1310nm/1310nm SC Receptacle Diplexer Assembly

Description

The PT8349 series contain a 1310nm MQW F-P laser diode as transmitter, an InGaAs photo-detector integrated with a trans-impedance amplifier (5V or optional 3.3V) into the TO-can as receiver, and a splitter to separate input and output light. So a duplex or half-duplex optical link can be built for a wide variety of data communication applications with high-speed up to 1Gb/s rate, long distance up to 40km. They use 9/125μm diameter single fiber with optional FC/APC or SC/APC integrated connector.

Transmitter Charcteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Center Wavelength	λ	CW	1260	1310	1360	nm
Threshold Current	I_{th}	CW	-	8	25	mA
Operating Current	I_{op}	CW	-	20	50	mA
Power(PT8349-34-1)	P_o	I_{th}+20mA	0.1	0.2	0.4	mW
Spectral Width	△λ	CW(RMS)	-	-	4	nm
Monitor PD Current	-	-	0.1	-	1.5	mA
MPD Tracking Error	-	−40～85℃	-	-	1	dB

Receiver Charcteristics

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Wavelength	-	R<10%	1260	1310	1360	nm
Responsivity	R	1310nm	0.45	0.55	-	A/W
Operating Current	I_{op}	3.3V	-	-	35	mA
Half Duplex Sensitivity	-	1310nm, 155Mb/s,3.3V	-	−36	−35	dBm
Optical Cross Talk	C_T	Optical RL >45dB	-	−30	−26	dB

Absolute Maximum Ratings

Parameter	Condition	Min	Max	Units
Operating Temperature	T_{op}	−40	+85	℃
Storage Temperature	T_{stg}	−40	+85	℃
Lead Soldering Temperature/Time	T_{sld}	-	240/10	℃/s
Optical Return Loss	APC connector	-	−45	dB

Features

- MQW F-P 1310nm laser diode as transmitter
- InGaAs PIN with TIA (5V or optional 3.3V) as receiver
- 1310 nm wavelength output, output power 0.15mW
- 1310 nm wavelength input, responsibility 0.5A/W
- Low cross talk −30dB
- Integrated a splitter to separate input and output light
- Coaxial single mode fiber package with optional FC/APC or SC/APC connector
- Operation temperature from −40 to 85℃

Applications

- Telecommunication systems
- Data communication systems