

14PIN 1550nm DFB Narrow Linewidth Laser Diode

1. Features:

- Multi-Quantum Well (MQW);
- 14-pin butterfly package;
- Built-in thermistor, and TEC;
- Operating temperature -20~ +70°C;
- SM or PM fiber pigtail.

RoHS and REACH Compliant

2. Applications

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

3. Absolute Maximum Ratings:

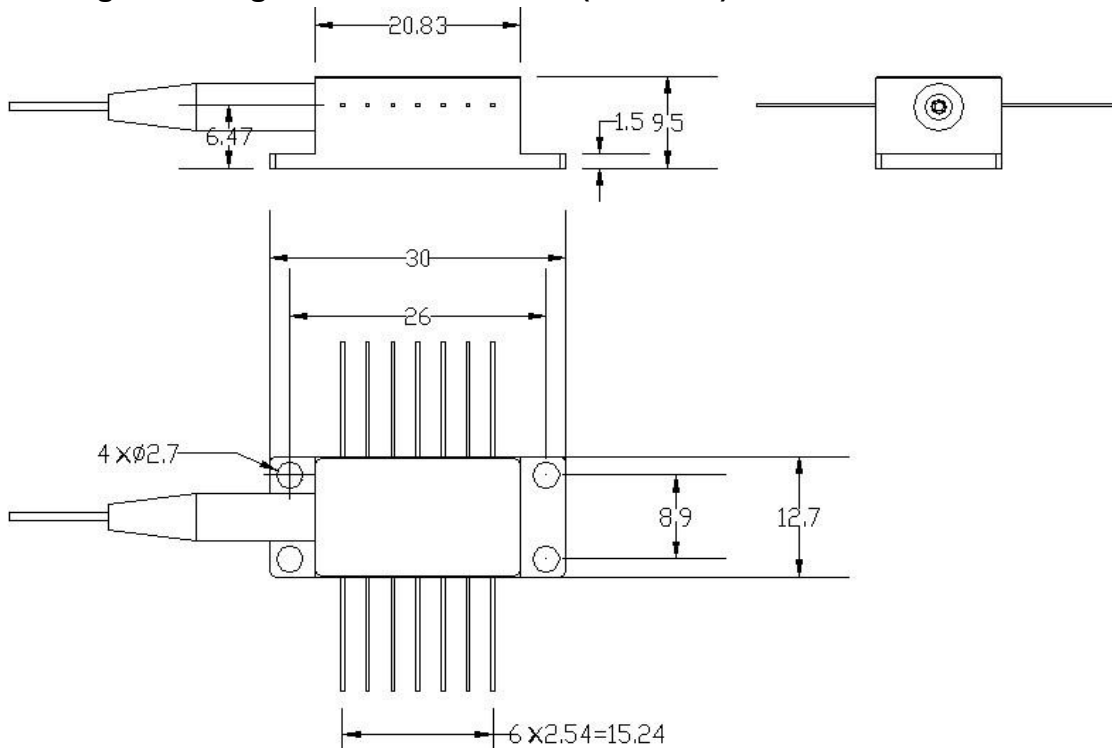
Parameter	Symbol	Condition	Min.	Max.	Unit
Laser forward current	I_F	-	-	500	mA
Laser reverse voltage	V_F	CW	-	2.0	V
TEC Current	I_{TEC}	CW	-	2.6	A
TEC Voltage	V_{TEC}	-	-	1.5	V
Operating relative humidity	RH_{STG}	-	-	85	%RH
Storage relative humidity	RH_{OP}	-	-	80	%RH
Operating temperature	T_{OP}	Case temperature	-20	+70	°C
Storage temperature	T_{STG}	Ambient temperature	-40	+85	°C
Lead soldering temperature	-	<10 seconds	-	260	°C

4. Optical-Electro Characteristics($T=25^{\circ}\text{C}$, $I_F = I_{OP}$):

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Operating wavelength	λ_C	25°C	1540	1550	1560	nm
Optical output power	P_F	-	50	-	-	mW
Threshold current	I_{TH}	25°C	-	30	45	mA
Laser forward current	I_F	CW	-	-	500	mA
Laser forward voltage	V_F	25°C	-	1.4	2.0	V
Monitor current	I_{MON}	$V_R = 5V$	50	-	1500	nA
MPD Dark current	I_D	$V_R = 5V$	-	-	50	nA

Side mode suppression ratio	SMSR	-	35	40	-	dB
Optical isolation	ISO	-	30	-	-	dB
Spectral width(-20 dB)	$\Delta\lambda$	-	-	0.1	1.0	nm
Wavelength temperature coefficient	$\Delta\lambda/\Delta T$	-	-	0.11	-	nm/°C
Thermistor resistance	R_{TH}	25°C	9.5	10.0	10.5	K Ω
Thermistor B-Value	β	25°C/85°C	-	3950	-	K
Linewidth	LW	25°C&CW	-	200	400	KHz
		25°C&CW	-	-	100	KHz
Fiber type	-	-	SM or PM			
Connector	-	-	FC/APC			Other

5. Package Drawing&PIN-OUT Definition(Unit:mm):



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