

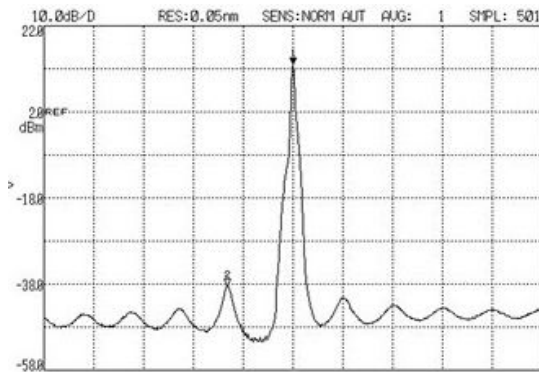
IDPTS-1570nm Fiber coupled BTF Laser Diode

Description:

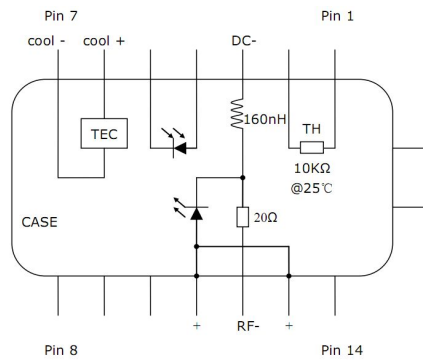
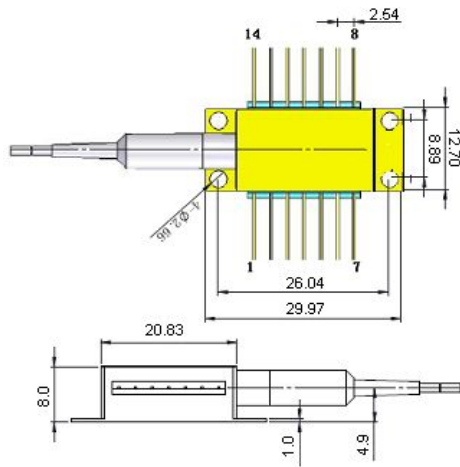
1570±2nm DFB laser, power $\geq 10.00\text{mw}$,14-pin butterfly package built-in optical isolator and thermoelectric cooler,1.00+0.10m single-mode pigtail with 900um tight tube,SC/UPC connector.

Application

Signal source in CWDM/DWDM network
Optical fiber sensing system
Gas detection
Quantum Teleportation



The package dimensions of the structure



PIN No	PIN assignment
1	Thermistor
2	Thermistor
3	Laser DC bias cathode (-)
4	PD monitor anode (+)
5	PD monitor cathode (-)
6	Thermoelectric cooler (+)
7	Thermoelectric cooler (-)
8	NC
9	NC
10	NC
11	Laser anode(+), Case
12	Laser RF input cathode (-)
13	Laser anode(+), Case
14	NC

Specifications

	Parameters	symbol	unit	Test conditions	Specification		
B	Extremum				MIN	TYP	MAX
1	Laser reverse voltage	V_{RLMAX}	V	/	/	/	2.00
2	Forward current/	I_{FLMAX}	mA	/	/	/	150.00
3	Operating temperature range	T_C	°C	/	-40.00	/	70.00
4	Storage temperature range	T_{sgt}	°C	/	-40.00	/	85.00
5	Photodiode reverse voltage	V_{RPDMAX}	V	/	/	/	10.00
6	Photodiode forward current	I_{FPDMAX}	mA	/	/	/	2.00
7	Thermistor temperature	/	°C	/	/	/	100.00
8	Cooler current	/	A	/	/	/	1.900
C	Optical Characteristics (at 25°C laser temperature)				Optical Characteristics (at 25°C laser temperature)		
1	Center Wavelength	λ_C	nm	$T_L=15\sim 35^\circ\text{C CW}$	1568.00	1570.00	1572.00
2	Linewidth	LW	MHz	CW 5mW	/	3.00	/
3	bandwidth(-3dB)	BW	GHZ	5mW	5.00	/	/
4	Relative Intensity Noise	RIN	dB/Hz	5mW,50MHz~2.5GHz	/	-140.00	/
5	Side-mode Suppression Ratio	$SMSR$	dB	CW	35.00	42.00	/
6	Optical Isolation	/	dB	0°C-70°C	/	30.0	/
7	Wavelength Drift	$\Delta\lambda$	nm	25year	/	/	±0.10
8	Wavelength/Temperature Coefficient	$d\lambda/dT$	nm/°C	/	/	/	0.09
9	Dynamic Spectral Width	$\Delta\lambda$	nm	2.5GHz, @-20dB	/	0.32	/
D	Electrical Characteristics (at 25°C laser temperature)				Electrical Characteristics (at 25°C laser temperature)		

1	Peak Optical Output Power	P _p	mW	/	15.00	/	/
2	Threshold Current	I _{TH}	mA	CW	/	14.00	25.00
3	Driving Current	/	mA	P _o =15mW	/	120.00	/
4	Laser forward voltage	V _{LF}	V	P _o =15mW	/	1.60	2.00
5	Laser operating temperature	T _L	°C	/	15.00	/	35.00
6	Monitor Reverse Voltage	V _{RMON}	V	/	3.00	5.00	10.00
7	Monitor Current	I _{RMON}	mA	P _o =15mW	0.01	/	2.00
8	Monitor dark current	I _D	μA	I _F =0mA, V _{RMON} =5.0V	/	0.01	0.10
9	Input Resistance	Z _{IN}	Ω	/	/	25.00	/
10	Thermistor Current	I _{TC}	μA	/	10.00	/	100.00
11	Thermistor resistance	R _{TH}	KΩ	T _L =25°C	9.50	/	10.50
12	Cooler current	I _{TEC}	A	T _L =25°C, Taround=70°C	/	/	1.20
13	Cooler voltage	V _{TEC}	V	T _L =25°C, Taround=70°C	/	/	3.50
E	Environmental Stress Screening			Specification			
1	Baking (Temperature / Duration)	C / Hr		+85°C/48Hr			
2	Temperature Cycling (Temperature Range / Cycles)	C / Hr		-40°C to +85°C/48Hr			
F	Mechanical and Configuration						
1	Labelling (Label Material & Dimension)			N/A			
2	Serialization (Laser Marking or others)			Printed paster			

3	Package Dimension	14 butterfly needle shell sealed package	
4	Packing	Vacuumize black anti-static plastic package	
G	Others Parameters		
1	RoHS Required	Yes/No	Yes
2	Pigtail Type	SMF-28e	0.9 tight tube
3	Pigtail Length		1.00+0.10m
4	Laser Application		/
5	Connector Type		FC/APC