YL-VC850-751

High Performance 10 Gbps Oxide VCSEL

Preliminary

FEATURES:

- Capable to run 10 Gbps
- P and N bonding pad on different surface
- Low divergence angle to ensure high optical coupling efficiency
- Wide operation temperature range -40℃ ~ 85℃

ELECTRO-OPTICAL CHARACTERISTICS:

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Threshold Current	I_{th}		0.8	1.2	mA	
Output Power	P_o		2.3		mW	I_F =6 mA
Slope Efficiency	η	0.25	0.45	0.65	mW/mA	I_F =6 mA
Wavelength	λ_P	840		860	nm	I_F =6 mA
Forward Voltage	V_F		2.1	2.4	V	I_F =6 mA
Series Resistance	R_S		85	115	Ω	I_F =6 mA
Beam Divergence	θ	15		35	degree	I_F =6 mA (1/e^2)
Spectral width (RMS)	Δ λ			0.65	nm	I_F =6 mA
Rise Times (20%~80%)	Tr		40		ps	I_F =6 mA
Fall Times (20%~80%)	Tf		40		Ps	I_F =6 mA
3dB Bandwidth	BW	8			GHz	I_F =6 mA

Notes:
All parameters except mentioned are measured at I_F=6 mA, 25℃, CW operation.

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	125	℃	
Operating Temperature	-40	85	℃	
Continuous Forward Current		10	mA	
Continuous Reverse Voltage		5	V	10μA

Fig. 1 Typical Optical Characteristics

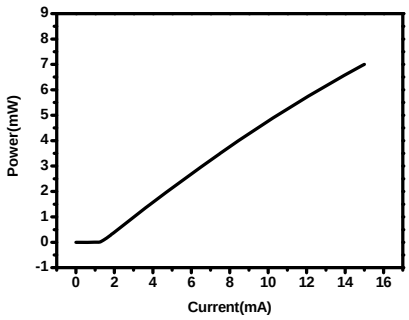
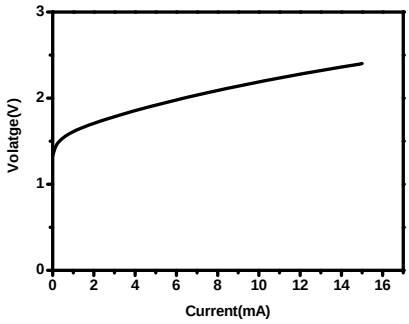
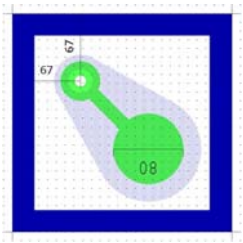


Fig. 2 Typical Electrical Characteristics



OUTLINE DIAGRAM:

- Chip length: 230 μm
- Chip width: 230 μm
- Chip thickness: 200 ± 20 μm



WARNING:

The VCSEL is a class 3B laser in the safety standard IEC 60825:2014 and should be treated to avoid exposure to beam .