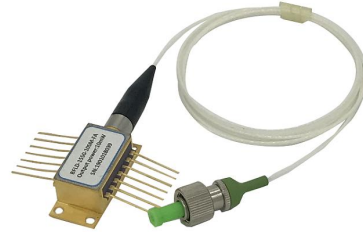


1651nm 10mW DFB Butterfly Laser Diode

1. Features:

- Multi-Quantum Well (MQW) Distributed Feedback(DFB) lasers;
 - 14-pin Butterfly package;
 - Built-in thermistor, and TEC;
 - Fiber type can be SMF-28e or PM fiber;
 - Operating temperature: -20~ +70℃;
- RoHS Compliant.



2. Applications

- Optical fiber communication;
- Optical instrument;
- Optical fiber sensor;
- Light source.

3. Absolute Maximum Ratings:

Parameter	Symbol	Condition	Min.	Max.	Unit
Laser forward DC current	-	-	-	120	mA
LD Reverse voltage	VRLD	CW	-	2.0	V
TEC voltage	VTEC	CW	-	2.6	V
TEC Current	ITEC	CW	-	1.5	A
Lead solder temperature/Time	-	-	-	260/10	℃/S
Operating temperature	TOP	Case temperature	-40	+85	℃
Storage temperature	TSTG	Ambient temperature	-40	+85	℃

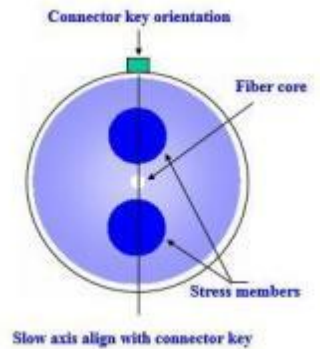
4. Optical-Electro Characteristics(T=25C, IF =IOP):

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating wavelength	λ_C	CW, 25℃	1650	1651	1652	nm
Optical output power	PF	-	10	-	-	mW
Threshold current	ITH	25℃	-	8	15	mA
Operating current	IOP	CW	-	-	90	mA
Operating voltage	VOP	25℃	-	1.1	2.0	V
Side mode suppression ratio	SMSR	-	35	40	-	dB
Optical isolation	ISO	25℃	35	-	-	dB
Spectral width (-3 dB)	$\Delta\lambda$	-	-	-	10	Mhz
Polarization extinction ratio	ER	PM fiber	18	-	-	dB
Wavelength temp. coefficient	$\Delta\lambda/\Delta T$	-	-	0.08	0.12	nm/℃

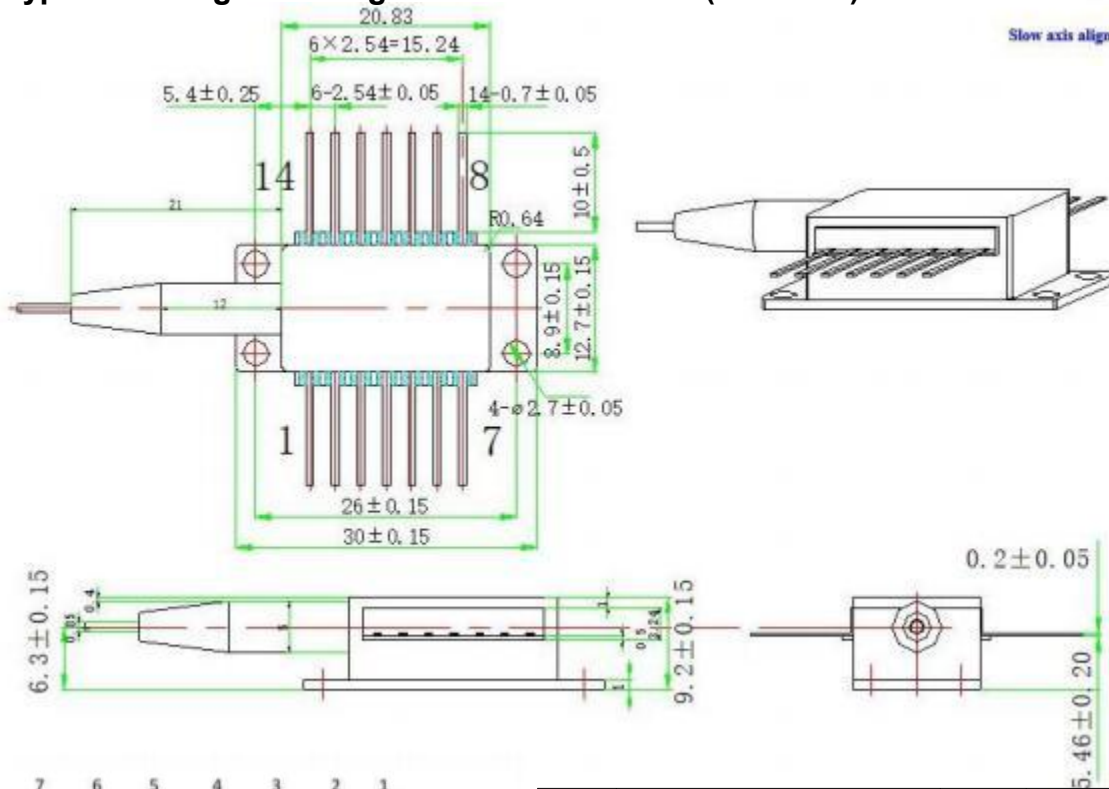
Monitor Current	IMON	VRM=5V	50	-	1500	μA
MPD Dark current	ID	VRM=5V	-	-	50	μA
Thermistor resistance	RTH	25°C	9.5	10	10.5	kΩ
Thermistor B-value	β	25°C/ 80°C	-	3950	-	K

