Distributed Bragg Reflector Lasers - Principles and

Principles of Distributed Bragg Reflector (DBR) Lasers A DBR laser is a type of single-frequency semiconductor laser in which wavelength selection

Sep 15, 2025

Distributed Feedback Lasers - DFB laser

Distributed feedback lasers are diode or fiber lasers where the whole laser resonator consists of a periodic structure, in which Bragg reflection occurs.

Jul 03, 2026

FP.VS DFB laser in OPTICAL module

FP.VS DFB laser in OPTICAL module We all know that optical modules have many types of lasers. FP and DFB lasers are common types of lasers. What is the

Aug 03, 2025

Tutorial : Fiber-Coupled Laser Diode Basics

This tutorial describes the technical properties of several families of fiber-coupled laser diode like DFB laser diodes or multi-emitter fiber coupled laser diodes.

Oct 13, 2025

Comprehensive Guide to Optical Transceiver

Introduction Optical modules are critical components in fiber optic communications, enabling the conversion between electrical and optical signals.

Feb 28, 2026

Transmitter-Receiver Optical Sub Assembly using Ultra

Download Citation | Transmitter-Receiver Optical Sub Assembly using Ultra-Compact Tunable DBR/Ring Laser | We demonstrate a tiny optical module which integrates an ultra-compact

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A Clear Comparison of Laser Diodes in Optical

Learn how VCSEL, FP, DFB, and EML lasers differ in optical modules. Explore their key traits, common uses, and how LINK-PP incorporates

Sep 29, 2025

A high power, broadband tunable laser module based on a DS-DBR

A high power, broadband tunable laser module operating over the C-band is presented which is based upon a monolithically integrated DS-DBR tunable laser and semiconductor optical amplifier.

Jan 10, 2026

Distributed Bragg Reflector Lasers – Principles and

This blog article is about Distributed Bragg Reflector (DBR) lasers and their applications. In this post we explore the operating principles of DBR

Oct 04, 2025

Optical Module Chip Market 2025

The Global Optical Module Chip market was valued at US\$ 823 million in 2024 and is projected to reach US\$ 1.52 billion by 2032. Segmentation Analysis: Detailed breakdown by product type (Laser &

Dec 01, 2025

(PDF) Digital wavelength-selected DBR laser

In this paper, we present a new multi-section, digital supermode DBR laser (DS-DBR) that can be controlled in a simple, quasi-digital manner.

May 12, 2026

Agility.ppt

Abstract: Tunable semiconductor lasers continue to be in just about everyone's list of important components for future fiber optic networks. Various designs will be overviewed with particular

Nov 04, 2025

Distributed Bragg reflector

The DBR's reflectivity,, for intensity is approximately given by where and are the respective refractive indices of the originating medium, the two alternating materials, and the terminating medium (i.e. backing or substrate); and is the number of repeated pairs of low/high refractive index material. This formula assumes the repeated pairs all have a quarter-wave thickness (that is, where is the refractive i

Jun 09, 2026

Distributed-Feedback Lasers (DFB)

Innolume's DFB laser diodes operate in part of the near-infrared (NIR) range. This wavelength range (780-1330nm) suited for optical communications, industrial sensors, quality control devices, scientific

Apr 02, 2026

Overview of 100G Optical Modules and Modulation

Explores 100G Optical Modules types and modulation techniques, focusing on PAM4 and coherent optics to improve performance and bandwidth.

Apr 06, 2026

Compact 976 nm pump-module for 200-μm fibers

Key factors include the provided power, price per pump module, a stable and narrow grating-stabilized spectrum, high conversion efficiency, and

Sep 10, 2025

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber

Aug 12, 2025

Micron Laser (DFB/DBR) » Distributed Feedback Laser » Laser

Distributed Bragg Reflector (DBR) Diode Lasers are available with up to 100mW at 1063nm and 80mW at 1083nm. These diode lasers are longitudinally and spatially single mode. They can be tuned up to

Dec 16, 2025

Fiber Coupled DBR Laser Module

A Fiber Coupled Module with Photodigm Distributed Bragg Reflector (DBR) and Optical Isolator inside. Output Power from fiber : 120mW @ 780 nm – 200 mW

Sep 30, 2025

Laser Types in Optical Transceivers: A Comprehensive

Optical transceivers are critical components in modern fiber-optic communication systems, acting as the bridge between electrical and optical

Sep 29, 2025

DBR Laser Modules 730-1090 nm

DBR Laser Modules Optoprim, with its partner Photodigm, offers a choice of high performance single frequency DBR laser modules from 730 to 1090 nm, with a

Feb 07, 2026

25 Gb/s Data Transmission Using a Directly Modulated

With the deployment of the fifth generation of mobile networks (5G), 25 and 100 Gb/s directly modulated lasers and modules will become the mainstream optical

Jan 17, 2026

Distributed Bragg Reflector Lasers

Introduction to DBR Lasers Distributed Bragg Reflector (DBR) lasers are an essential component in the field of photonics, known for their efficiency in

Feb 25, 2026

D2 DBR Laser Module | Vescent

The D2-200 laser module is a complete redesign of our robust Distributed Bragg Reflector (DBR) diode laser. The D2-200 houses a new Virtual Point Source (VPS) DBR laser.

May 21, 2026

Distributed Bragg Reflector (DBR) Laser Diodes | Modulight

A DBR laser is a semiconductor laser with one or several quantum wells embedded within a p-n junction as the active medium. It contains Bragg reflectors at either one or both ends of the laser diode.

Feb 08, 2026

DBR Laser

A DBR (distributed Bragg reflector) laser is typically defined as one where the internal grating sections are passive (do not provide optical gain) and are located at one or both output facets in an edge emitter.

Jul 13, 2026

D2-100 DBR Lasers

The D2-100 DBR Laser The D2-100-DBR laser module is comprised of a Distributed Bragg Reflector (DBR) laser diode in a precision temperature-controlled housing with beam conditioning optics and

Contact Us

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