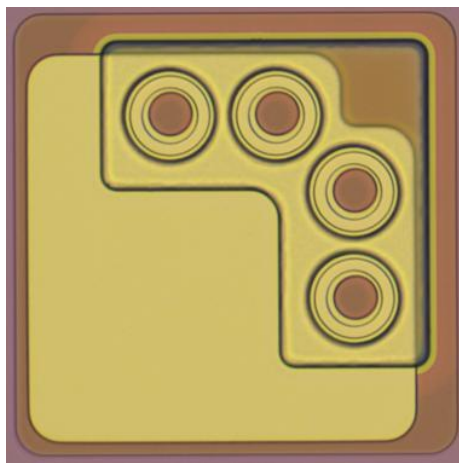


680nm 12mW VCSEL Laser Chip

Part No.: D-V0680M-0012-0007

Suitable for pulse power applications and the power is 12mW



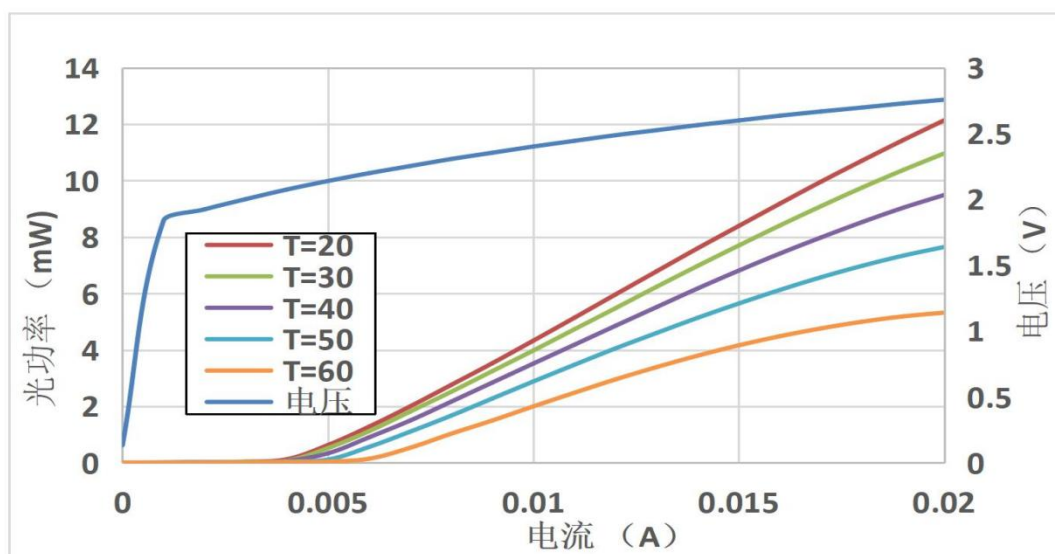
Features

- VCSEL (Vertical-Cavity Surface-Emitting Laser)
- High efficiency and reliability
- Stable central wavelength, narrow line width
- Doughnut shaped, symmetrical far field
- Surface mountable

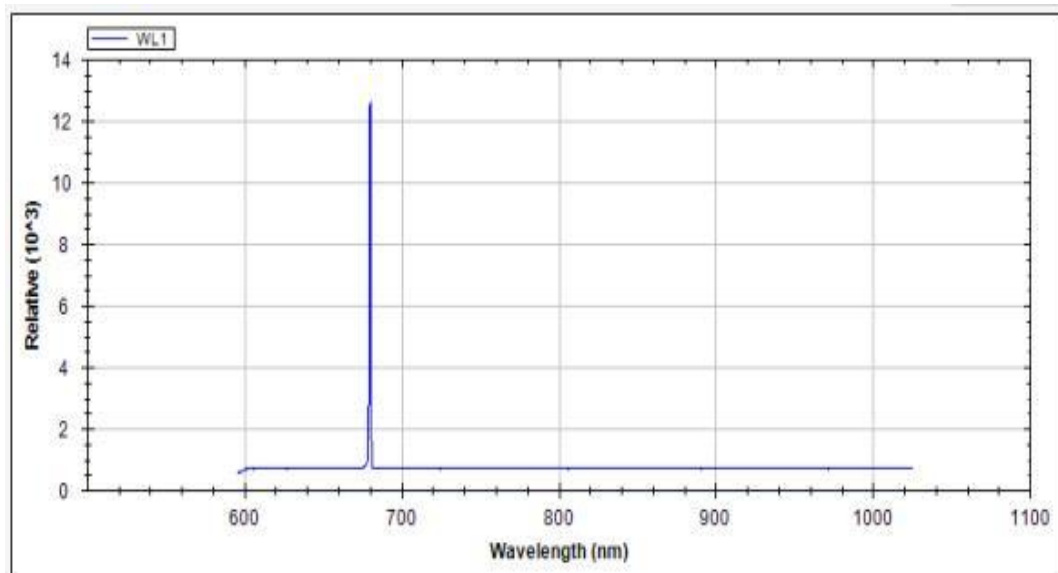
Applications

- Sensor light source
- Consumer electronic products
- Machine vision
- Red lighting

