

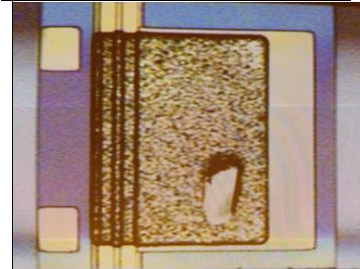
## CWDM 10 Gbps DFB Laser (Preliminary)

### BC5X-70XX Series

#### Part Number: BC5X-7022

#### Product Description:

The LuxNet BC5X-7022 DFB laser chip is designed for high speed, high performance optical communication applications. communication applications.



#### Product Specifications:

##### Absolute Maximum Ratings

Parameter	Symbol	Unit	Min.	Max.	Note
Case Temperature	$T_C$	°C	0	70	
Storage Temperature	$T_{stg}$	°C	- 40	100	
Die-Attach Temperature		°C	--	300	30 seconds max.
Maximum Power	$P_o$	mW	--	10	
Reverse Voltage	$V_r$	V	--	2	

##### Electro-Optical Characteristics (T = 25°C, unless noted otherwise):

Parameter	Symbol	Unit	Min.	Typ	Max.	Test Condition	
Threshold Current	$I_{th}$	mA	--	10	15 25	$T_a=25^\circ C$ $T_a=85^\circ C$	
Operating Voltage	$V_{op}$	V	--	1.3	1.7	$P_o=5\text{ mW}$	
Slope Efficiency	$\eta$	mW/mA	0.25	--	--	$T_a=25^\circ C$	
Peak Wavelength	BC57-7022	$\lambda_p$	nm	1264	--	1278	$P_o=5\text{ mW}$ , $T_c=0\sim 70C$
	BC59-7022			1284	--	1298	
	BC51-7022			1304	--	1318	
	BC53-7022			1324	--	1338	
Side Mode Suppression Ratio	SMSR	dB	35	--	--	$P_o=5\text{ mW}$	
Beam Divergence Angle (//)	$\theta_{//}$	degree	--	25	--	FWHM @ $P_o=5\text{ mW}$	
Beam Divergence Angle ( $\perp$ )	$\theta_{\perp}$			35			
Rise Time	$\tau_r$	ps	--	35	45	$I_b=I_{th}$ , $P_o=5\text{ mW}$ , 20-80%	
Fall Time	$\tau_f$	ps	--	35	45	$I_b=I_{th}$ , $P_o=5\text{ mW}$ , 20-80%	
Relaxation Oscillation Frequency	$f_r$	GHz	--	12	--	$P_o=5\text{ mW}$	

#### Chip configuration:

1. Top contact: anode; Bottom contact: cathode.
2. Dimension: 250  $\mu\text{m}$  (width) x 200  $\mu\text{m}$  (cavity length) x 100  $\mu\text{m}$  (thickness)  
 Tolerance: +/-12.5 $\mu\text{m}$  (Thickness)  
 +/-20 $\mu\text{m}$  (Width, Length)

\* Specifications are subject to change without notice.  
 \* Screening per customer-specified reject limits is available.