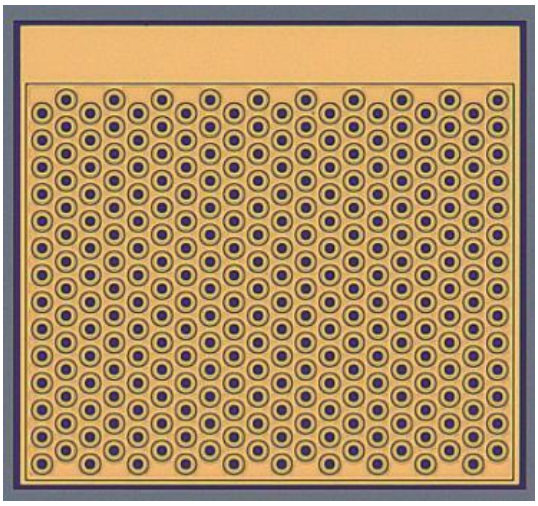
850nm 1.5W VCSEL Laser Chip

Part No.: D-V0850M-1500-0034

Suitable for pulse power applications and the power is 1.5W



May 2022

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

Features

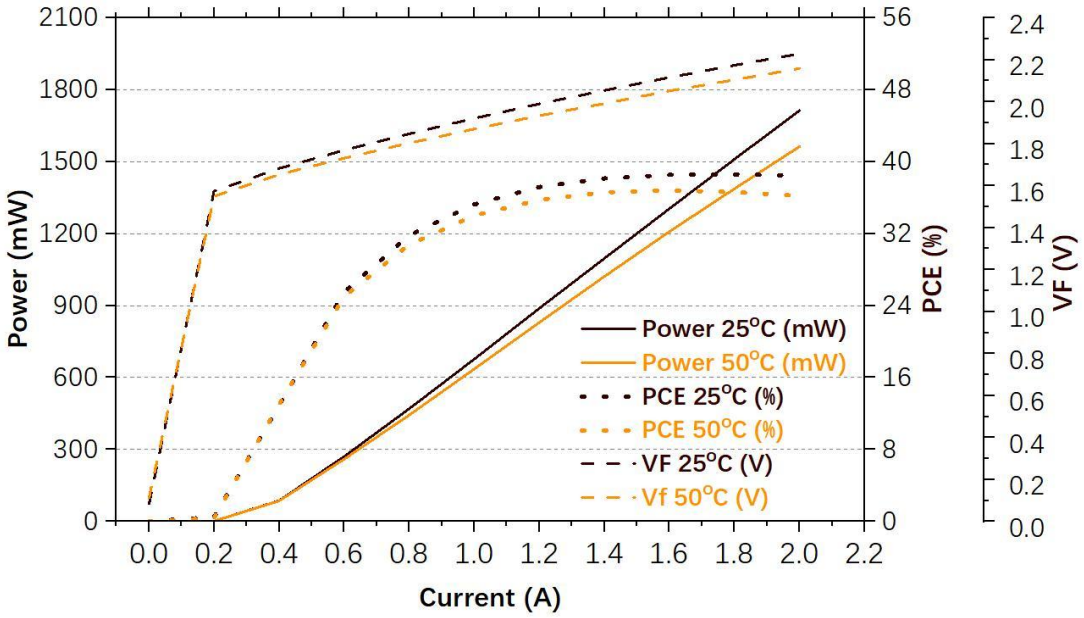
- VCSEL（Vertical-Cavity Surface-Emitting Laser）
- High efficiency and reliability
- Stable central wavelength, narrow line width
- Doughnut shaped, symmetrical far field
- Surface mountable

Applications

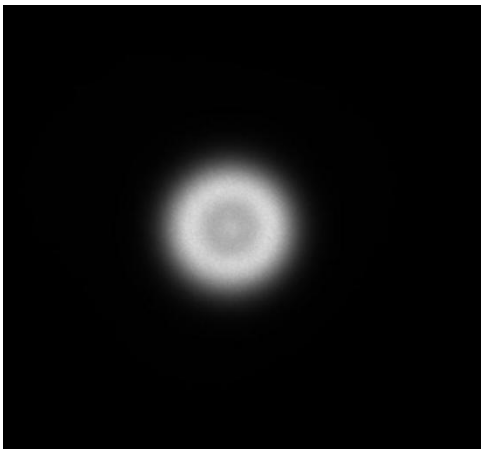
- Sensor light source
- Consumer electronic products
- Machine vision
- Red lighting
- Industrial

