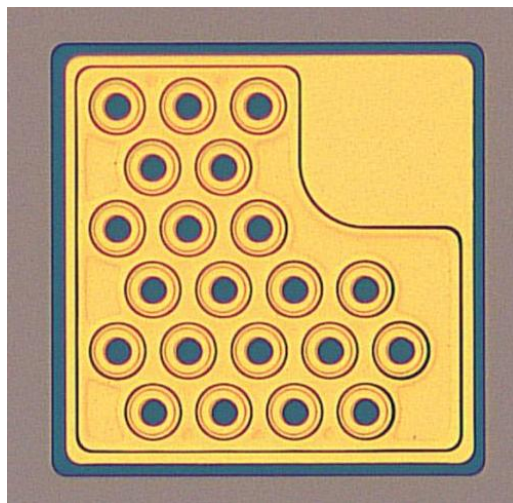


940nm 100mW VCSEL Laser Chip

Part No.: D-V0940M-0100-0013

Suitable for pulse power applications and the power is 100mW



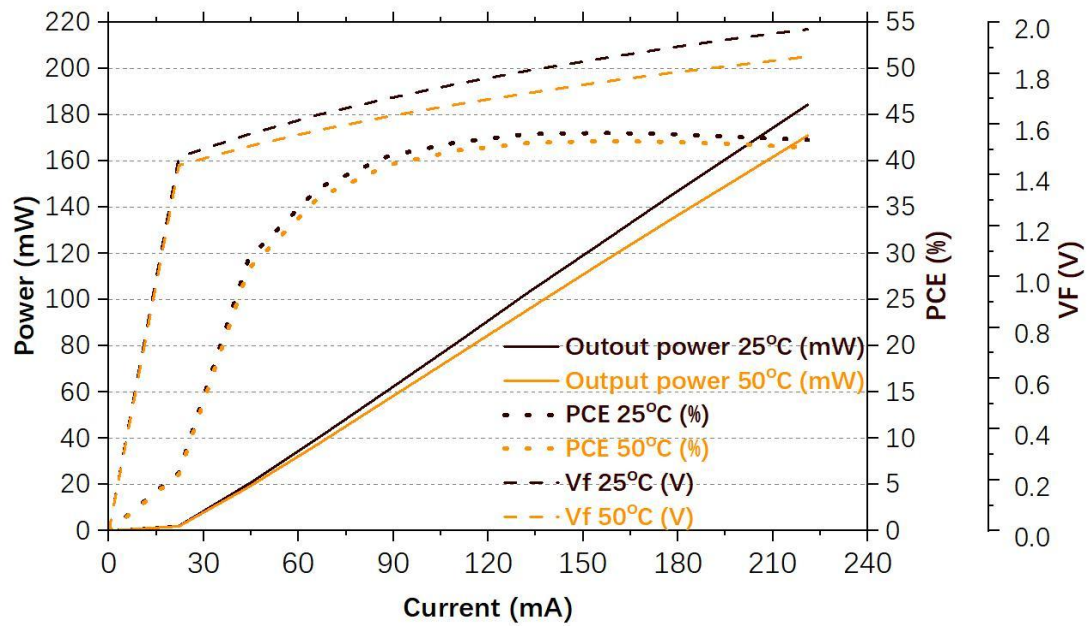
Features

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

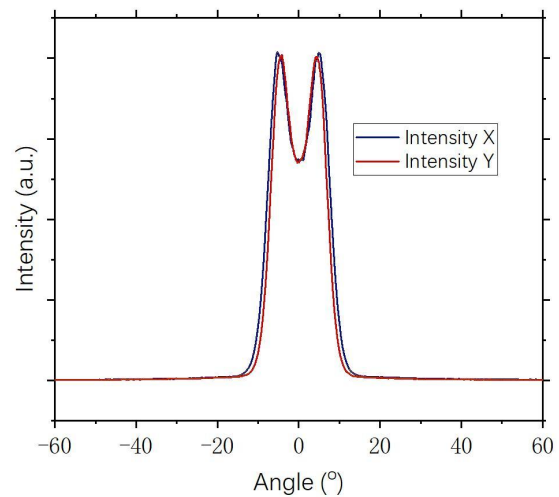
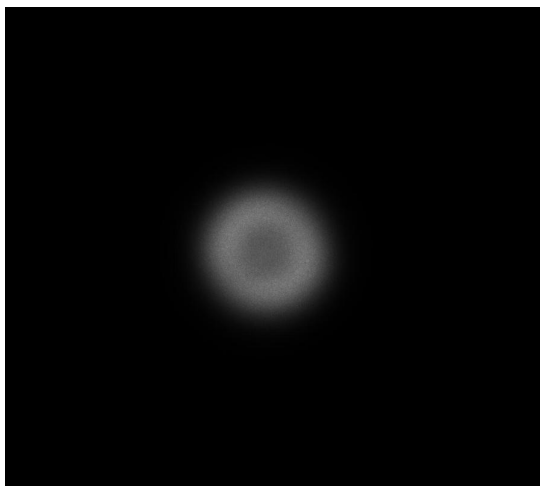
Applications

