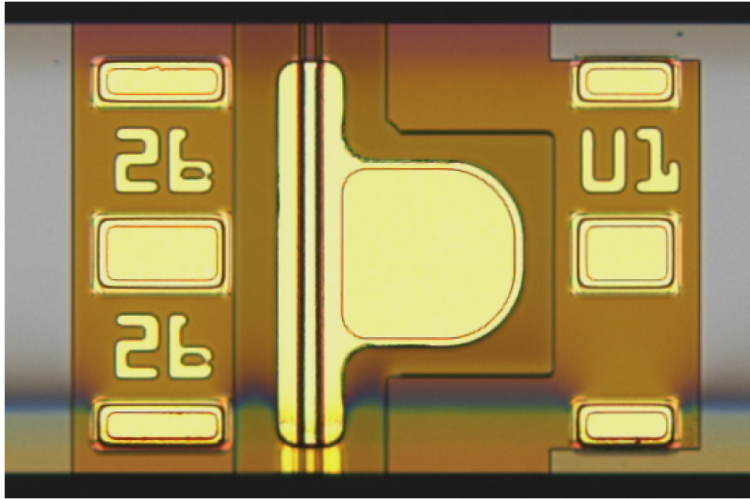


28 Gbps FB LASER DIODE CHIP

BH3FP



FEATURES

- Designed for 28 Gb/s
- Designed for isolator free operation
- Operating temperature -40 °C to 95 °C
- 1310 nm

Electro-Optical Characteristics

Operating conditions: Top= -40° to 95°C

Parameter	Symbol	Condition	Min	Typical	Max	Unit
Threshold current	I_{th}	95 °C		8	12	mA
		25 °C		2.6		
Slope efficiency	SE	95 °C	0.1	0.14		mW
		25 °C		0.26		
Slope efficiency ratio	SE_{0C}/SE_{85C}	0 °C, 85°C		1.7		mW
Forward voltage	V_f	$P_o = 5$ mW			1.6	V
Series resistance	R	$P_o = 5$ mW	5	6.5	11	Ohm
Front/Back power ratio	P_f/P_b		5	8	12	
Spectral Width	$\Delta\lambda$	I = 60 mA, 95 °C			2.5	dB
Wavelength	λ	40 °C to 95 °C	1260		1345	
Wavelength temperature coefficient	$d\lambda /dt$			0.5		nm/°C
Beam divergence (Horizontal)	Θ_H	FWHM		30		degree
Beam divergence (Vertical)	Θ_V	FWHM		35		degree
Relative intensity noise	RIN	$P_o = 5$ mW			-132	dB/Hz ^{1/2}
Bandwidth	I_{3db}	I = 60 mA, 85 °C	17	18		GHz
Relaxation oscillation frequency	f_r	I = 60 mA, 85 °C	13.5	14		GHz

Absolute Maximum Ratings

Parameter	Symbol	Condition	Max Rating	Unit
Operating current	Iop	T <70 °C	60	mA
		T = 70 - 85 °C	80	
Modulation swing			30	mA
Reverse voltage	VR		2	V

Environmental Exposure Ratings

Parameter	Symbol	Condition	Max Rating	Unit
Case temperature	Tc		-10 to +85	°C
Storage Temperature	Tstg		-40 to +100	°C
ESD HBM			150	V

Chip Dimensions

Parameter	Min	Typical	Max	Unit
Chip width	230	250	270	μm
Chip length	130	150	170	μm
Chip thickness	80	85	90	μm
Bond pad width		65		μm
Bond pad length		60		μm

