

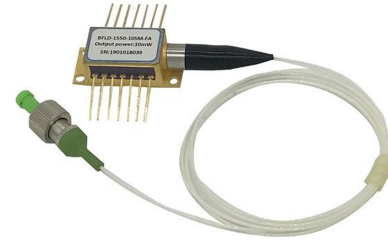
## 1550nm 100mW PM Fiber Coupled Laser

### 1. Features:

- 100mW High output power;
- Industry-standard, 14PIN butterfly package;
- Built-in TEC and optical isolator;
- High-performance, multiquantum well (MQW) distributed-feedback (DFB) laser.
- Reliability: Telcordia GR-468. RoHS

### 2. Applications:

- LAN, WAN and metro networks;
- Laser sources;
- CATV systems.



### 3. Absolute Maximum Ratings:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Storage temperature	T <sub>s</sub>	-	-40	-	85	°C
Operating case temperature	T <sub>op</sub>	-	0	-	65	°C
Forward Current	I <sub>F</sub>	CW	-	-	650	mA
Laser Reverse Voltage	V <sub>LR</sub>	-	-	-	2	V
PD Forward Current	I <sub>FPD</sub>	-	-	-	10	mA
PD Reverse Voltage	V <sub>RPD</sub>	-	-	-	20	V
TEC current	I <sub>TEC</sub>	-	-	-	1.3	A
TEC voltage	V <sub>TEC</sub>	-	-	-	3.7	V

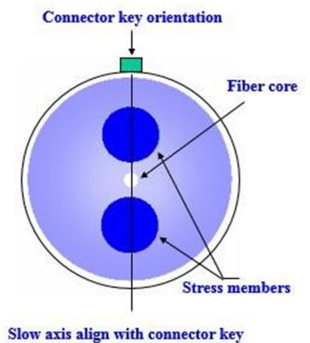
### 4. Electro-Optical Characteristics(25°C laser temperature):

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Center Wavelength	λ <sub>c</sub>	TL=15~35°C CW	1548	1550	1552	nm
Optical Output Power	P <sub>O</sub>	TL=15~35°C CW	-	100	-	mW
Threshold Current	I <sub>TH</sub>	-	-	25	40	mA
Slope Efficiency	η	CW output power 50mW	0.10	0.2	0.4	mW/mA
Operating current	I <sub>op</sub>	P <sub>O</sub> = 100mW(CW)	-	600	-	mA
Spectral linewidth	LW	FWHM	-	-	1	MHz
Laser Forward Voltage	V <sub>F</sub>	CW output power 100mW	-	-	3.0	V
Monitor Dark Current	I <sub>D</sub>	-	-	-	0.1	μA
Bandwidth(@-3dB)	BW	-	-	2.5	-	GHz
Side-mode Suppression Ratio	SMSR	CW	30	45	-	dB
Optical Isolation	-	-10 < T <sub>c</sub> < +70 °C	30	35	-	dB
Polarization Extinction Ratio	PER	-	20	-	-	dB

