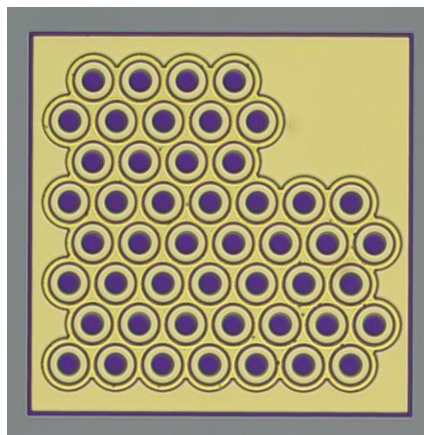


850nm 300mW VCSEL Laser Chip

Part No.: D-V0850M-0300-0014

Suitable for pulse power applications and the power is 300mW



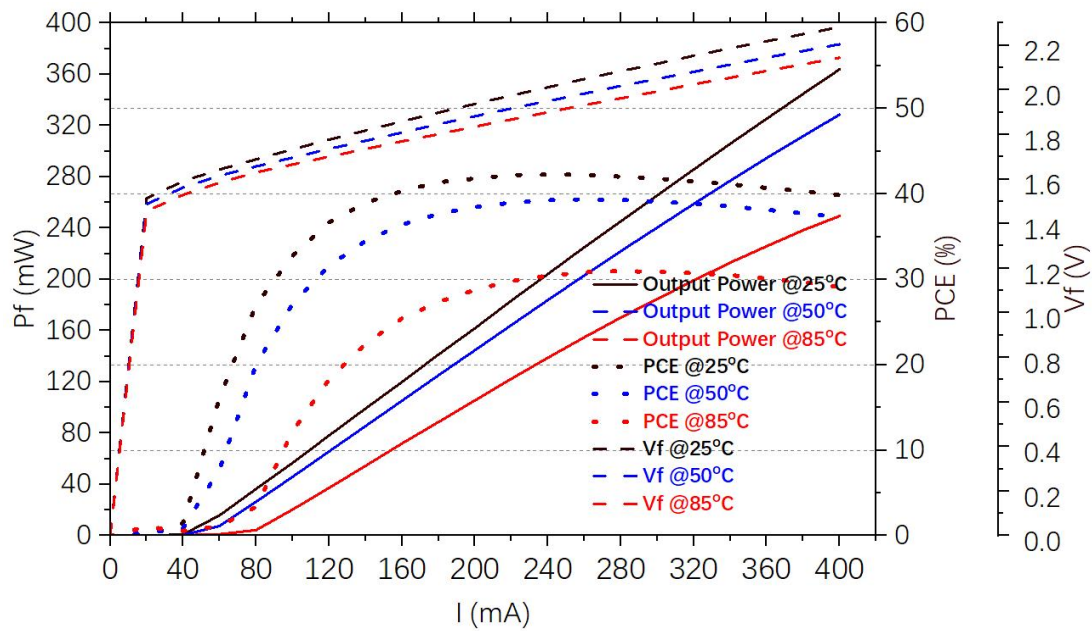
Features

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

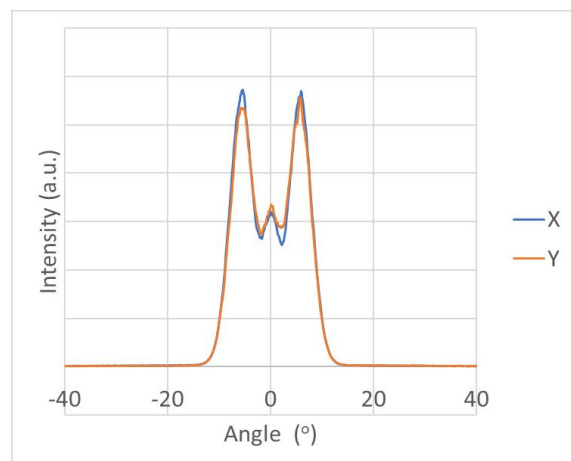
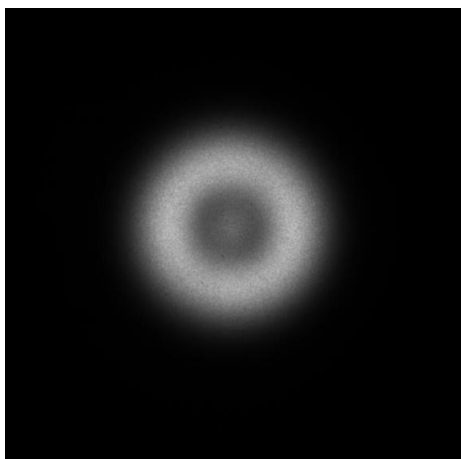
Applications

