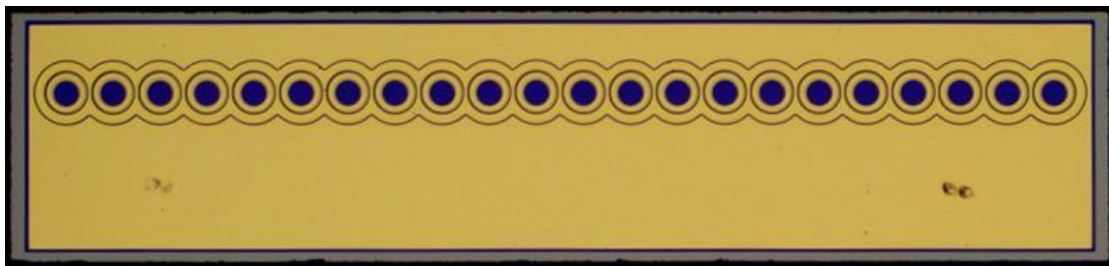


850nm 400mW VCSEL Laser Chip

Part No.: D-V0850M-0400-0841

Suitable for pulse power applications and the power is 400mW



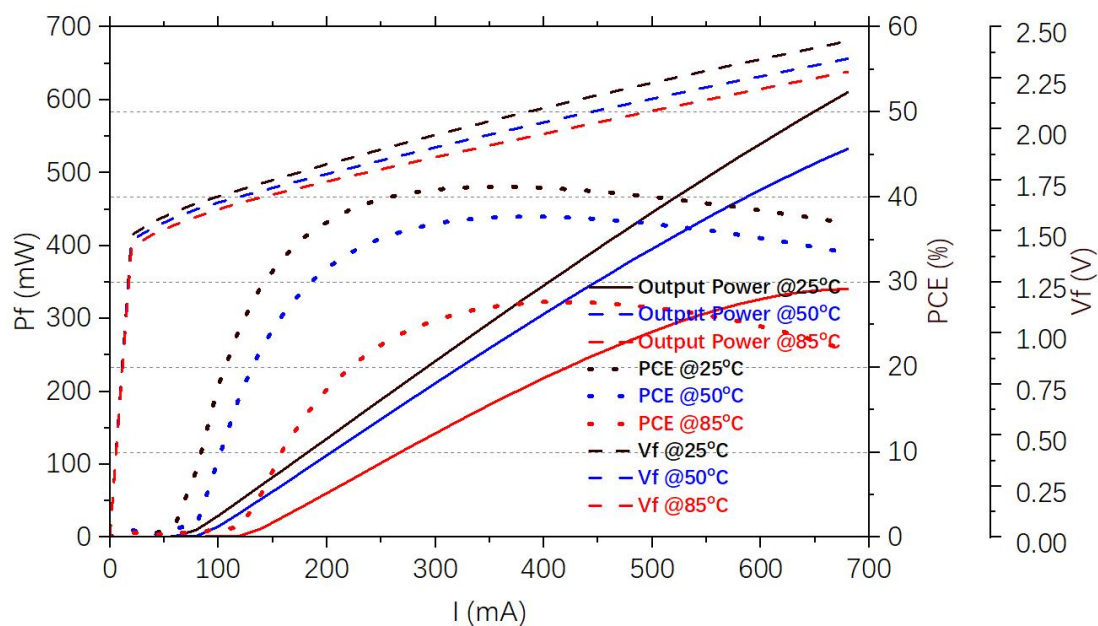
Features

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

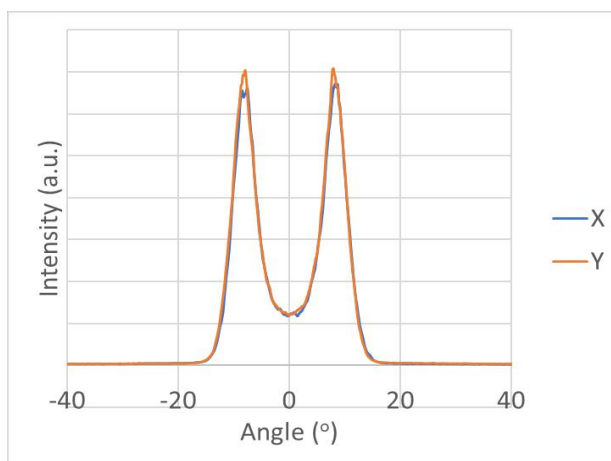
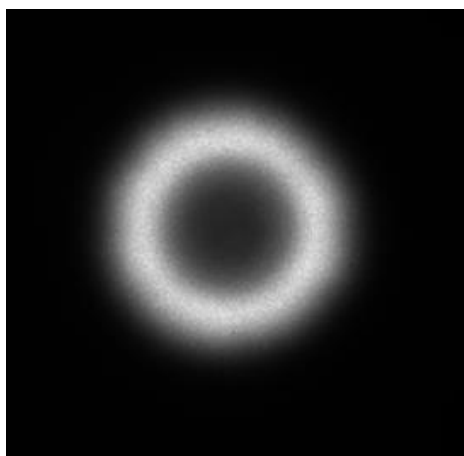
Applications

- 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	60	70	90	
Forward Voltage	V _F	V	2.0	2.25	2.4	IF =500mA
Differential Resistance	R _s	Ohms	--	1.2	--	
Slop Efficiency	SE	W/A	1.0	1.05	1.2	
Output Power	P _{op}	mW	420	450	480	IF =500mA
Power Conversion Efficiency	PCE	%	38	40	42	IF =500mA
Wavelength	λ _{op}	nm	840	850	860	
