1550 nm, 2.5 Gbps MQW-DFB Laser Diode Modules Preliminary

C-15-DFB2.5-XD-SXXXX-X



Features

- Uncooled laser diode with MQW structure
- High temperature operation without active cooling
- Hermetically sealed active component
- Built-in InGaAs monitor photodiode
- Complies with Bellcore TA-NWT-000983
- Single frequency operation with high SMSR

Application

• Designed for 2.5 Gbps high speed optical networks

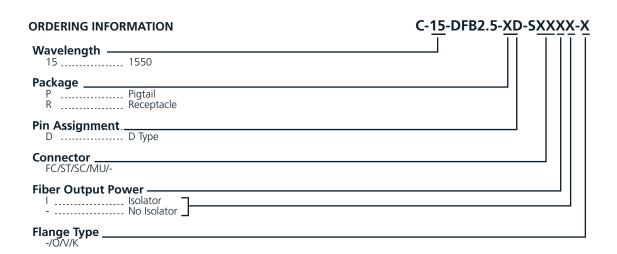
Absolute Maximum Ratings (T _c =25°C)							
Parameter	Symbol	Value	Unit				
Fiber Output Power							
L	P _f	0.6	mW				
М		1.0					
Н		2.0					
LD Reverse Voltage	V _{rld}	2	V				
PD Reverse Voltage	V_{rpd}	10	V				
PD Forward Current	I _{fpd}	2	mA				
Operating Temperature	T _{opr}	0 to +70	°C				
Storage Temperature	T _{stg}	-40 to +85	°C				

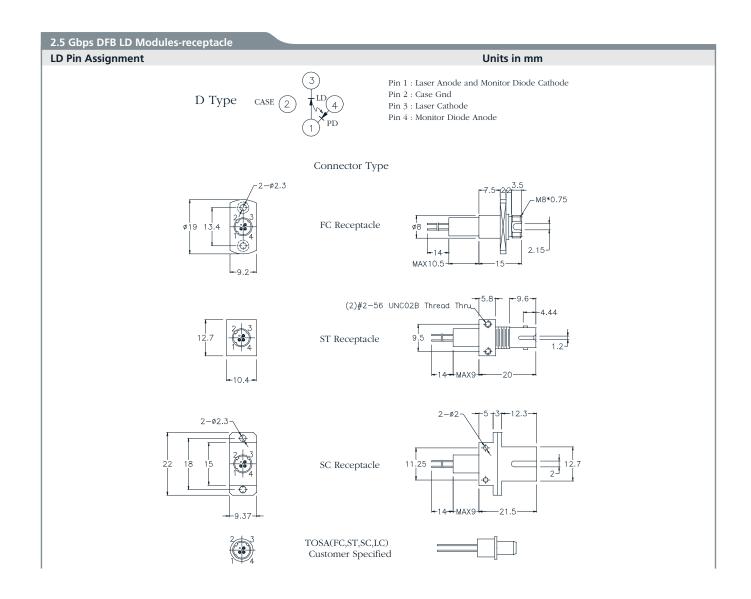
Optical and Electrical Characteristics (T _c = 25°C)							
Parameter	Symbol	Min	Тур	Max	Unit	Test Condition	
Threshold Current	I _{th}	-	10	15	mA	CW	
Fiber Output Power							
L		0.2	-	0.5			
М	Pf	0.5	-	1	mW	CW, I _{th} +30 mA,	
Н		1	-	2		kink free	
Peak Wavelength*	λ	1535	1550	1565	nm		
Side mode Suppression	S _r	30	35	-	dB	CW, $P_f = P_f$ (Min), 0 to +70 °C	
Forward Voltage	V _F	-	1.2	1.5	V	CW, $P_f = P_f$ (Min)	
Rise, Fall Time	t _r , t _f	-	-	150	ps	I _{bias} =I _{th} , 10 to 90%	
Tracking Error	$\Delta P_f / P_f$	-	-	±1.5	dB	APC, 0 to +70 ℃	
PD Monitor Current	I _m	100	-	-	μΑ	$CW,P_f=P_f(Min), V_{rpd} = 2V$	
PD Dark Current	I _{DARK}	-	-	0.1	μΑ	$V_{rpd} = 5V$	
PD Capacitance	C _t	-	6	15	pF	V _{rpd} = 5V, f= 1MHz	

(All optical data refer to a coupled 9/125 μm SM fiber)

 $[\]hbox{*Selected wavelength is available for WDM application}.$

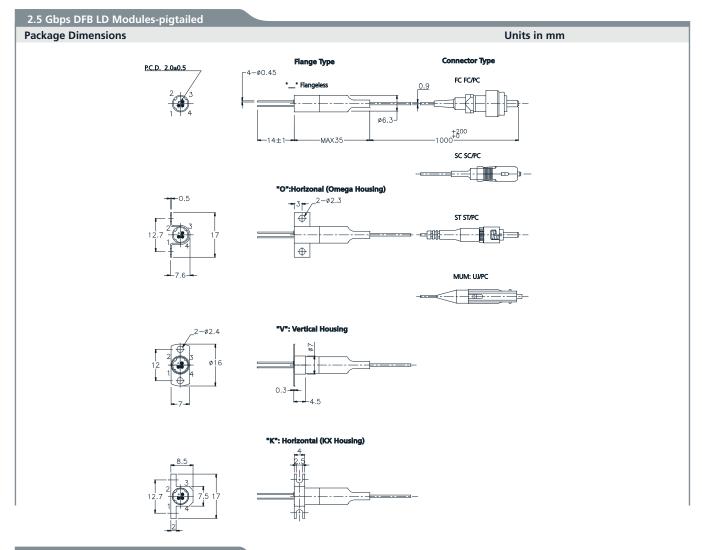
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Warnings

Handling Precautions: This device is susceptible to damage as a result of electrostatic discharge (ESD). A static free environment is highly recommended. Follow guidelines according to proper ESD procedures.

Laser Safety: Radiation emitted by laser devices can be dangerous to human eyes. Avoid eye exposure to direct or indirect radiation.

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