

TSD-9B20-703

Oxide VCSEL Emitter(940nm)

ELECTRO-OPTICAL CHARACTERISTICS :

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	CONDITIONS
Threshold Current	I_{th}		1.5		mA	
Output Power	P_o	7.5	9		mW	$I_F = 12mA$
Slope Efficiency	η		0.9		mW/mA	
Forward Voltage	V_F		2.1		V	$I_F = 12mA$
Conversion efficiency	PCE		38		%	$I_F = 12mA$
Wavelength	λ_P	930	940	955	nm	$I_F = 12mA$
Beam Divergence	θ		30		degree	$I_F = 12mA (1/e^2)$

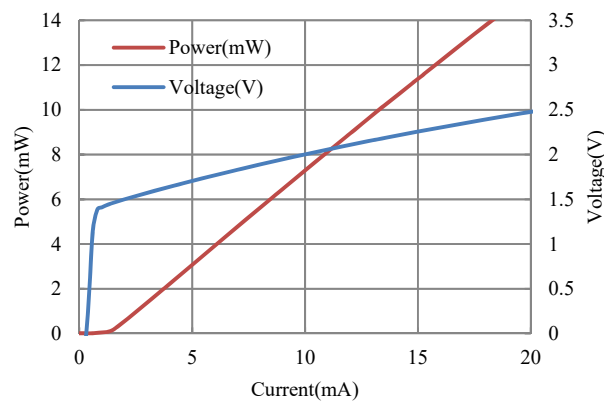
Notes:

All parameters except mentioned are measured at 25°C, CW operation.

ABSOLUTE MAXIMUM RATINGS :

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage Temperature	-40	125	°C	
Operating Temperature	-20	85	°C	
Continuous Forward Current		15	mA	
Reverse Voltage		5	V	

ELECTRO-OPTICAL CHARACTERIZATION :



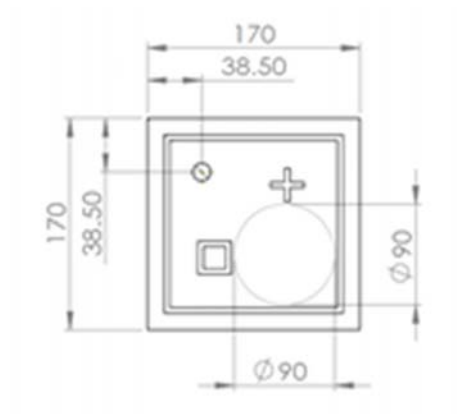
Typical electro / optical characteristics curves measured at 25°C, CW operation

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OUTLINE DIAGRAM :

- Chip length : $170\ \mu\text{m} \pm 10\ \mu\text{m}$
- Chip width : $170\ \mu\text{m} \pm 10\ \mu\text{m}$
- Chip thickness : $150 \pm 15\ \mu\text{m}$
- Anode bond pad : $\Phi 95\mu\text{m} \pm 2\ \mu\text{m}$



WARNING :

The VCSEL chip is a class 1 laser in the safety standard IEC60825-1:2014.

