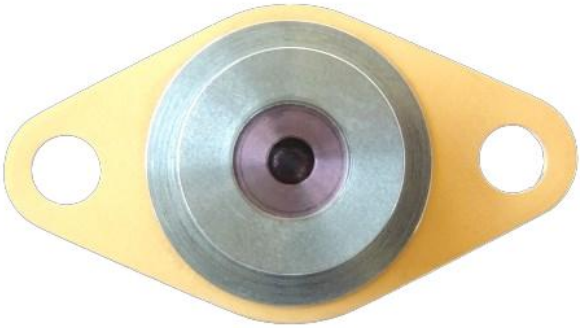
DFB Interband Cascade Lasers from 2300 nm



We are the manufacturer worldwide routinely providing single- and multi-mode lasers at any wavelength from 760 to 6000nm. At wavelengths up to 14 pm, QCLs complete our laser portfolio.

Our IC lasers deliver single mode emission with well defined optical properties enabling a wide range of applications. Our lasers operate reliably in tens of thousands of installations worldwide,including chemical and metallurgical industries, gas pipelines, power plants, medical systems, airborne and satellite applications.

Key features of our distributed feedback laser diodes

monomode
continuous wave
room temperature
tunable
custom wavelengths

Why choose our distributed feedback laser diodes

stable longitudinal and transversal single mode emission
precise selection of target wavelength
narrow laser linewidth
mode-hop-free wavelength tunability
fast wavelength tuning
typically > 5 mW output power
small size
easy usability
high efficiency
long-term stability

For more than 20 years BeamQ has been the technology leader for lasers in gas sensing.

beamqlaser@gmail.com

Quick description of distributed feedback laser technology

We use a unique and patented technology for DFB laser manufacturing. We apply a lateral metal grating along the ridge waveguide, which is independent of the material system.

Related information for DFB laser diodes between 2200 nm and 2600 nm

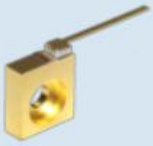
parameters (T = 25 °C)	symbol	unit	minimum	typical	maximum
operating wavelength (at T_{op}, I_{op})	λ_{op}	nm		0.1 nm	
optical output power (at λ_{op})	P_{op}	mW		3	
operating current	I_{op}	mA		100	
operating voltage	V_{op}	V		2.3	
threshold current	I_{th}	mA	5	30	50
side mode suppression ratio	SMSR	dB		> 35	
current tuning coefficient	C_I	nm / mA	0.01	0.02	0.05
temperature tuning coefficient	C_T	nm / K	0.18	0.22	0.25
operating chip temperature	T_{op}	°C	+20	+25	+50
operating case temperature*	T_C	°C	-20	+25	+50
storage temperature*	T_S	°C	-40	+20	+80

Free space mountings

Select a TO header with or without TEC. The TO headers are hermetically sealed with cap and window. Ask for customization without cap or without window. c-mount is available upon request. Please click on the mounting for detailed specifications and dimensions.

TO5 header with TEC and thermistor, black cap and AR coated window

TO56 header without TEC and thermistor, cap and window



c-mount without TEC and NTC

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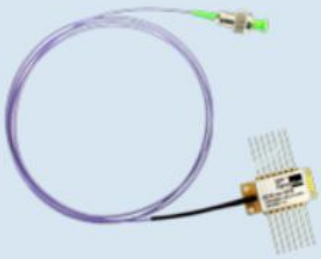
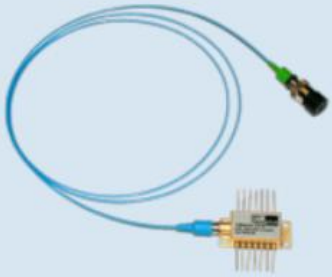
Fiber coupled mountings

Choose between SM and PM fiber coupling. Please click on the mounting for detailed specifications and dimensions. The SM-BTF is available for lasers between 760 nm and 2360 nm, the PM-BTF option is offered for lasers between 1064 nm and 2050 nm.



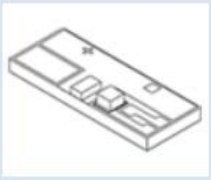
butterfly package with single mode fiber, TEC and NTC, FC / APC connector



butterfly package with polarization maintaining fiber, TEC and NTC, FC / APC connector

OEM mounting

For our OEM customers we offer a very small footprint package that is easy to integrate.



chip on heatspreader with NTC, without TEC

Accessories

- improved heat distribution
- connectors for laser diode driver
- connectors for temperature controller
- M6 thread for optical posts
- easy use with standard cage systems

TO5 heatsink

TO5 heatsink is available with collimation. The optical set up guarantees a collimated elliptical beam shape.

TO5 heatsink with collimation

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