DWDM DFB Butterfly Laser Module (14 pins)

Features

- High Linearity Direct Modulation DFB laser
- Standard ITU Grid Wavelengths
- Built –in Isolator , TEC, Thermistor and Monitor PD
- Hermetically Sealed 14 Pin Butterfly Package
- Telcordia Technologies 468 Compliant
- Wide Temperature Range – Stable Even In Harsh Environments

Application

- Note Capability
- Narrow Transmitter Housing
- Networks With Limited Fiber
- Architectures Using Separate Optical
- Wavelengths to Carry Targeted Services
- Optical Communication
- Test equipment

The 1550nm DWDM DFB laser is available in a wide range of standard ITU wavelengths.

The lasers are offered as either forward – path (40MHz –1GHz) or return–patch (5 MHz –210 MHz) modules.

Absolute Maximum Ratings

Parameter	Symbol	Min	Typ.	Max.	Unit	Test Conditions
Storage Temperature	T_{st}	- 40	-	+ 85	℃	CW
Operate Case Temperature	T_C	- 40	-	+ 85	℃	CW
Laser Forward Current	If	-	-	300	mA	-
Laser Reverse Bias	V_r	-	-	1	V	-
Reverse Voltage PD	V_{rpd}	-	-	10	V	-
ESD		-500	-	+500	V	HBM:R=1500Ω.C=100pF
TEC Current	I_{tec}	-1.7	-	+1.7	A	CW
RF Input Power	P_{RFIN}	-	-	62	dBmV	If = Iop
Relative Humidity	R_H	-	-	95	%	Top < 30 ℃
Thermal Electric Cooler		-	-	2	V	voltage
		-	-	1.5	A	current

Fiber Yield Strength		–	–	30	nm	–
Fiber Bend Radius		–	–	1	kgf	–
Soldering Temperature /Time			260/10		℃/S	–

Performance Highlights

Parameter		Min	Typ.	Max.	Unit
Available Wavelengths (ITU Grid)		1526	–	1563	nm
Output Power		2	–	25	mW
Temperature Case Temperature Range		- 40	–	+ 85	℃
Frequency Range	Return Path	5	–	210	MHz
	Forward Path	40 MHz	–	1	GHz
Composite Second ORder		50	–	–	dBc
Composite Triple Beat		60	–	–	dBc
Adiabatic Chirp @ 500MHz		40	–	100	MHz / mA

Specifications (electrical & optical characteristics)

Parameter	Symbol	Min	Typ.	Max.	Unit	Test Conditions
Threshold Current	I_{th}	-	-	20	mA	CW
Operating Current	I_{OP}	-	-	120	mA	CW
Monitor PD Res	R_{PD}	10	-	200	uA/mW	V_{rm} = 5V
Thermistor	R_{th}	9.5	-	10.5	KΩ	25 ℃
Thermistor TEMP Coefficient	TC_{th}	-	-4.4	-	% / ℃	25 ℃
Wavelength	λ_C	1526.0	-	1563.1	nm	CW, If = Iop, T = Top
Output Power	P_O	1	-	25	mW	CW
Side-mode Suppression Ratio	SMSR	35	-	-	dB	CW, Iop = 10mW
Slope Efficiency	S_e	0.16	0.19	-	mW/mA	CW
Isolation	ISO	30	-	-	dB	-
Laser Relative Intensity Noise	RIN	-	< - 155	-	dB / Hz	If = Ith + 70mA,25 ℃

Spectral Width	Δ λ	-	-	0.04	nm	If = 60 mA, T = Top
RF Return Loss	S11	16	-	-	dB	-
Composite Second Order	CSO	50	-	-	dBc	Note ,1.2.3.4
Composite Triple Beat	CTB	60	-	-	dBc	Note ,1.2.3.4
Carrier to Noise Ratio	CNR	51	-	-	dB	Note ,1.2.3.4
Adiabatic Chirp	FM	40	-	100	MHz/mA	If = 60mA,25 ℃@500MHz
Nominal Input Impedance	Z_{IN}	-	25	-	dB	-