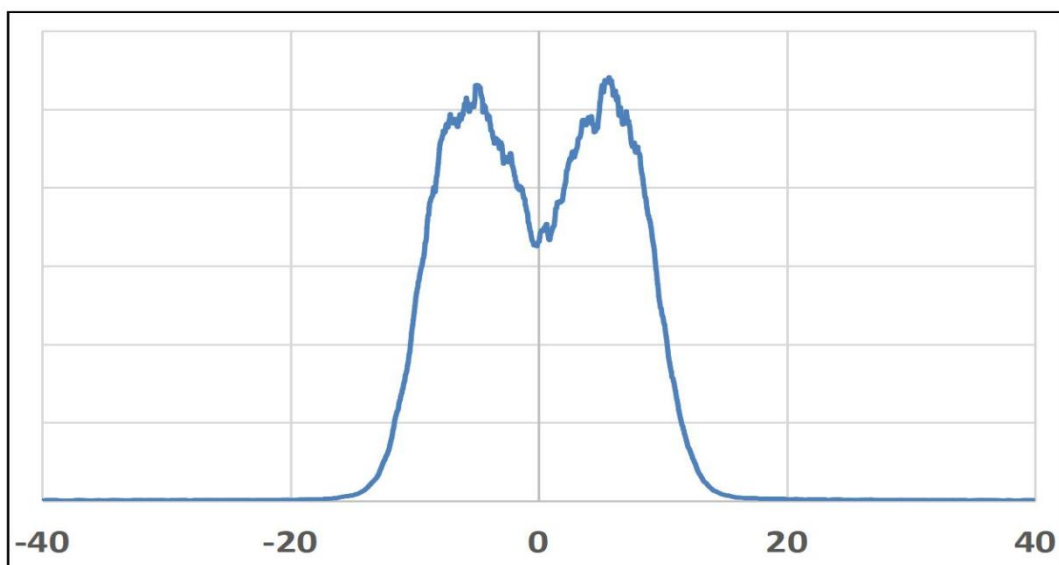
L-I-V Curve



Spectroscopy



FFDA (Far-Field Divergence Angle) ($\sim 23^\circ$ at 20 mA)

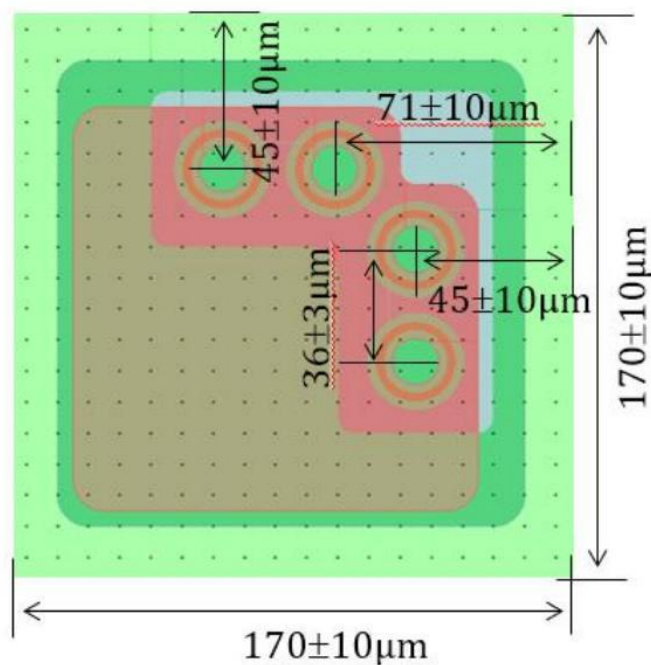


Electrical Optical Characteristics

Parameter	Symbol	Unit	Min.	Typ.	Max	Note
Threshold Current	I _{th}	mA		4.0		
Forward Voltage	V _F	V		2.7		IF = 20mA
Output Power	P _{op}	mW	9.0	12		IF = 20mA
Slop Efficiency	SE	W/A	0.6	0.7		
Power Conversion Efficiency	PCE	%		20		IF = 20mA
Wavelength	λ _{op}	nm	675	680		
Divergence Angle(1/e ²)		deg		23		IF = 20mA

25°C, QCW Model (Pulse length 0.5ms, 1% Duty Cycle)

Mechanical Specifications



参数 Parameter	规格 Specification
芯片尺寸 Die size	$170 \pm 10 \mu\text{m} \times 170 \pm 10 \mu\text{m}$
芯片厚度 Die Thickness	$130 \pm 10 \mu\text{m}$
光孔数目 Number of Emitters	4
焊盘尺寸 (正极) Bond Pad Size (Anode Pad)	$87 \pm 3 \mu\text{m} \times 85 \pm 3 \mu\text{m}$
背面电极尺寸 (负极) Back Electrode Size (Cathode Pad)	$170 \pm 10 \mu\text{m} * 170 \pm 10 \mu\text{m}$