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

L-I-V Curve



FFDA (Far-Field Divergence Angle)



Electrical Optical Characteristics

Parameter	Symbol	Unit	Min.	Typ.	Max	Note
Threshold Current	I _{th}	mA	--	20	26	
Forward Voltage	V _F	V	1.9	2.0	2.15	IF = 140mA
Differential Resistance	R _s	Ohms	--	5	--	
Slop Efficiency	SE	W/A	0.9	1.0	--	
Output Power	P _{op}	mW	100	120	--	IF = 140mA
Power Conversion Efficiency	PCE	%	39	41	--	IF = 140mA
Wavelength	λ _{op}	nm	930	940	950	
Divergence Angle(1/e ²)		deg	18	21	24	IF = 140mA

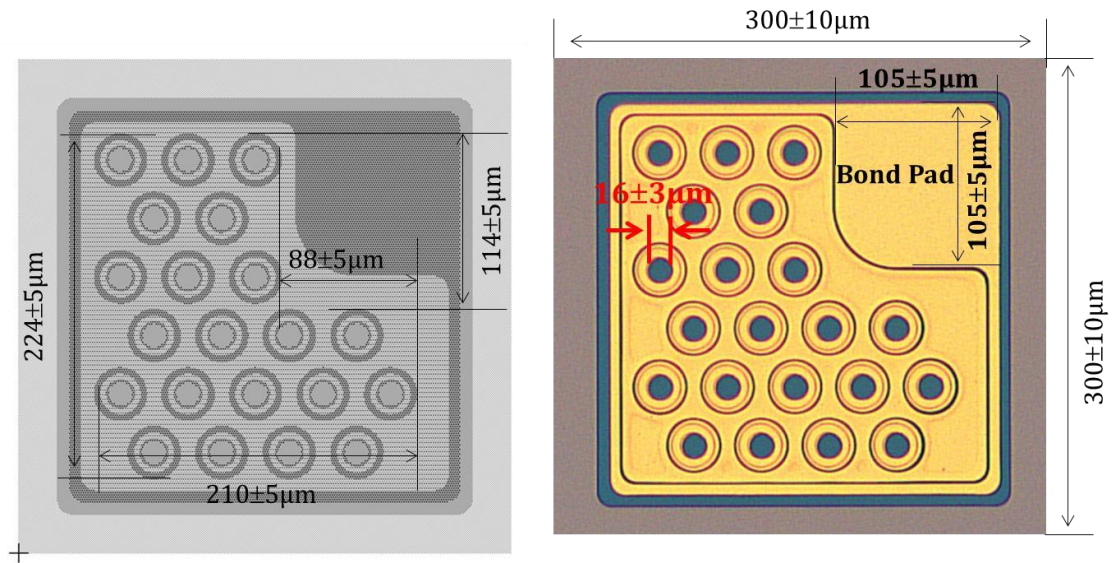
25°C, QCW Model (Pulse length 0.5ms, 1% Duty Cycle)

May 2022

The details in this document may subject to change without prior notice.

Email:info@deraysemi.com
DE-RAY Optoelectronics Co., Ltd.
All Rights Reserved

Mechanical Specifications



参数 Parameter	规格 Specification
芯片尺寸 Die size	300±10μm x 300±10μm
芯片厚度 Die Thickness	130±10μm
光孔数目 Number of Emitters	21
焊盘尺寸 (正极) Bond Pad Size (Anode Pad)	105±5μm
背面电极尺寸 (负极) Back Electrode Size (Cathode Pad)	300±10μm x 300±10μm

