

1310 nm DFB 1.25G Laser Diode Module With Pigtail Connection and SC/PC

Data Sheet

OLD3338-C3-SC

Features

- Uncooled
- Type C laser
- Low threshold current
- Output power: 2mW
- Data Rate: 1.25 Gbps
- 1310nm DFB laser diode
- InGaAs monitor PIN photodiode
- Single mode fiber pigtailed with SC/PC connector
- Operating Temperature: 0~ +85° C

Applications

- Digital Signal Transmission
- Telecommunications (Local loop, interoffice and intraoffice)
- Data Communications
- Gigabit Ethernet
- SONET OC-3, OC-12, OC-24/SDH STM-1, STM-4, STM-8

Description

The OLD3338-C3-SC is a hermetically sealed InGaAsP/ InP DFB laser diode module in a small coaxial type package, including a high speed InGaAs PIN monitor photodiode and single mode fiber pigtail connection.

The laser diode is designed for use in data communications systems and telecommunications systems over single mode fiber, and can operate in temperatures of 0° C to 85° C. The laser diode module transmits emission power to the monitor photodiode in the rear, which ensures highly stable emission at a wavelength of 1310 nm.

Safety

Radiation emitted by laser diode devices can be dangerous to the eyes. Avoid direct or scattered radiation exposure to the eyes or skin. Device contains gallium arsenide (GaAs) which can be hazardous to your health. Please embrace all customary precautions and discretion while handling this device. Observe governmental laws and regulations when discarding this device.

Performance Specifications

Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause damage to the optical device. Operations of the optical device are suggested to remain within the recommended operating conditions. Exposure to the absolute maximum ratings for extended periods can adversely affect device reliability.

Parameter	Symbol	Value	Unit
Storage Temperature	T_{stg}	-40 to +85	°C
Operating Case Temperature	T_{op}	0 to +85	°C
Peak Optical Output Power	P_o	4	mW
Forward Current (LD)	I_{FLD}	150	mA
Reverse Voltage (LD)	V_{RLD}	2	V
Reverse Current (PD)	I_{RPD}	2	mA
Reverse Voltage (PD)	V_{RPD}	15	V
Soldering Temperature	S_{temp}	260	°C
Soldering Time	S_{time}	10	sec

Electrical and Optical Characteristics ($T_C=25^\circ\text{C}$ unless otherwise noted)

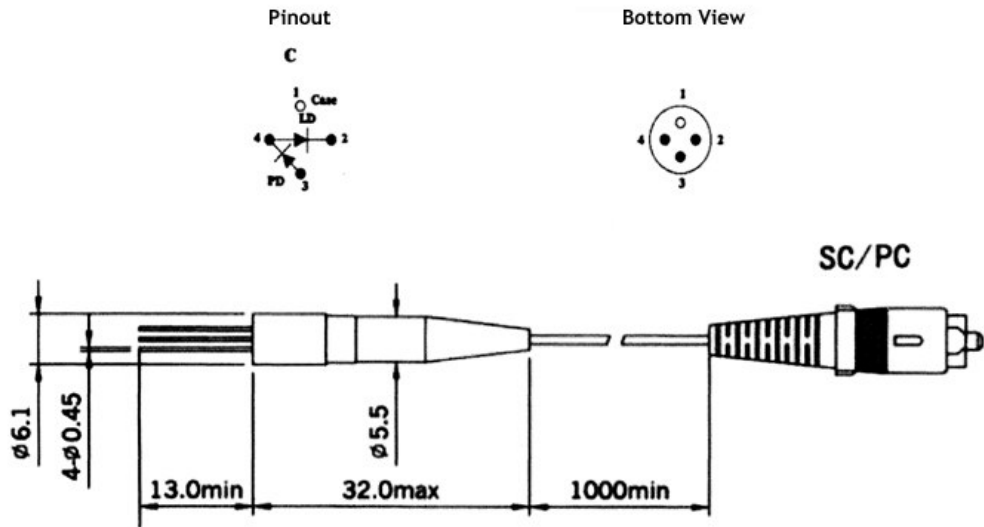
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold Current	I_{th}	CW	-	10	15	mA
		CW, $T_C=0-85^\circ\text{C}$	-	-	40	
Operating Voltage	V_{op}	CW, Pop, $T_C=0-85^\circ\text{C}$	-	1.2	1.6	V
Fiber Output Power	P_f	CW, $I_f=I_{th}+20\text{mA}$	2.0	-	-	mW
Central Wavelength	λ_{c25}	CW, Pop=2.0mW, $T_C=25^\circ\text{C}$	1290	1310	1325	nm
	λ_c	CW, Pop=2.0mW, $T_C=0-85^\circ\text{C}$	1280	-	1335	nm
Spectral Width	$\Delta\lambda_{c25}$	CW, Pop=2.0mW, $T_C=25^\circ\text{C}$	-	-	1.0	nm
	$\Delta\lambda_c$	CW, Pop=2.0mW, $T_C=0-85^\circ\text{C}$	-	-	1.2	nm
Side-mode Suppression Ratio	SMSR	CW, Pop, $T_C=0-85^\circ\text{C}$	32	-	-	dB
RIN	RIN		-	-	-120	db/Hz
Rise Time	T_r	$I_b=I_{th}$, 20%-80%	-	0.2	0.3	ns
Fall Time	T_f	$I_b=I_{th}$, 20%-80%	-	0.2	0.3	ns
Tracking Error	-	APC, 0 to +85° C	-	-	±1.0	dB

Photodiode Parameters (T_c=25°C unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Monitor Current	I _m	Pop, V _{rp} =5V	100	-	1000	μA
Monitor Dark Current	I _d	V _{rp} =5V	-	-	100	nA
Monitor Capacitance	C	V _{rp} =5V, f=1MHz	-	7	12	pF

Package Outline Diagram

Dimensions for the device package are given in millimeters.



Additional Information

Contact

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