

Description

This module has been developed for coupling a singlemode fiber and a $1.31 \mu\text{m}$ / $1.55 \mu\text{m}$ wavelength InGaAsP F-P LD(laser diode). It is suitable for light source for high-speed short haul and long haul digital optical communication systems.



Characteristics (PT3343, PT3303)

(T_c=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Threshold Current	I _{th}	CW	-	5	15	mA
Operating Current	I _{op}	CW	-	20	45	mA
Operating Voltage	V _{op}	CW, I _F =I _{op} (Note 1)	-	1.1	1.5	V
Central Wavelength	λ _c	CW, I _F =I _{op}	1290	1310	1330	nm
Spectral Width (RMS)	Δλ	CW, I _F =I _{op}	-	1.0	2.0	nm
Output Power	P _F	CW, I _F =I _{op}	0.1	-	-	mW
Rise and Fall Times	t _r , t _f	I _B =I _{th} , 10%~90% (Note2)	-	0.3	-	ns
Tracking Error	E _r	T _c = -40 ~ +85 °C (PT3343) T _c = 0 ~ +70 °C (PT3303) APC (Note 3)	-	0.5	1.0	dB
Monitor Current	I _m	CW, I _F =I _{op} , V _{RD} =5V	0.1	-	-	mA
Dark Current (Photodiode)	I _d	V _{RD} =5V	-	0.01	0.1	μA

Features

- InGaAsP/In P MQW laser
- Low operating current
- High output power
- Excellent reliability
- Rear facet monitor
- Coaxial pigtailed package

Characteristics (PT3543, PT3503)

(T_c=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Threshold Current	I _{th}	CW	-	10	20	mA
Operating Current	I _{op}	CW	-	30	50	mA
Operating Voltage	V _{op}	CW, I _F =I _{op} (Note 1)	-	1.1	1.5	V
Central Wavelength	λ _c	CW, I _F =I _{op}	1520	1550	1580	nm
Spectral Width (RMS)	Δλ	CW, I _F =I _{op}	-	1.5	3.0	nm
Output Power	P _F	CW, I _F =I _{op}	0.1	-	-	mW
Rise and Fall Times	t _r , t _f	I _B =I _{th} , 10%~90% (Note2)	-	0.3	-	ns
Tracking Error	E _r	T _c = -40 ~ +85 °C (PT3543) T _c = 0 ~ +70 °C (PT3503) APC (Note 3)	-	0.5	1.0	dB
Monitor Current	I _m	CW, I _F =I _{op} , V _{RD} =5V	0.1	-	-	mA
Dark Current (Photodiode)	I _d	V _{RD} =5V	-	0.01	0.1	μA

Note 1. I_F : Forward Current 2. I_B : Bias Current 3. E_r=MAX |10×log [P_F(T_c) / P_F(25)] |

Applications

- Telecommunication
- Data communication

Optical Isolator Characteristics

Parameter	Condition	Min	Typ	Max	Unit
Type	Single stage				
Optical Isolation	$T_c = +25^{\circ}\text{C}$	30	-	-	dB
	$T_c = 0 \sim +70^{\circ}\text{C}$	20	-	-	

Absolute Maximum Ratings

($T_c = 25^{\circ}\text{C}$)

Parameter	Symbol	Ratings	Unit
Storage Temperature	T_{stg}	$-40 \sim +85$	$^{\circ}\text{C}$
Operating Case Temperature	T_{op}	$-40 \sim +85$ (PT3343, PT3543) $0 \sim +70$ (PT3303, PT3503)	$^{\circ}\text{C}$
Reverse Voltage (Laser Diode)	V_R	2	V
Reverse Voltage (Photodiode)	V_R	20	V
Forward Current (Photodiode)	I_F	2	mA

Ordering Information

PT	3			3	-			-		-		-		
		Wavelength				Output Power				Flange & Mounting Bracket Type				Connector Type
		3: 1310nm 5: 1550nm				11: 0.3~0.5mW 12: 0.5~1.0mW 13: 1.0~2.0mW 20: 2.0~4.0mW				0: No flange 5: "Ω" type 9: Rectangular flange				0 0: No connector FC: FC connector SC: SC connector ST: ST connector
		Package Type				Data Rate								
		0: With isolator 4: Without isolator				3: ~155Mb/s 4: ~622Mb/s 5: ~1.25Gb/s 6: ~2.5Gb/s								

