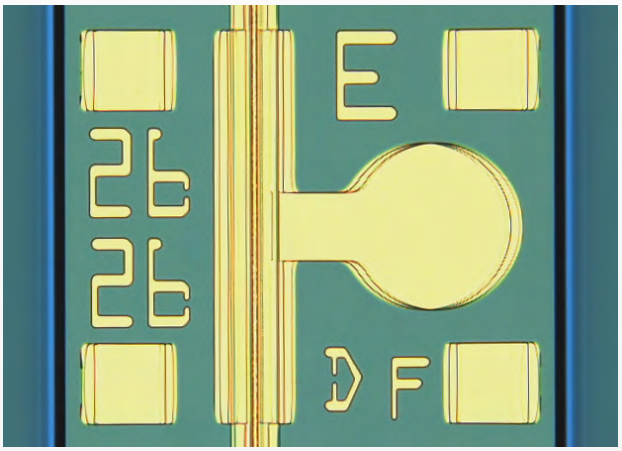
II-VI



DFB15

10 Gb/s DFB Laser Diode Chip

Features:

- Designed for 10 Gb/s
- Operating temperature -40 °C to 85 °C

Available Wavelengths:

- CWDM 1270 nm to 1330 nm

DFB15: 10 Gb/s DFB Laser Diode Chip

Electro-Optical Characteristics

Operating conditions: Top = -40° to 85°C

Parameter	Symbol	Condition	Min	Typical	Max	Unit
Threshold Current	I_{th}	85°C		21	29	mA
		25°C		8		mA
Slope Efficiency	SE	85°C	0.1			W/A
		25°C		0.4		W/A
Forward Voltage	V_f	P_O = 5mW			1.6	V
Series Resistance	R	P_O = 5mW	4	6	9	Ohm
Front/Back Power Ratio	P_f/P_b		10		60	
Side Mode Suppression Ratio	SMSR	P_O = 5mW	35			
Wavelength	λ	see table below				
Wavelength Temp. Coefficient	dλ /dT			0.09		nm/°C
Beam Divergence (Horizontal)	θ_H	FWHM		20		degree
Beam Divergence (Vertical)	θ_V	FWHM		30		degree
Relaxation oscillation frequency	f_r	I = Ith+25mA, 72°C	10.5	11.3		GHz

Available Wavelengths

Channel	Symbol	Condition	Min	Typical	Max	Unit
CWDM-L0	λ	0°C to 85°C	1263.5	1269.5	1277	nm
CWDM-L1	λ	0°C to 85°C	1283.5	1289.5	1297	nm
CWDM-L2	λ	0°C to 85°C	1303.5	1309.5	1317	nm
CWDM-L3	λ	0°C to 85°C	1323.5	1329.5	1337	nm

Absolute Maximum Ratings

Parameter	Symbol	Condition	Max Rating	Unit
Operating Current	Iop	T<25 °C	110	mA
		T=25-85 °C	100	mA
		T>85 °C	150	mA
Reverse Voltage	VR		2	V

DFB15: 10 Gb/s DFB Laser Diode Chip

Environmental Exposure Ratings

Parameter	Symbol	Conditions	Max Rating	Unit
Case temperature	Tc		-10 to +95	°C
Storage Temperature	Tstg		-40 to +100	°C

Chip Dimensions

Parameter	Min	Typ	Max	Unit
Chip width	260	280	300	µm
Chip length	180	200	220	µm
Chip thickness	80	85	90	µm
Bond pad width		75		µm
Bond pad length		75		µm