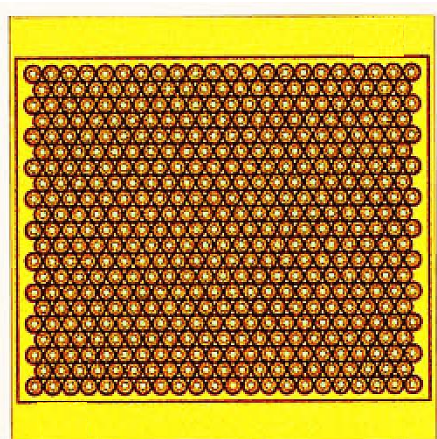


# 2W 808 nm Multi-Mode VCSEL

## S-V808S20-000

[Draft Version]



A TYPICAL WAFER PROBER TESTED VCSEL

### FEATURES

- 808nm multi-mode top-emitter
- Low threshold and operating currents
- Top-anode and Bottom-cathode configuration
- Non hermetic design

### APPLICATIONS

- IR illumination
- Sensing

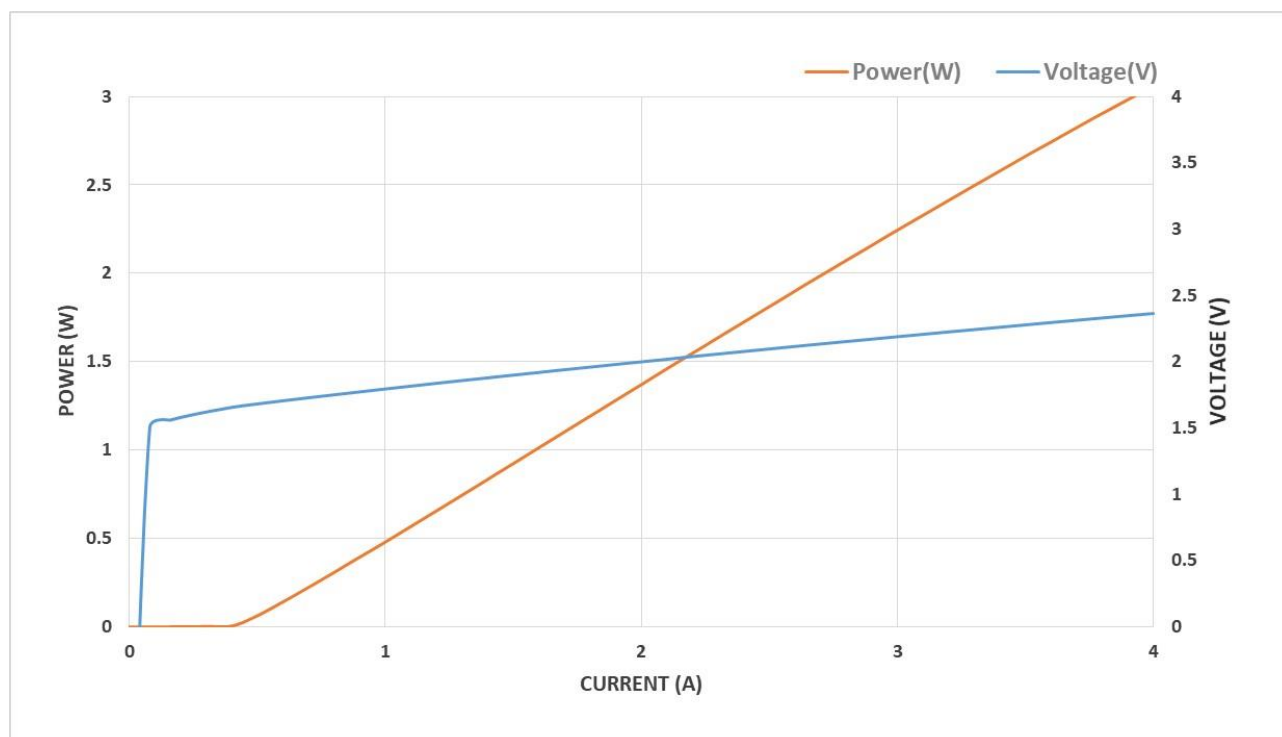
## ELECTRO OPTICAL CHARACTERISTICS

Parameters	Symbol	Conditions	Specification/Rating			Unit
			Min.	Typ.	Max.	
Threshold current	$I_{th}$	T=25 °C		0.4	0.8	A
Operating voltage	$V_{op}$	T=25 °C, $I_{op}=3.0A$	1.9	2.2	2.4	V
Series resistance	$R_s$	T=25 °C,		0.2		$\Omega$
Slope efficiency	$\eta$	T=25 °C,	0.8		1.1	W/A
Output power	LOP	T=25 °C, $I_{op}=3.0A$	1.8	2.2	2.4	W
Beam divergence	FW 86%	T=25 °C, $I=2.0A$		25	28	deg.
Emission wavelength	$\lambda$	T=25-85 °C, $I_{op}=3.0A$	804	808	816	nm
Wavelength shift	$d\lambda/dT$			0.07		nm/°C
Conversion efficiency	PCE	T=25 °C	32	34	36	%

