

DFB Single-Frequency Pigtailed Laser Diodes with Isolators



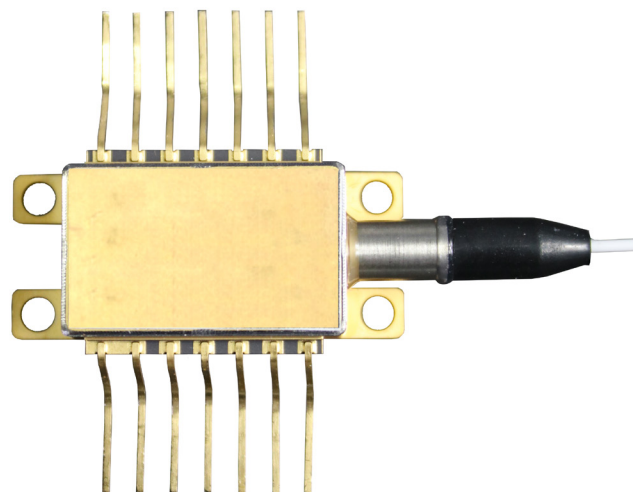
Newport DFB Pigtailed Laser Diodes are Distributed Feedback lasers with an integrated optical isolator and single-mode fiber pigtail precisely attached for optimum coupling efficiency.

DFB Single Frequency Laser Diodes

We offer single frequency 1310 and 1550 nm DFB laser diode assemblies for those applications requiring narrow line width laser sources. The DFB devices are of a multi-quantum well structure with an internal grown Bragg Grating resonator. The index of refraction change in the periodically grown Bragg Grating resonator/ reflector causes reflections to occur within the laser cavity which promoted only one single longitudinal mode of light to be generated. The DFB lasers will therefore have one primary longitudinal mode and the secondary modes will typically be 40 dB down from the primary mode. The feedback provided by the internal resonator creates a primary mode whose spectral line width < 0.1 nm FWHM. DFB lasers have a lower wavelength-temperature coefficient than FP lasers and so wavelength shift with temperature is typically about 0.1 nm/ $^{\circ}$ C, so minimal temperature tuning is possible. The assemblies include an internal monitor photodiode to allow them to be operated in automatic power control, APC, mode or the laser may be operated in constant current mode.

Butterfly and TO-Can Packages Available

Newport DFB lasers are available in two most popular package types: butterfly and flange-mounted TO-can. Newport offers various butterfly package laser diode mounts, and Model 710 for the flange-mounted TO-can lasers. All required Newport laser control instruments are available.

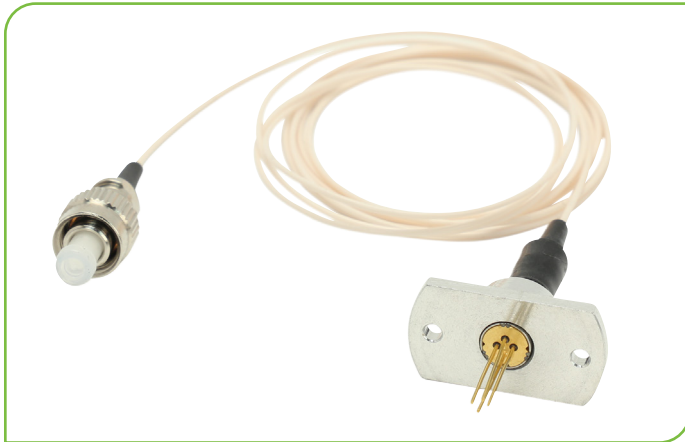


Features

- Distributed Feedback (DFB) laser for narrow linewidth
- Most popular 1310 and 1550 nm center wavelengths
- Butterfly and TO-can packages available
- Integrated optical isolator
- 1 meter 9/125 μ m single-mode fiber pigtail with FC/PC connector

Applications

- High-speed data
- Telecommunications systems and instrumentation
- Optical instruments requiring a laser diode light source



Integrated Optical Isolator

Our DFB laser diode assemblies feature an integral optical isolator. The addition of these isolators provides protection against back reflections and ensures a minimum optical isolation of 30 dB at the specified center wavelength over the entire operating temperature range.

Connectorized Single-mode Output

The DFB lasers in the butterfly packages are pigtailed with a panda PM fiber, terminated with a narrow-key FC/APC connector. The laser is aligned to the slow axis. The DFB lasers in the flange-mount TO-can packages are pigtailed with single-mode fiber, terminated with an FC/PC fiber optic connector.

Warranty

Warranty is only applicable to unopened packages with original seal unbroken. The fiber pigtailed laser diodes are backed by 30 day return-for-credit with the laser diode returned in the original sealed bag with no sign of physical damage.

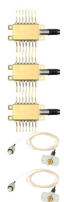
Caution on Electrostatic Discharge (ESD)

Each individual laser diode is tested and characterized, and guaranteed to operate, prior to shipment, by the renowned laser diode manufactures. The bare laser diodes are highly sensitive to ESD and it can happen from mundane activities such as connecting electrical cables. A grounding wrist strap, such as the FK-STRAP , is recommended when handling the laser diode.



Laser Radiation 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**



NEW!
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Model	Center Wavelength	Center Wavelength Tolerance	Output Power
LDB-DFB-1310-150	1310 nm	±3 nm	150 mW
LDB-DFB-1550-20	1550 nm	±2 nm	20 mW
LDB-DFB-1550-50CW	1550 nm	±2 nm	50 mW
PL13CF0021FCB-N	1310 nm	±3 nm	2 mW
PL15CE0021FCB-N	1550 nm	±3 nm	2 mW

Please check the detailed specifications at the product web pages.