



PRODUCT INFORMATION

DFB / DBR Diode Lasers, Single Mode

Single Mode

Distributed Feedback (DFB):

Distributed Feedback (DFB) Diode Lasers are fixed wavelength single mode diode lasers. 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 laser chip is grown by MOVPE of compound semiconductor material. The optical gain is provided by double heterostructure which include several Quantum Wells for electronic confinement. Typical emitter width range between $3\mu\text{m}$ and $7\mu\text{m}$. The single mode emission is enforced by a Bragg grating with the laser chip. The surfaces of the laser chip act as cavity mirrors due to the difference of the refractive index of the laser material and the surrounding air. The rear facet of the laser chip is provided with a high reflection coating. The front facet of the laser chip is provided with a high quality antireflection coating for avoiding the Fabry Perot modes of the laser chip. Distributed Feedback (DFB) Diode Lasers are available at almost any wavelength between 760nm and 2800nm.

Packaging Options:

DFB Lasers are available in 9mm TO-cans, TO3 cans with an integrated thermoelectric cooler or butterfly packages with thermoelectric cooler and single mode fiber coupling. Please note that the output power is reduced to typically 20% of the nominal power for the fiber coupled butterfly versions.

Customized Wavelength Selection:

Available wavelength range from 750nm to 1630nm. Due to a special manufacturing method, customized wavelength can be provided with a selection of below 2nm even for single units. Please check our most commonly requested wavelength.

Distributed Bragg Reflector (DBR):

Distributed Bragg Reflector (DBR) Diode Lasers are tunable single mode diode lasers. 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 laser chip is grown by MOVPE of compound semiconductor material. The optical gain is provided by double heterostructure which include several Quantum Wells for electronic confinement. Typical emitter width range between $3\mu\text{m}$ and $7\mu\text{m}$. The single mode emission is enforced by a Bragg grating with the laser chip. The surfaces of the laser chip act as cavity mirrors due to the difference of the refractive index of the laser material and the surrounding air. The rear facet of the laser chip is provided with a high reflection coating. The emission wavelength of the DBR laser is tuned by a synchronized changing the current of the Bragg and the Phase segment of the 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 100GHz mode-hop free. Please check our data sheets.

Packaging Options:

DBR Lasers are available in 9mm TO-cans, TO3 cans with an integrated thermoelectric cooler

or butterfly packages with thermoelectric cooler and single mode fiber coupling. Please note that the output power is reduced to typically 20% of the nominal power for the fiber coupled butterfly versions.

CONTACT & LEGAL



For further information about the product or support requests, please contact your local person in charge.

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