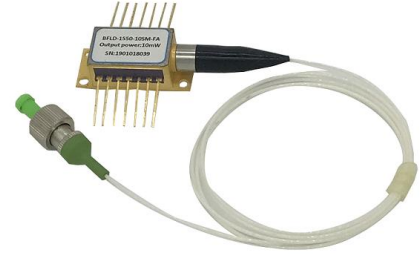


## 1310nm 50mW DFB Butterfly Laser

### 1. Features:

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

**Reliability:** Telcordia GR-468. RoHS



### 2. Applications:

- LAN, WAN and metro networks;
- C/DWDM systems;
- Fiber optical sensors;
- 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>	-	-20	-	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>	-	-	1.2	5	mA
PD Reverse Voltage	V <sub>RPD</sub>	-	-	5	10	V
TEC current	I <sub>TEC</sub>	-	-	0.8	1.5	A
TEC voltage	V <sub>TEC</sub>	-	-	1.5	3.5	V

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

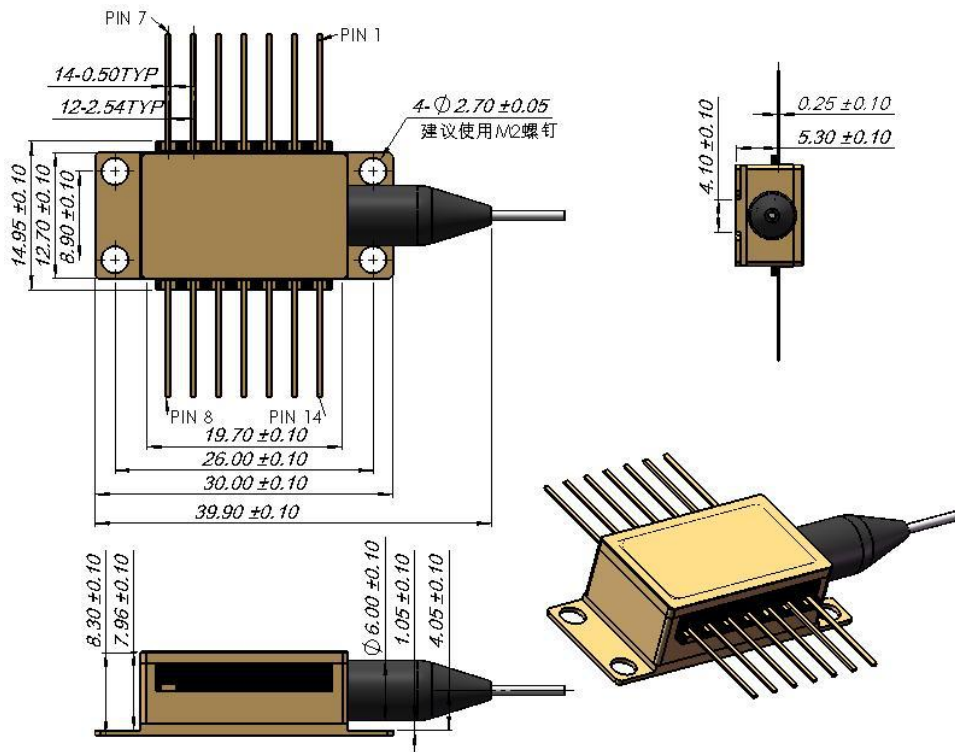
Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Center Wavelength	λ <sub>c</sub>	TL=15~35°C CW	1308	1310	1312	nm
Optical Output Power	P <sub>O</sub>	-	50	-	-	mW
Threshold Current	I <sub>TH</sub>	-	-	10	35	mA
Slope Efficiency	η	CW output power 20mW	0.05	0.20	0.40	mW/mA
Operating current	I <sub>op</sub>	PO= 40mW(CW)	-	350	-	mA
Spectral linewidth	LW	FWHM	-	3	-	MHz
Laser Forward Voltage	V <sub>F</sub>	CW output power 40mW	-	-	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	35	40	-	dB	
Optical Isolation	-	-10 < TC < +70°C	30	35	-	dB	
TEC set temperature	T <sub>s</sub>	-	15	-	35	°C	
Thermistor Current	I <sub>TC</sub>	-	10	-	100	μA	
Thermistor Resistance	R <sub>TH</sub>	TL = 25 °C	9.5	10	10.5	KΩ	
TEC Current	I <sub>TEC</sub>	TL = 25 °C, TC = 70°C	-	-	1.5	A	
TEC Voltage	V <sub>TEC</sub>	TL = 25 °C, TC = 70°C	-	-	3.5	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 coefficient	Temperature	Δλ/ΔT	TEC temperature at 15°C to 35°C	-	0.09	-	nm/°C
Wavelength coefficient	Current	Δλ/ΔI	-	-	0.01	-	nm/mA

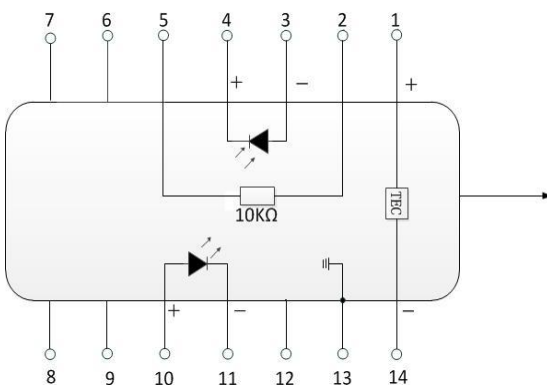
### 5. Optical Fiber Specifications:

Parameters	Description
Fiber Type	SM fiber
Pigtail Type	900μm loose tube
Pigtail Length	1.0±0.1m
Connector Type	FC/APC

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



**Type 2**



PIN	Description	PIN	Description
1	TEC(+)	14	TEC(-)
2	Thermistor	13	Case Ground
3	PD Monitor Anode (-)	12	NC
4	PD Monitor Cathode (+)	11	Laser Cathode (-)
5	Thermistor	10	Laser Anode (+)
6	NC	9	NC
7	NC	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 50: 50mW Customized	SM : Single mode PM : Polarization maintaining	FA : FC/APC SA : SC/APC Other	2: Type 2 Customized

E.g.:BFLD-1310-50SM-FA2 (Order information: 1310nm DFB Laser diode with 50mW output power, and SM fiber with FC/APC connector, PIN-OUT is Type 2).