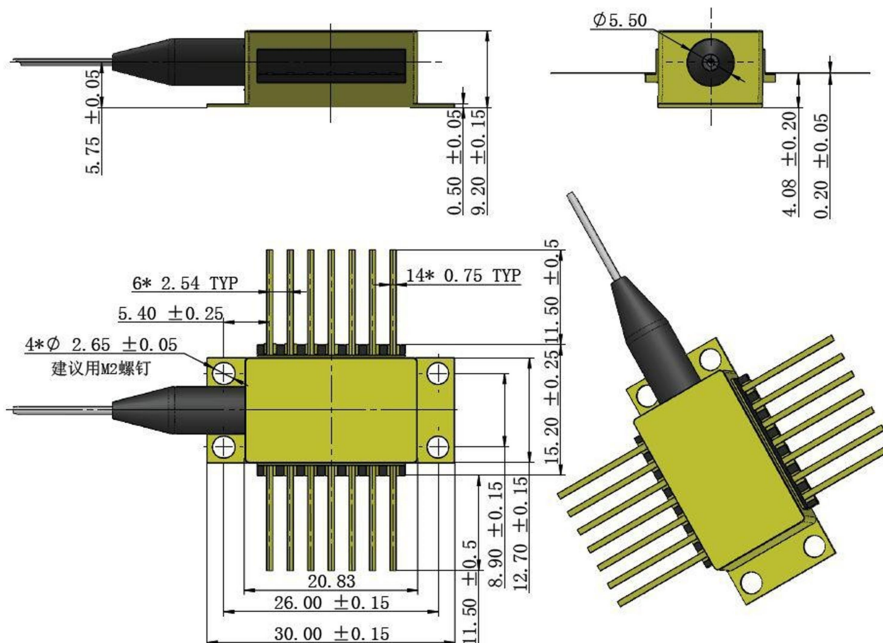
Relative Intensity Noise	RIN	20 - 1000 MHz	-	-	160	dB
TEC set temperature	T <sub>S</sub>	-	20	-	35	°C
Input Impedance	Z <sub>IN</sub>	-	-	20	-	Ω
Thermistor Current	I <sub>TC</sub>	-	10	-	100	μA
Thermistor Resistance	R <sub>TH</sub>	T <sub>L</sub> = 25°C	9.5	10	10.5	KΩ
TEC Current	I <sub>TEC</sub>	T <sub>L</sub> = 25°C, T <sub>C</sub> = 70°C	-	0.6	1.3	A
TEC Voltage	V <sub>TEC</sub>	T <sub>L</sub> = 25°C, T <sub>C</sub> = 70°C	-	1.3	3.7	V
TEC capacity	ΔT	T <sub>C</sub> = 70°C	-	-	50	°C
Thermistor temperature	-	-	-	-	100	°C
Wavelength Drift (EOL)	Δλ	Tested over 25-year lifetime	-	-	±0.1	nm
Wavelength drift with case temp	Δλ/ΔT	0°C < T <sub>case</sub> < 65°C	-	-	0.001	nm/°C
Wavelength Temperature tunability	Δλ/ΔI	20°C < T <sub>λ</sub> < 35°C	0.07	-	0.12	nm/°C

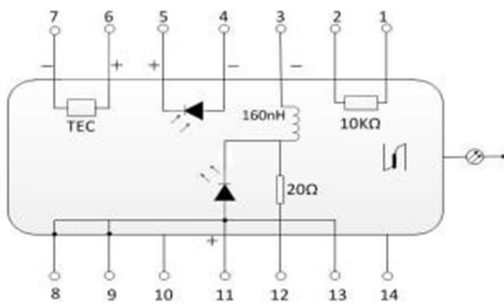
### 5. Optical Fiber Specifications:

Parameters	Description
Fiber Type	PM fiber
Pigtail Type	900μm loose tube
Pigtail Length	1.0±0.1m
Connector Type	FC/APC
PM fiber Connector Orientation	Please see the right figure



### 6. Package drawing & PIN-OUT Definition (Unit: mm):



**Type 1**


PIN	Description	PIN	Description
1	Thermistor	14	NC
2	Thermistor	13	Laser Anode (+),Case Ground
3	Laser dc Bias(Cathode)(-)	12	Laser RF Cathode (-)
4	PD Monitor Anode (-)	11	Laser Anode (+),Case Ground
5	PD Monitor Cathode (+)	10	NC
6	TEC(+)	9	Gase Ground
7	TEC(-)	8	Gase Ground

**7. Ordering Information:**

BFLD	-XXXX	-XX	-XX	-XX	(-X)
Laser type	Wavelength	Output power	Fiber type	Connector type	PIN-OUT
DFB Laser	1310: 1310nm 1550: 1550nm CWDM Other	10: 10mW 20: 20mW 40: 40mW 1H: 100mW Customized	SM : Single mode PM : Polarization maintaining	FA : FC/APC SA : SC/APC Other	NULL: Type 1

E.g.:BFLD-1550-1HPM-FA (Order information: 1550nm DFB Laser diode with 100mW output power, and PM fiber with FC/APC connector, PIN-OUT is Type 1).