Divergence Angle(1/e ²)		deg	22	25	27	IF =500mA

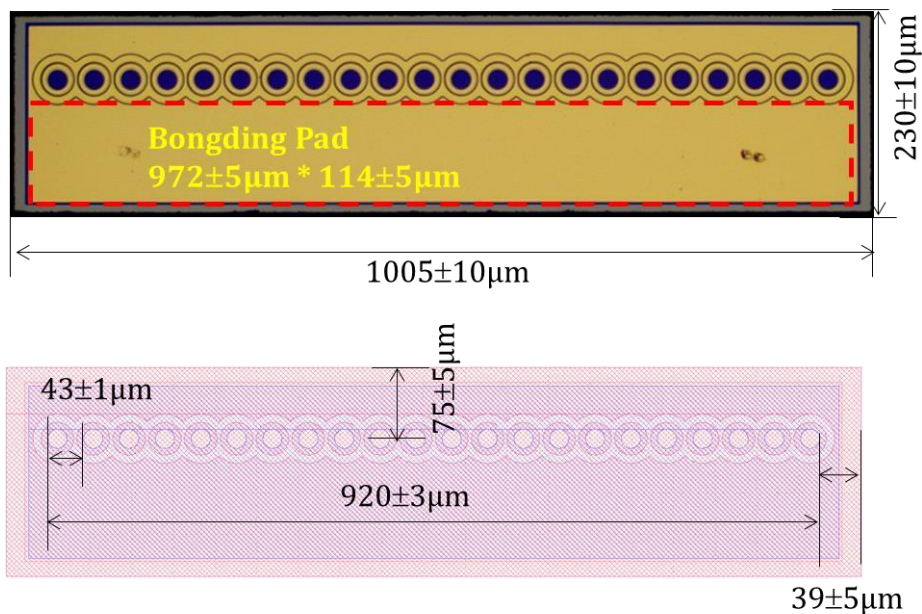
25°C, QCW Model (Pulse length 0.1ms, 10% Duty Cycle)

April 2023

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

Email:info@deraysemi.com
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Mechanical Specifications



参数 Parameter	规格 Specification
芯片尺寸 Die size	$330\pm10\mu\text{m} * 330\pm10\mu\text{m}$
芯片厚度 Die Thickness	$130\pm10\mu\text{m}$
光孔数目 Number of Emitters	48
发光点尺寸 Emitting Aperture	$10\pm1\mu\text{m}$
焊盘尺寸 (正极) Bond Pad Size (Anode Pad)	$98\pm3\mu\text{m} * 110\pm3\mu\text{m}$
背面电极尺寸 (负极) Back Electrode Size (Cathode Pad)	$330\pm10\mu\text{m} * 330\pm10\mu\text{m}$

