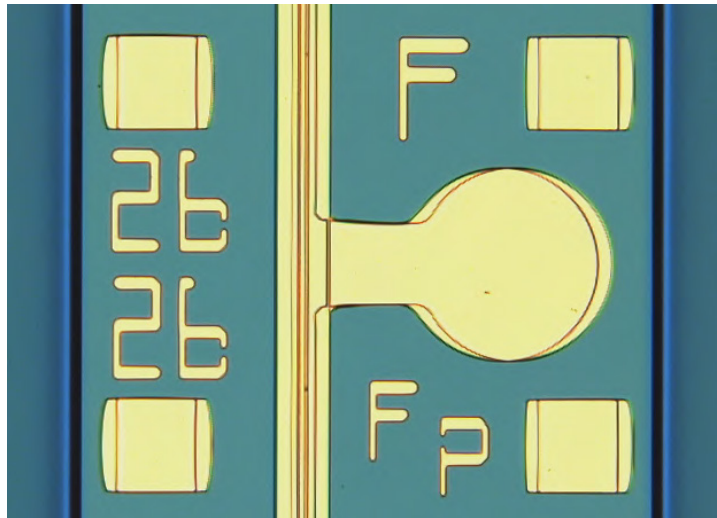


10 Gbps FB LASER DIODE CHIP

DFB15



FEATURES

- Designed for 10 Gb/s
- Designed for isolator free operation
- Operating temperature -40 °C to 95 °C
- 1310 nm wavelength

Electro-Optical Characteristics

Operating conditions: Top = -40 to 95°C

Parameter	Symbol	Condition	Min	Typical	Max	Unit
Threshold Current	I_{th}	95 °C			15	mA
		25 °C		6		mA
Slope Efficiency	SE	95 °C	0.15			W/A
		25 °C		0.28		W/A
Slope Efficiency Ratio	SE_{0C}/SE_{85C}	0 °C , 85 °C			1.5	
Forward Voltage	Vf	PO = 5 mW			1.6	V
Series Resistance	R	PO = 5 mW	5	7	11	Ohm
Front/Back Power Ratio	P_f/P_b		5		30	
Spectral Width	$\Delta\lambda$	I = 60 mA, 95 °C			2.4	nm
Wavelength	λ	-40 °C to 95 °C	1260		1345	nm
Wavelength Temp. Coefficient	$d\lambda /dT$			0.5		nm/°C
Beam Divergence (Horizontal)	θ_H	FWHM		28		degree
Beam Divergence (Vertical)	θ_V	FWHM		34		degree
Bandwidth	f_{3dB}	I = 60mA, 95 °C	13			GHz
Relaxation oscillation frequency	f_r	I = 60 mA, 95 °C	10			GHz
Relative Intensity Noise	RIN				-132	dB/Hz ^{1/2}

Absolute Maximum Ratings

Parameter	Symbol	Condition	Max Rating	Unit
Operating Current	Iop		110	mA
Operating Power	P		40	mW
Reverse Voltage	VR		2	V

Environmental Exposure Ratings

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

Chip Dimensions

Parameter	Min	Typical	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

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