- 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	45	55	65	
Forward Voltage	V _F	V	1.9	2.1	2.3	IF =350mA
Differential Resistance	R _s	Ohms	--	1.5	--	
Slop Efficiency	SE	W/A	1.0	1.05	1.2	
Output Power	P _{op}	mW	300	320	360	IF =350mA
Power Conversion Efficiency	PCE	%	40	44	46	IF =350mA
Wavelength	λ _{op}	nm	840	850	860	
Divergence Angle(1/e ²)		deg	19	20	22	IF =350mA

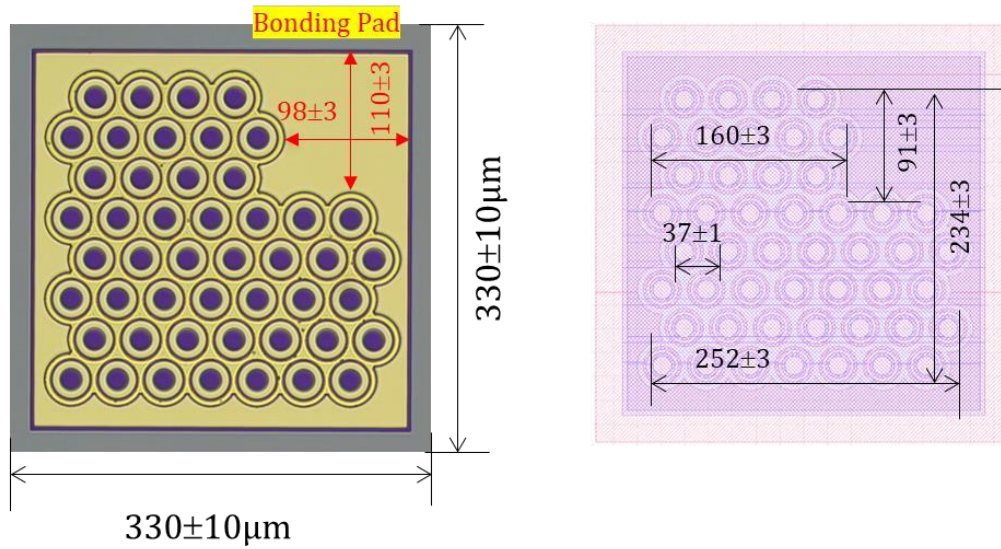
25°C, QCW Model (Pulse length 0.1ms, 10% Duty Cycle)

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	$330 \pm 10 \mu\text{m} * 330 \pm 10 \mu\text{m}$
芯片厚度 Die Thickness	$130 \pm 10 \mu\text{m}$
光孔数目 Number of Emitters	48
发光点尺寸 Emitting Aperture	$10 \pm 1 \mu\text{m}$
焊盘尺寸 (正极) Bond Pad Size (Anode Pad)	$98 \pm 3 \mu\text{m} * 110 \pm 3 \mu\text{m}$
背面电极尺寸 (负极) Back Electrode Size (Cathode Pad)	$330 \pm 10 \mu\text{m} * 330 \pm 10 \mu\text{m}$

