



1650nm DFB Butterfly Laser Module (14 pins)

GTA9012

Features

High Linearity Direct Modulation DFB laser
High Output Power 1~100mW
Built-in Isolator,TEC, Thermistor and Monitor PD
Hermetically Sealed 14 Pin Butterfly Package
RoHs Compliant

Application

Long Reach Analog Transmission Systems
Light Source
Sensor
Optical Communication
Test equipment



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

Parameters	Symbol	Min.	Max.	Unit	Test Condition
Laser Chip	I _{FL}	-	1200	mA	Forward Current
	I _{RL}	-	2	mA	Reverse Current
Reverse Voltage (Laser diode)	V _{RL}	-	2	V	Reverse Current <500uA
Storage Temperature	T _{stg}	-40	+100	°C	-
Soldering Temperature/Time	-	260/10		°C/S	-
Relative Humidity	RH	-	95	%	Top < 30 °C
Thermal Electric Cooler	-	-	2	V	Voltage
	-	-	1.5	A	Current
Fiber Yield Strength	-	-	30	nm	
Fiber Bend Radius	-	-	1	kgf	
Monitor Detector	V _{RD}	-	15	V	Reverse Voltage
	I _{RD}	-	1	mA	ReversePhoto Current
	I _{FD}	-	2	mA	Forward Current

2 Operating Conditions

Parameters	Symbol	Min.	Max.	Unit	Test Condition
Caser Operating Temperature Range	T _C	- 20	60	°C	-
Power Supply Voltage	V _{CC}	-	5	V	-
Relative Humidity	R _H	-	80	%	-
Bias Current	I _D	-	70	mA	-
TEC Cooler Current	I _{cooler}	-	1	A	ΔT=40K
TEC Voltage	V _{cooler}	-	2	V	ΔT=40K

3 Specifications (electrical & optical characteristics)

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Operating Voltage	V _{op}	-	-	3	V	CW
Threshold Current	I _{th}	-	10	45	mA	CW
Thermistor	R _{th}	9.5	10	10.5	KΩ	25 °C
Monitor Current	I _m	10	-	150	uA	CW, V _{rd} = 5V





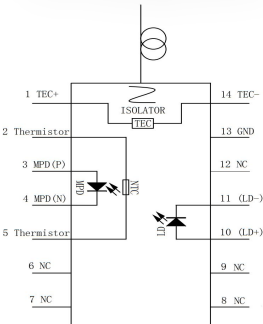
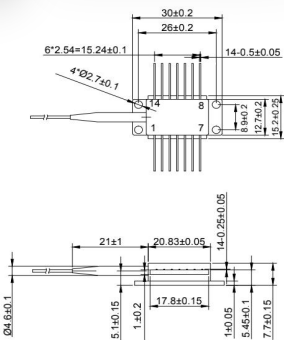
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Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Thermoelectric cooler current	Icooler	-	-	1000	mA	CW, -5℃ ~ 60℃
Monitor Dark Current	Id	-	-	500	nA	CW, Vrd = 5V
Central Wavelength	λ_c	1645	1650	1655	nm	CW, 25℃
Output Power	Po	1	-	100	mW	CW
Side Mode Suppression Ratio	SMSR	30	-	-	dB	CW, If = Ith + 20 mA
Slope Efficiency	Se	-	0.3	-	mW/mA	CW
Spectral Width	$\Delta\lambda$	-	-	0.3	nm	CW , - 20dB
Bias Current	I _B	-	-	70	mA	-
Tracking Error	ΔP_f	-	-	0.5	dB	CW,-5℃ ~ 60℃ , Im =Im @25℃
Monitor PD Capacitance	C	-	-	0.5	pF	Vrd = 5 V, F = 1 MHz
Connector Repeatability		-	-	0.3	dB	CW
Frequency Range	F	45	-	1000	MHz	-
Tracking Error	Er	-	-	1	dB	Tc = - 20 ~ 65℃ , APC, ATC
Rise Time / Fall Time	Tr / Tf	-	-	2.0	ns	10-90% / 90-10%

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

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**

- GTA9012 series laser 1650nm DFB butterfly laser module**
 Please let us know
 1:output power
 2: fiber type
 3: connector
 4: pin map (If you have your own request,please let us know it.)
 5: with isolator or not

For example

GTA9012109
 1650nm DFB butterfly laser moudle 100mW.
 SMF FC/APC 1m,with isolator.

