

CWDM DFB 2.5G Laser Diode Module With Pigtail Connection and SC/PC

Data Sheet

OLD3458-XXD1-SC

Features

- Uncooled
- Type C laser
- Low threshold current
- Single Isolator
- Output power: 2mW
- Operates in wavelengths of 1470/1490/1510/1530/1550/1570/1590/1610nm
- Single mode fiber pigtailed with SC/PC, SC/APC, FC/PC, FC/APC connector
- SONET OC-12, OC-48/SDH STM-4, STM-16 compatible

Applications

- Digital Signal Transmission
- Telecommunications (Local loop, interoffice and intraoffice)
- Data Communications
- Gigabit Ethernet
- LAN

Description

The OLD3458-XXD1-SC is a hermetically sealed CWDM InGaAsP/ InP MQW- DFB laser diode module in a small coaxial type package, including a high speed InGaAs PIN monitor photodiode and single mode fiber pigtail connection. It comes with a single isolator.

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 +70°C. The laser diode module transmits emission power to the monitor photodiode in the rear, which ensures highly stable emission at specific wavelengths from bandwidths of 1470 to 1610 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	$^{\circ}C$
Operating Case Temperature	T_{op}	0 to +70	$^{\circ}C$
Peak Optical Output Power	P_o	8	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	$^{\circ}C$
Soldering Time	S_{time}	10	sec

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

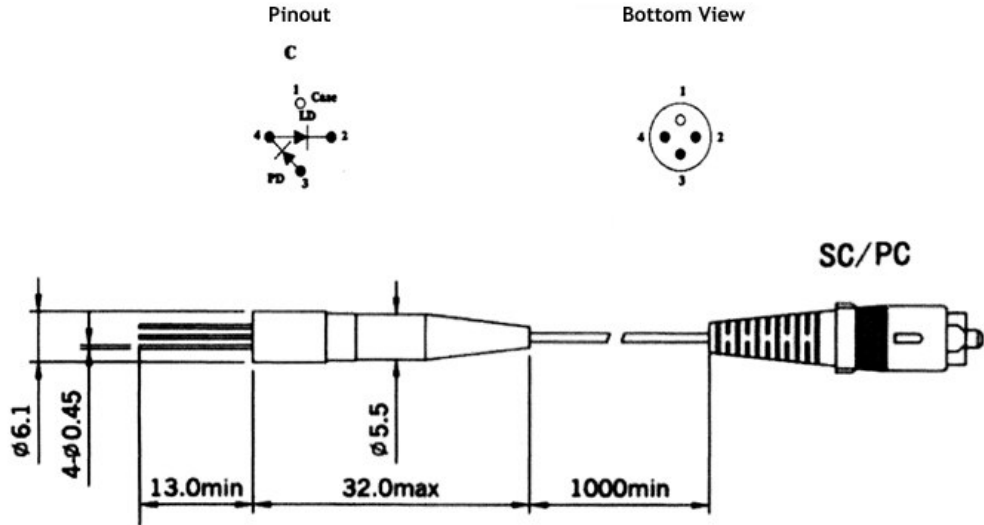
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Threshold Current	I_{th}	CW	-	10	15	mA
		CW, $T_C=0-70^{\circ}C$	-	-	50	
Operating Voltage	V_{op}	CW, Pop, $T_C=0-70^{\circ}C$	-	1.2	1.6	V
Operating Current	I_{op}	Pop=2.0mW	-	30	40	mA
Peak Wavelength	λ_p	CW, Pop	$\lambda_p - 3.0$	λ_p	$\lambda_p + 3.0$	nm
		CW, Pop, $T_C=0-70^{\circ}C$	$\lambda_p - 5.5$	λ_p	$\lambda_p + 7.5$	
Side-mode Suppression Ratio	SMSR	CW, Pop, $T_C=0-70^{\circ}C$	30	-	-	dB
Rise Time	T_r	$I_b=I_{th}$, 20%-80%, $T_C=0-70^{\circ}C$	-	-	0.25	ns
Fall Time	T_f	$I_b=I_{th}$, 20%-80%, $T_C=0-70^{\circ}C$	-	-	0.30	ns
Monitor Current	I_m	Pop, $V_{rp}=5V$	0.08	0.5	-	mA
Monitor Dark Current	I_d	$V_{rp}=5V$	-	-	10	nA
		$V_{rp}=5V$, $T_C=0-70^{\circ}C$	-	-	100	
Monitor Capacitance	C	$V_{rp}=5V$, $f=1MHz$	-	-	10	pF
Optical Isolation	OS	CW, Pop=2.0mW, $T_C=0-70^{\circ}C$	20	-	-	dB
Tracking Error	-	APC, 0 to +70 $^{\circ}C$	-	-	± 1.5	dB

Note:

- $\lambda_p = \lambda_{47}, \lambda_{49}, \lambda_{51}, \lambda_{53}, \lambda_{55}, \lambda_{57}, \lambda_{59}, \lambda_{61}$

Package Outline Diagram

Dimensions for the device package are given in millimeters.



Additional Information

Ordering Information

Center Wavelength	Part Number*
1470 nm	OLD3458-47D1-XX
1490 nm	OLD3458-49D1-XX
1510 nm	OLD3458-51D1-XX
1530 nm	OLD3458-53D1-XX
1550 nm	OLD3458-55D1-XX
1570 nm	OLD3458-57D1-XX
1590 nm	OLD3458-59D1-XX
1610 nm	OLD3458-61D1-XX

*XX please indicate either SC/ ASC/ FC/ AFC

Contact

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