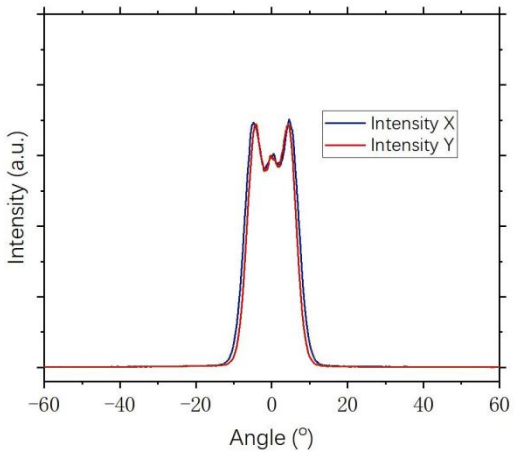
Email:info@deraysemi.com
DE-RAY Optoelectronics Co., Ltd.

L-I-V Curve



FFDA (Far-Field Divergence Angle)





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

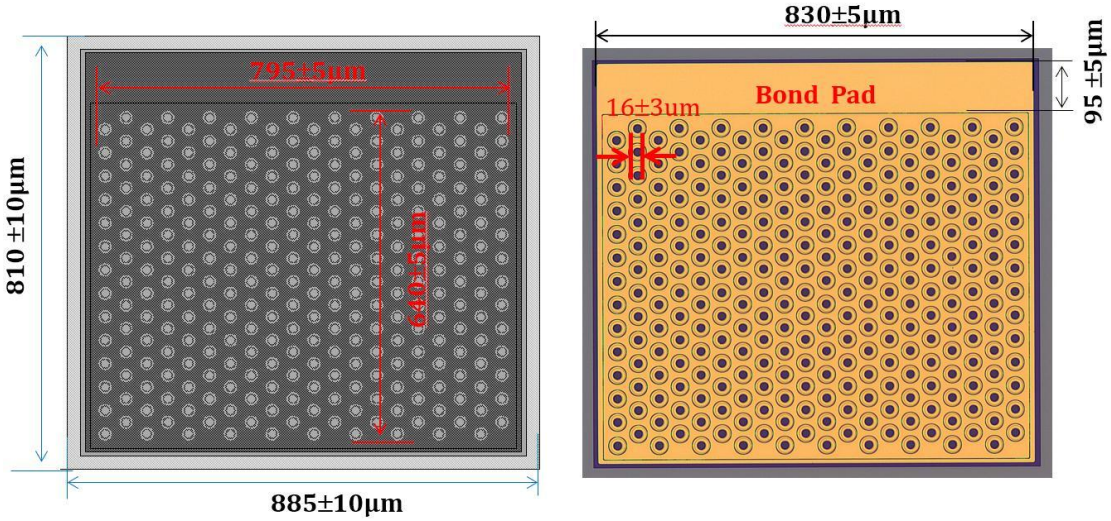
Electrical Optical Characteristics

Parameter	Symbol	Unit	Min.	Typ.	Max	Note
Threshold Current	Ith	mA	280	340	420	
Forward Voltage	V_F	V	2.0	2.2	2.4	IF = 2A
Differential Resistance	Rs	Ohms	--	0.3	--	
Slop Efficiency	SE	W/A	0.9	1.0	--	
Output Power	Pop	mW	1500	1700	--	IF = 2A
Power Conversion Efficiency	PCE	%	36	38	--	IF = 2A
Wavelength	λop	nm	840	850	860	
Divergence Angle(1/e2)		deg	17	20	23	IF = 2A

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

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

Mechanical Specifications



参数 Parameter	规格 Specification
芯片尺寸 Die size	885±10μm x 810±10μm
芯片厚度 Die Thickness	150±10μm
光孔数目 Number of Emitters	280
焊盘尺寸（正极） Bond Pad Size（Anode Pad)	95±5μm X 830±5μm
背面电极尺寸（负极） Back Electrode Size（Cathode Pad)	885±10μm x 810±10μm

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