DWDM DFB Butterfly Laser Module (14 pins)

GTA9080

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
- RoHs Compliant

Application

- Narrow Transmitter Housing
- Light Source,Sensor
- 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 (5MHz~210MHz) modules .

1 Absolution Maximun Ratings (Tc=25℃.unless otherwise specified)

Parameters	Symbol	Min.	Max.	Unit	Test Condition
Storage Temperature	T_{st}	- 40	+ 85	℃	CW
Operate Case Temperature	T_C	- 40	+ 85	℃	CW
Laser Forward Current	If	-	1000	mA	-
Laser Reverse Bias	V_r	-	1	V	-
Reverse Voltage PD	V_{rpd}	-	10	V	-
Reverse Voltage (Laser diode)	V_{RL}	-	2	V	Reverse Current <500uA
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	

2 Operating Conditions

Parameters		Min.	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	1	GHz
Composite Second Order		50	-	dBc
Composite Triple Beat		60	-	dBc
Adiabatic Chirp @ 500MHz		40	100	MHz / mA

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3 Specifications (electrical & optical characteristics)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Threshold Current	I_{th}	-	-	20	mA	CW
Operating Current	I_{OP}	-	-	1000	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	-	100	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	Δλ	-	-	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 Chip	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,λop 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.

* CWDM DFB wavelength tolerance ±3nm.
* LAN-WDM.MWDM.DWDM wavelength tolerance belongs to their specific properties.
* 1625nm.1650nm.1654nm wavelength tolerance ±5nm.

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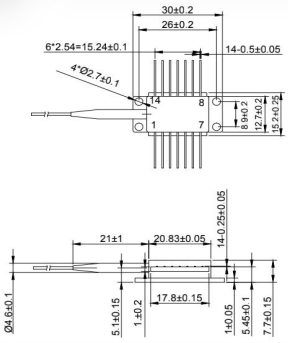
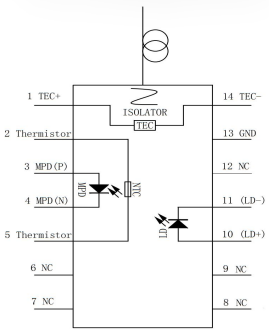
4 Dimensions(mm)



Pin Assignment



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

5 Order Information

GTA9080 series laser DWDM DFB butterfly laser module

Please let us know

1: wavelength

2:output power

3: fiber type

4: connector

5: pin map (If you have your own request,please let us know it.)

6: with isolator or not

For example

GTA90855029

1550.12nm DFB butterfly laser moudle

20mW.SMF FC/APC 1m, with isolator.

6 Available Channels

Ordering Option	ITU Frequency	Wavelength	Ordering Option	ITU Frequency	Wavelength
15	191.5	1565.50	33	193.3	1550.92
16	191.6	1564.68	34	193.4	1550.12
17	191.7	1563.86	35	193.5	1549.32
18	191.8	1563.05	36	193.6	1548.51
19	191.9	1562.23	37	193.7	1537.72
20	192.0	1561.42	38	193.8	1546.92
21	192.1	1560.61	39	193.9	1546.12
22	192.2	1559.79	40	194.0	1545.32
23	192.3	1558.98	41	194.1	1544.53
24	192.4	1558.17	42	194.2	1543.73
25	192.5	1557.36	43	194.3	1542.94
26	192.6	1556.56	44	194.4	1542.14
27	192.7	1555.75	45	194.5	1541.35
28	192.8	1554.94	46	194.6	1540.56
29	192.9	1554.13	47	194.7	1539.77
30	193.0	1553.33	48	194.8	1538.98
31	193.1	1552.52	49	194.9	1538.19
32	193.2	1551.72	50	195.0	1537.40

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6 Available Channels

Ordering Option	ITU Frequency	Wavelength	Ordering Option	ITU Frequency	Wavelength
51	195.1	1536.61	58	195.8	1531.12
52	195.2	1535.82	59	195.9	1530.33
53	195.3	1535.04	60	196.0	1529.55
54	195.4	1534.25	61	196.1	1528.77
55	195.5	1533.47	62	196.2	1527.99
56	195.6	1532.68	63	196.3	1527.22
57	195.7	1531.90			