5. Optical Fiber Specifications:

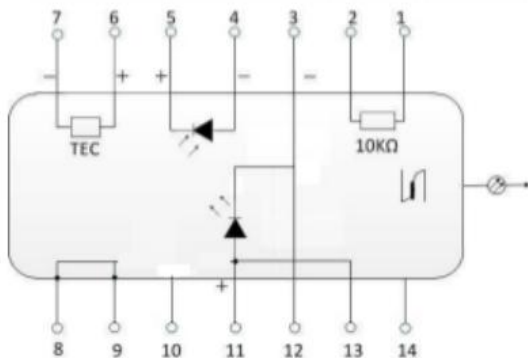
Parameters	Description
Fiber Type	SMF-28e or PMF-1550
Pigtail Type	900μm loose tube
Pigtail Length	1.0±0.1m
Connector Type	FC/APC
Note: The PM fiber and the connector key are aligned to the slow axis.	



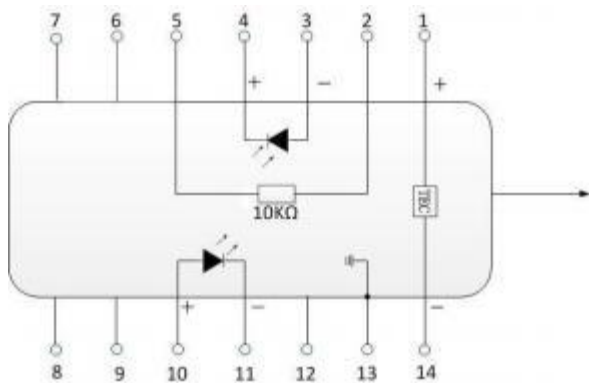
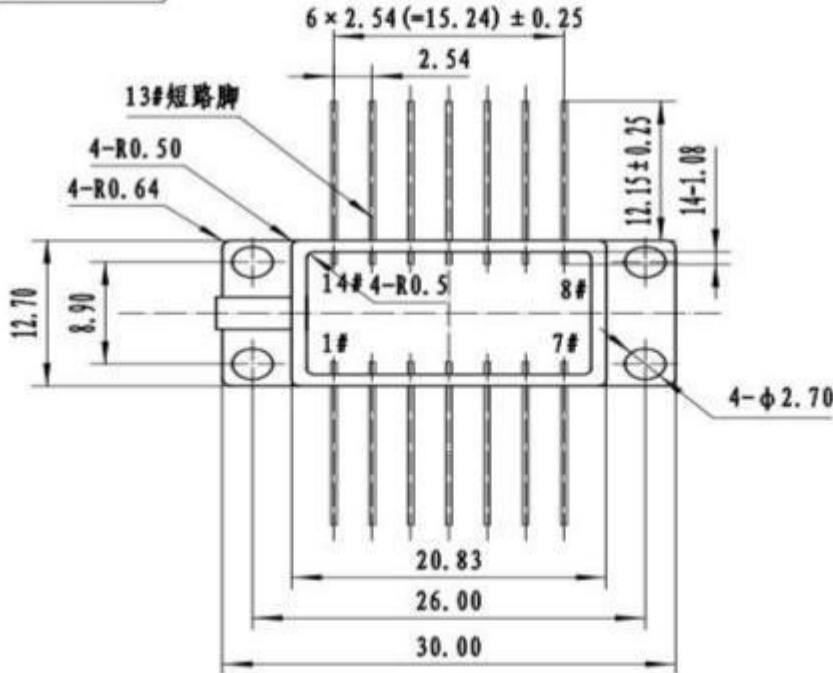
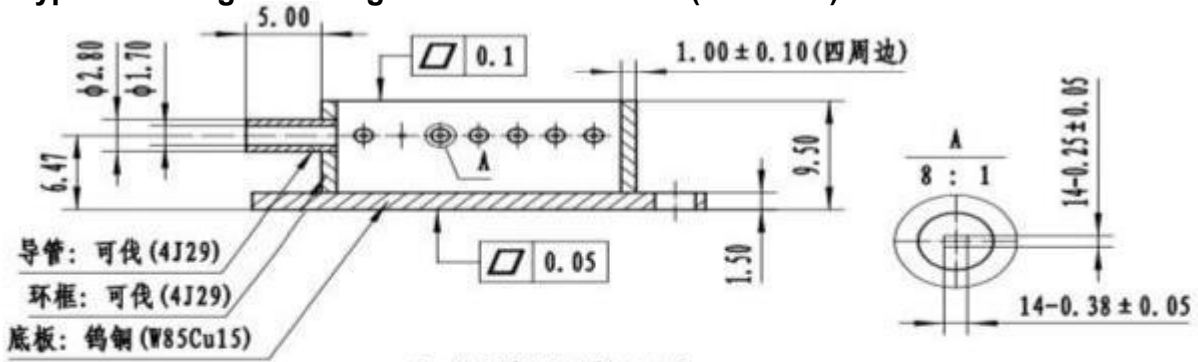
6. Type-1 Package Drawing & PIN-OUT Definition (Unit: mm):



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



7.Type-2 Package Drawing&PIN-OUT Definition(Unit:mm)



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

8. 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 DWDM	10: 10mW 20: 20mW Customized	SM : Single mode PM : Polarization maintaining	FA : FC/APC SA : SC/APC Other	Null: Type 1 2: Type 2

E.g.:BFLD-1651-10SM-FA (Order information: 1651nm DFB Laser diode with 10mW output power, and SM fiber with FC/APC connector, PIN-OUT is Type 1).