Note

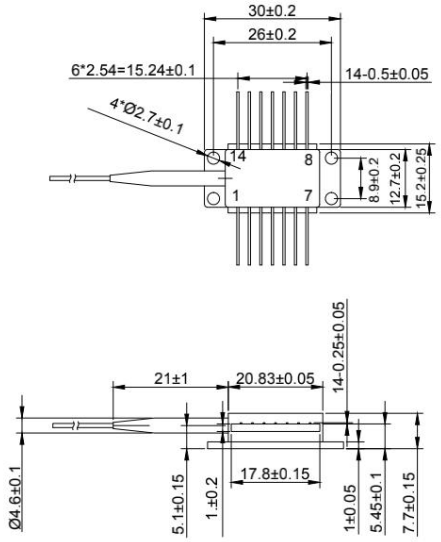
1: Iop is the bias point at which simultaneously the linearity, the min. optical power and the required operating wavelength, λ op are obtained.

2: 8 channel loading with 10% OMI and 40km fiber length.

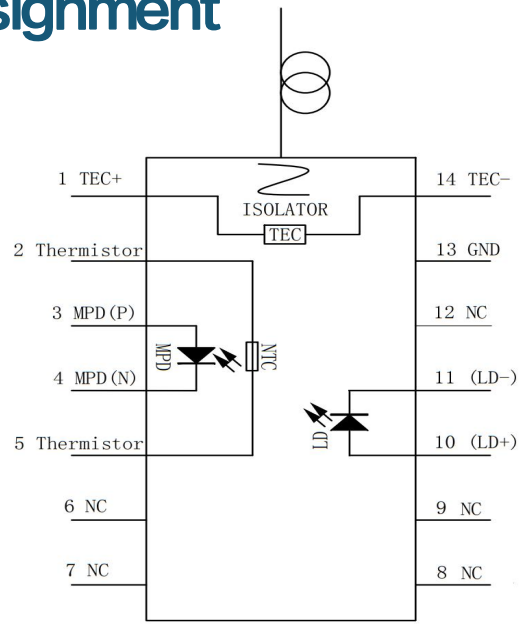
3: Receiver thermal noise 8 pA*Hz $^{-0.5}$, 0.5mA @ Ith + 40mA, photodiode responsivity ~ 1.1 A/W, noise bandwidth 4.2MHz.

4: Forward band (45~870MHz): Eight channel CW measurement : 552.25,559.25,565.25,571.25,577.25,583.25,595.25 MHz. CTB @ 553.25,577.25,595.25MHz, CSO@42MHz.

Dimensions(nm)



Pin Assignment



Order Information GTA9008

Please let us know your request details before order.
* * If you have your own Pin Assignment request .
Kindly share it with us before order .

Customize for you

Available Channels:

Ordering Option	ITU Frequency	Wavelength	Ordering Option	37ITU Frequency	Wavelength
15	191.5	1565.50	26	192.6	1556.56
16	191.6	1564.68	27	192.7	1555.75
17	191.7	1563.86	28	192.8	1554.94
18	191.8	1563.05	29	192.9	1554.13
19	191.9	1562.23	30	193.0	1553.33
20	192.0	1561.42	31	193.1	1552.52
21	192.1	1560.61	32	193.2	1551.72
22	192.2	1559.79	33	193.3	1550.92
23	192.3	1558.98	34	193.4	1550.12
24	192.4	1558.17	35	193.5	1549.32
25	192.5	1557.36	36	193.6	1548.51

37	193.7	1537.72	51	195.1	1536.61
38	193.8	1546.92	52	195.2	1535.82
39	193.9	1546.12	53	195.3	1535.04
40	194.0	1545.32	54	195.4	1534.25
41	194.1	1544.53	55	195.5	1533.47
42	194.2	1543.73	56	195.6	1532.68
43	194.3	1542.94	57	195.7	1531.90
44	194.4	1542.14	58	195.8	1531.12
45	194.5	1541.35	59	195.9	1530.33
46	194.6	1540.56	60	196.0	1529.55
47	194.7	1539.77	61	196.1	1528.77
48	194.8	1538.98	62	196.2	1527.99
49	194.9	1538.19	63	196.3	1527.22
50	195.0	1537.40			