Note: The testing condition is 0.3ms-pulse/1%-Duty.

\*This region is calculated by linear regression or summarize.

## LIV CHARACTERISTICS

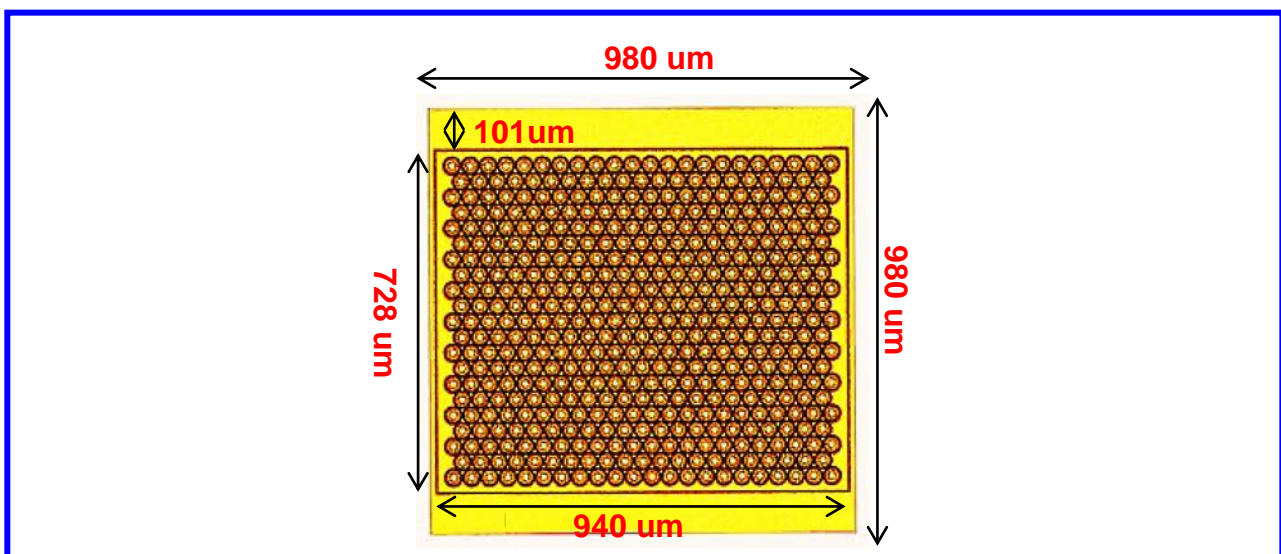


## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Max.	unit
Peak forward current	$I_{max}$	3.0	A
Optical output power	$P_{max}$	2.0	W
Reverse Voltage	$V_r$	-7.5	V
Operating Temperature	$T_{op}$	0 to 85	°C
Storage Temperature	$T_{st}$	-40 to 100	°C
Mounting Temperature (max. 10 sec)	$T_m$	260	°C

## VCSEL CHIP DIMENSIONS

Parameter	Symbol	Min.	Typ.	Max.	Unit
Die Length	$L$	960	980	1000	um
Die Width	$W$	960	980	1000	um
Die Thickness	$T$	85	100	115	um
Bonding pad length	$L_{pad}$		940		um
Bonding pad width	$W_{pad}$		101		um
Emitter count	$\#.E$		452		ea



## RoHS Compliance

Xiamen Sanan Integrated Circuit is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

## Ordering Information

Product Code	Power	Description
S-V808S20-000	2W	808 nm Multi-Mode VCSEL Chip

## Important Notice

Performance data, figures, tables, charts, and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing with Sanan before they become applicable to any particular order or contract. In accordance with the Sanan policy of continuous improvement specifications may change without notice. Further details are available from Sanan customer contact.

## Quality Certifications

- 0016Q35695R0M/3502(ISO9001:2015)
- 00217E31547R0M(ISO14001:2015)

## Safety Labels

