
1270 nm ~ 1610 nm DFB LD MODULES
2.5 Gbps CWDM MQW-DFB LD RECEPTACLE

FEATURES

- 2 18-wavelength CWDM: from 1270 nm to 1610 nm, each Step 20 nm
- 2 $P_f \geq 3\text{mW}$ @ $I_{th}+20\text{ mA}$
- 2 High reliability, long operation life
- 2 $0\text{ }^\circ\text{C} \sim +70\text{ }^\circ\text{C}$ operation
- 2 Up to 2.5 Gbps Operation
- 2 Single frequency operation with high SMSR
- 2 Build-in InGaAs monitor

APPLICATION

OC-3, OC-12, OC-48, and Gigabit Ethernet Optical communication system

DESCRIPTION

DL-5500S-CXX0 series are MQW-DFB laser diodes that provide a durable, single frequency oscillation with emission wavelength from 1270 nm to 1610 nm CWDM, each step 20 nm.

ELECTRICAL AND OPTICAL CHARACTERISTICS (T _C =25 °C)						
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{th}	Threshold Current	CW		10	20	mA
I _{OP}	Operating Current	CW, I _{th} +20mA		35	50	mA
V _{OP}	Operating Voltage	CW, I _{th} +20mA		1.2	1.5	V
P _f	Optical Output Power	CW, I _{th} +20mA	3.0	-		mW
λ _c	Center Wavelength	CW, I _{th} +20mA	λ -3	λ	λ +2	nm
SMSR	Side Mode Suppression Ratio	CW, I _{th} +20mA	30	35		dB
t _r , t _f	Rise And Fall Times	I _F =I _{th} , I _{th} +20mA, 20~ 80%			150	ps
ΔP _f / P _f	Tracking Error	APC, 0~+70 °C	-	-	±1.5	dB
I _m	PD Monitor Current	CW, I _{th} +20mA, V _{RD} =1V	50			μA
I _D	PD Dark Current	V _{RD} =5V			10	nA
C _t	PD Capacitance	V _{RD} =5V, f=1MHz		10	15	pF

Note: Central CWDM wavelength is from 1270 nm to 1610 nm, each step 20 nm.

ABSOLUTE MAXIMUM RATINGS (T _C =25 °C)			
Symbol	Parameter	Ratings	Unit
P _o	Optical Output Power	4	mW
V _{RL}	LD Reverse Voltage	2	V
V _{RD}	PD Reverse Voltage	10	V
I _{FD}	PD Forward Current	1.0	mA
T _{opr}	Operating Temperature	0~+70	°C
T _{stg}	Storage Temperature	-40~+85	°C

