

1310nm FP Laser Diode Module

1. Features

- 1310nm FP Laser diode module
- Signal Rate up to 1.25Gb/s
- High Output Power(>1mW)
- Coaxial Pigtail Package

2. Description

CT120-323-05 products are a 1310 nm Multiple Quantum Well (MQW) structured Fabry-Perot (FP) laser diodes with InGaAs monitor PIN-PD, for fiber optic communication systems. These modules are ideally suitable for 1.25Gb/s transmission applications.

3. Application

- Telecommunication
- Data Communication

4. Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Note
Reverse Voltage of LD	VRL		2	V	
Forward Current of PD	IFD		10	mA	
Reverse Voltage of PD	VRD		2.0	V	
Operating Case Temperature	Tc	-40	+85	°C	
Storage Temperature	Tstg	-40	+85	°C	
Lead Soldering Temperature/Time	Tsld		260/10	°C/S	
connector Reflection	Rf	40		dB	

5. Electrical and Optical Characteristics

(Tc=25 °C, unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold current	Ith	CW		6	15	mA
Optical output power	Pf	CW, If=Ith+20mA	1.0	-		mW
Operating voltage	Vf	Vop	-	1.1	1.5	V
Slope efficiency	Se	CW	0.05	-	0.10	mW/mA
Peak wavelength	λ_p	CW, If= Ith+20	1290	1310	1330	nm
Spectral Width	$\Delta \lambda$	Po= 1.0 mW, RMS Tc= -40 to +85°C	-	-	2.5	nm
Tracking error	Er	Im hold (@Pf=1mW(25°C)), Tc=0~+70°C, APC	-1.0	-	1.0	dB
Rise and Fall time	tr ,tf	Ib=Ith, 10~90%	-	0.15	0.3	ns.
Monitor current	Im	CW, If= Ith+20, VRD=5V	100			μ A
Capacitance (PD)	Ct	Vrd=5V, f=1MHz	-	5	20	pF
Dark current (PD)	Id	Vrd=5V	-	0.1	0.5	μ A

6. Precaution

(1) Radiation emitted by laser devices can be dangerous to the eyes. Avoid eye or skin

exposure to direct or scattered radiation.

- (2) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- (3) The stress to the fiber pigtail may cause the damage on the performance. The fiber pigtail may snap off by dropping the module.

7. Package Dimensions and Pin Description:

