

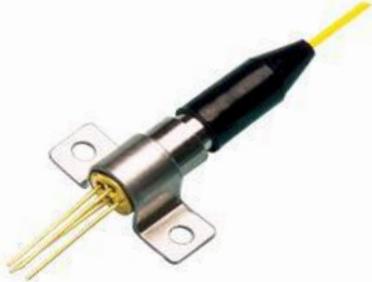
Fiber Coupled DFB Laser

(1310nm, 1550nm, 1653nm)



DATASHEET

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Features

- Low Cost
- Stable

Applications

- Test
- Communication
- Instrument



The DFBL DFB Laser is a high performance and low-cost device that features high output power up to 10mW and build-in power monitor for precision power control as well as TEC cooling for wavelength stability. The precision temperature control capability can also be used for small range wavelength tuning. We offer three wavelength band of 1310nm, 1550nm, and 1653nm.

A heat sink is required to remove the heat preventing damage.

We offer driving electronics to precisely control both the output power and temperature (wavelength).

Specifications

Parameter	Min	Typical	Max	Unit
Center Wavelength		1310/1550/1653		nm
Output Power	2		10	mW
Spectral Width, -3dB		0.06	0.1	nm
Side Mode Suppression Ration (SMSR)		30	36	dB
Laser Operation Current	10		50	mA
Laser Threshold Current (I _{th})		4	20	mA
Forward Voltage (V _f)		1.2	2	V
Reverse Voltage			1.5	V
Slope Efficiency		0.1		W/A
Reflection Isolation (built-in isolator)	30			dB
Speed		1.25		Gb/s
PD Capacitance		10	15	pF
PD Dark Current			0.1	μA
PD Operation Current			1	mA
PD Reverse Voltage			15	V
Pin Solder Temperature			250	°C
Thermistor Resistance (25°C)		10	10.5	KΩ
B Constant of R _{th}		3938		K
TEC Voltage			1.2	V
TEC Current			1	A
Operating Temperature	-40		75	°C
Storage Temperature	-40		85	°C
Reliability				Telcordia 1209 and 1221

Note: The specifications provided are for general applications with a cost-effective approach. If you need to narrow or expand the tolerance, coverage, limit, or qualifications, please [click this link](#):

Warning: The device can be damaged by a spike in applying voltage. Do not touch by hand or use a regular power supply. The device mounted on PCB is a cost-effective OEM module for professional system integration only, not intended for laboratory use, which be a protected turn-key boxed package. Information is believed to be accurate and is subject to change without notice. Some specific combinations of options may not be available. The user assumes all risks and liability in connection with the use of a product or its application.

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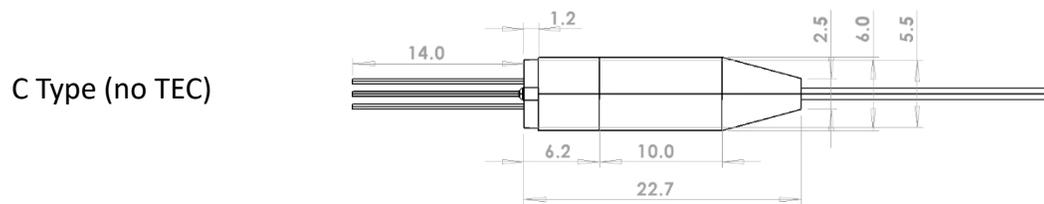
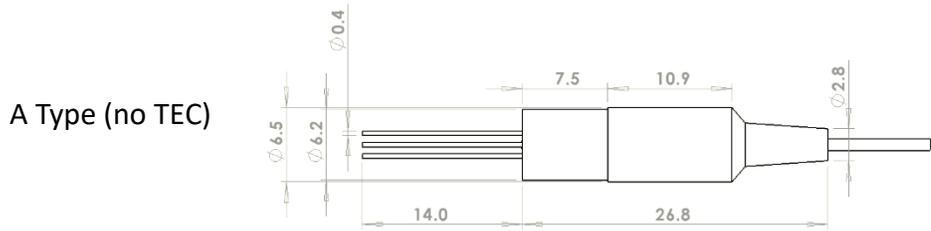
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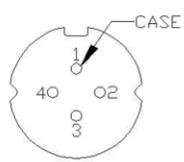
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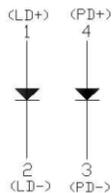
Mechanical Dimensions (mm)



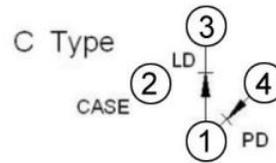
Electrical/Computer Connection (Bottom view)



A Type (no TEC)



B Type (with TEC)



C Type (no TEC)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information (Part Number)

Prefix	Wavelength	Output Power	Driver	TEC Cooling	Package	Fiber Type	Fiber Buffer	Fiber Length	Connector ^[1]
DFBL-	1310nm = 3 1550nm = 5 1653nm = 6 Special = 0	3mW = 3 5mW = 5 10mW = 1 Special = 0	No = 1 PCB = 2 Box = 3 Special = 0	No A Type = 1 Yes B Type = 2 No C Type = 3 Special = 0	Standard = 1 Special = 0	SM28 = 1 PM1550 = 4 Special = 0	900µm Tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0m = 3 1.5m = 5 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC/PC = 7 LC/UPC = U LC/APC = A Special = 0

Note:

□ PM1550 fiber works well for 1310nm

[1]. The connector cannot be installed directly onto bare fiber, as it is prone to damage during shipping. However, the connector can be assembled on bare fiber if a 3 cm protective loose tube is added for reinforcement. The customer can remove this protective tube after testing. The optical power handling of a standard connector is less than 0.5 W for SM28 fiber and decreases further with smaller core fibers.