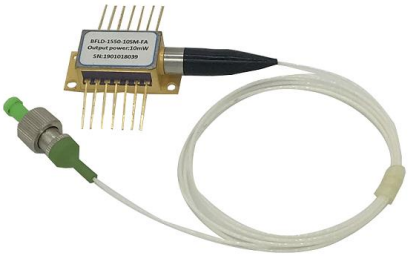
1550nm 20mW PM Fiber Coupled Laser

1. Features:

- High output power(10~100mW);
- Industry-standard, 14-pin butterfly package;
- Built-in TEC and optical isolator;
- High-performance, multiquantum well (MQW) distributed-feedback (DFB) laser;
- ITU wavelengths available from 1260nm~1650nm.

Reliability: Telcordia GR-468. RoHS



2. Applications:

- Fiber optical sensors;
- Laser sources;
- CATV systems.

3. Absolute Maximum Ratings:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Storage temperature	Ts	-	-40	-	85	℃
Operating case temperature	Top	-	-20	-	70	℃
Forward current	I_F	CW	-	-	400	mA
Laser reverse voltage	V_{LR}	-	-	-	2	V
PD Forward current	I_{FPD}	-	-	0.7	2	mA
PD Reverse voltage	V_{RPD}	-	-	5	10	V
TEC current	I_{TEC}	-	-	0.8	1.5	A
TEC voltage	V_{TEC}	-	-	1.5	3.5	V

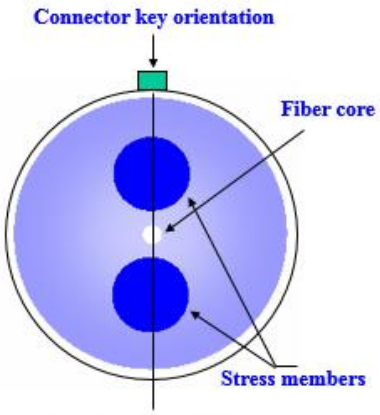
4. Electro-Optical Characteristics(25℃ laser temperature):

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Center wavelength	λc	TL=15～35℃ CW	1548	1550	1552	nm
Optical output power	P_O	-	20	-	-	mW
Threshold current	I_{TH}	-	-	10	35	mA
Slope efficiency	η	CW output power 10mW	0.05	0.11	0.2	mW/mA
Operating current	Iop	P_O= 20 mW(CW)	-	200	300	mA
Spectral linewidth	LW	FWHM	-	2	-	MHz
Laser forward voltage	V_F	CW output power 20mW	-	-	3.0	V
Monitor dark current	I_D	-	-	-	0.1	μA
Bandwidth(@-3dB)	BW	-	-	2.5	-	GHz
Side-mode suppression ratio	SMSR	CW	35	40	-	dB
Polarization extinction ratio	ER	-	20	-	-	dB

TEC set temperature	Ts	-	15	-	35	℃
Input impedance	ZIN	-	22	25	28	Ω
Thermistor current	ITC	-	10	-	100	μA
Thermistor resistance	RTH	TL = 25℃	9.5	10	10.5	KΩ
TEC Current	ITEC	TL = 25℃, TC = 70℃	-	-	1.5	A
TEC Voltage	VTEC	TL = 25℃, TC = 70℃	-	-	3.5	V
TEC capacity	ΔT	Tc = 70℃	-	-	50	℃
Thermistor temperature	-	-	-	-	100	℃
Wavelength drift (EOL)	△λ	Tested over 25-year lifetime	-	-	±0.1	nm
Wave. temp. coefficient	Δλ/ΔT	TEC temperature at 15℃ to 35℃	-	0.09	-	nm/℃
Wave. current coefficient	Δλ/ΔI	-	-	0.01	-	nm/mA

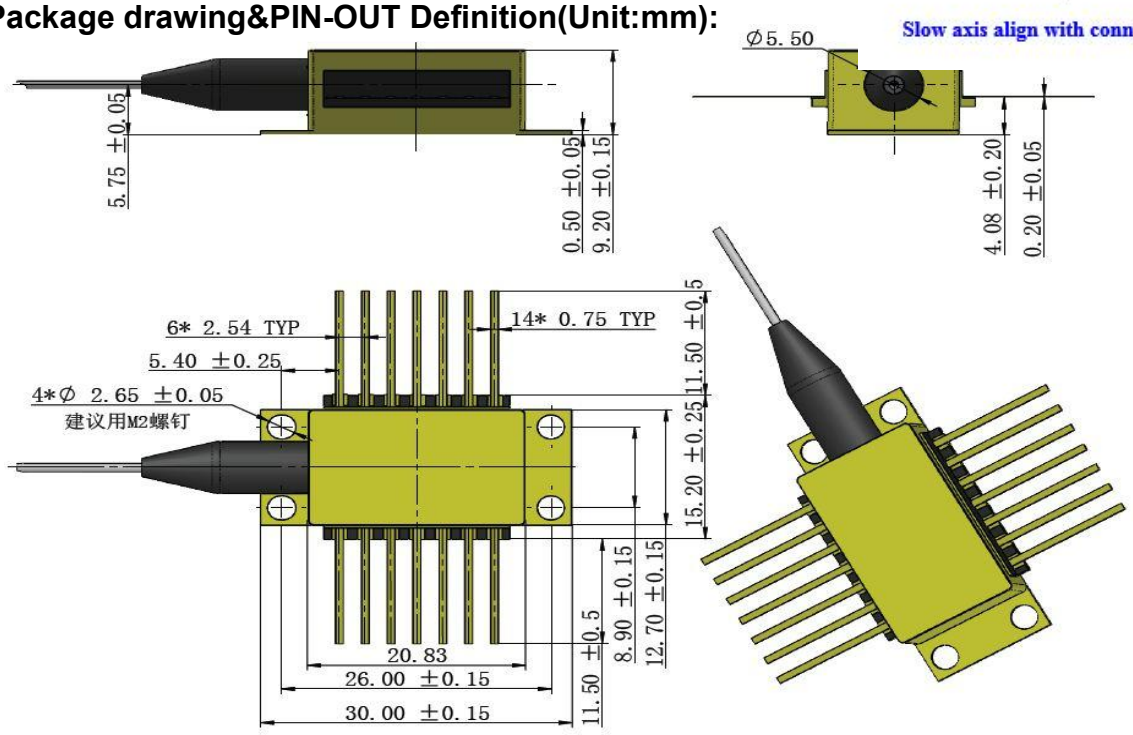
5. Optical Fiber Specifications:

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

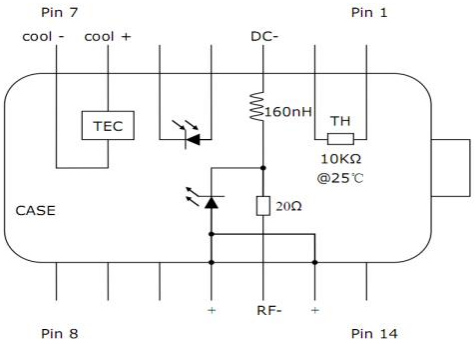


Note: The PM fiber and the connector key are aligned to the slow axis, fast axis is blocked.

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	NC
7	TEC(–)	8	NC

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 Customized	SM : Single mode PM : Polarization maintaining	FA : FC/APC SA : SC/APC Other	NULL: Type 1

E.g.:BFLD-1550-20PM-FA (Order information: 1550nm DFB Laser diode with 20mW output power, and PM fiber with FC/APC connector, PIN-OUT is Type 1).