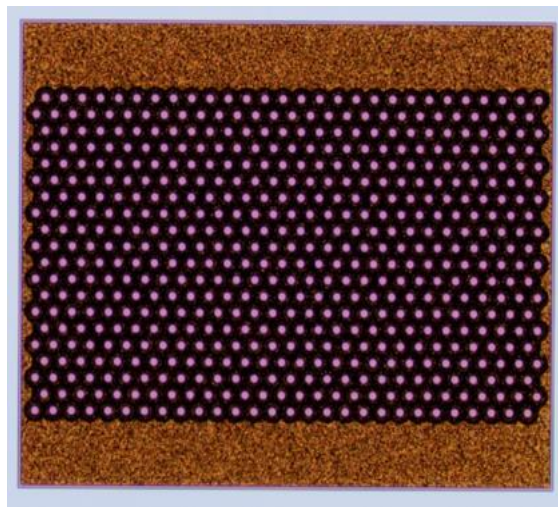


940nm 8W VCSEL Laser Chip

Part No.: D-V0940M-8000-0034-03

Suitable for pulse power applications and the power is 8W



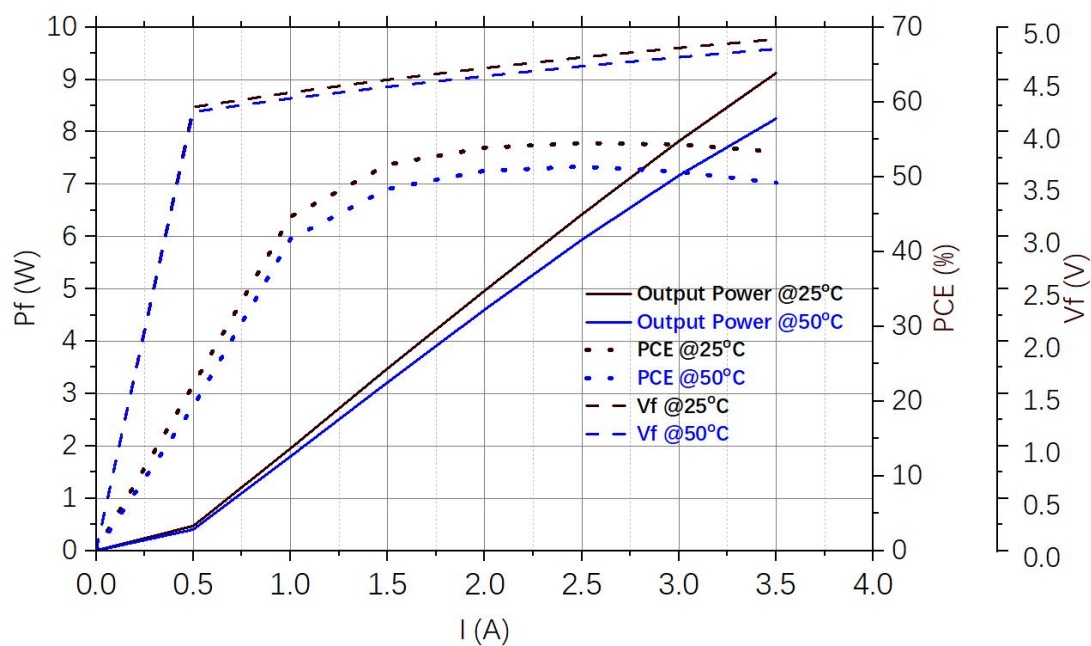
Features

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

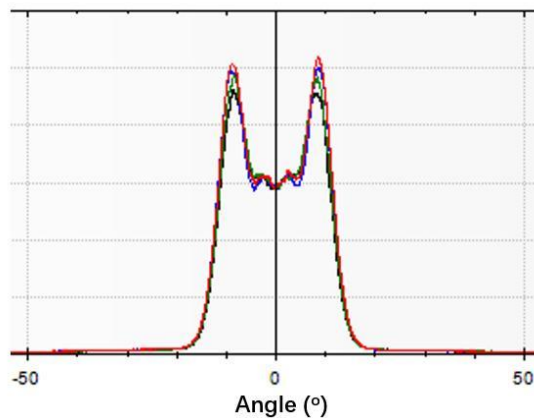
Applications

- 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	300	380	550	
Forward Voltage	V _F	V	4.75	4.9	5.1	IF = 3.5A
Differential Resistance	R _s	Ohms	--	0.17	--	
Slop Efficiency	SE	W/A	2.8	2.9	3.2	
Output Power	P _{op}	mW	8000	9000	10000	IF = 3.5A
Power Conversion Efficiency	PCE	%	50	53	56	IF = 3.5A
Wavelength	λ _{op}	nm	930	940	950	
Divergence Angle(1/e ²)		deg	25	28	30	IF = 3.5A

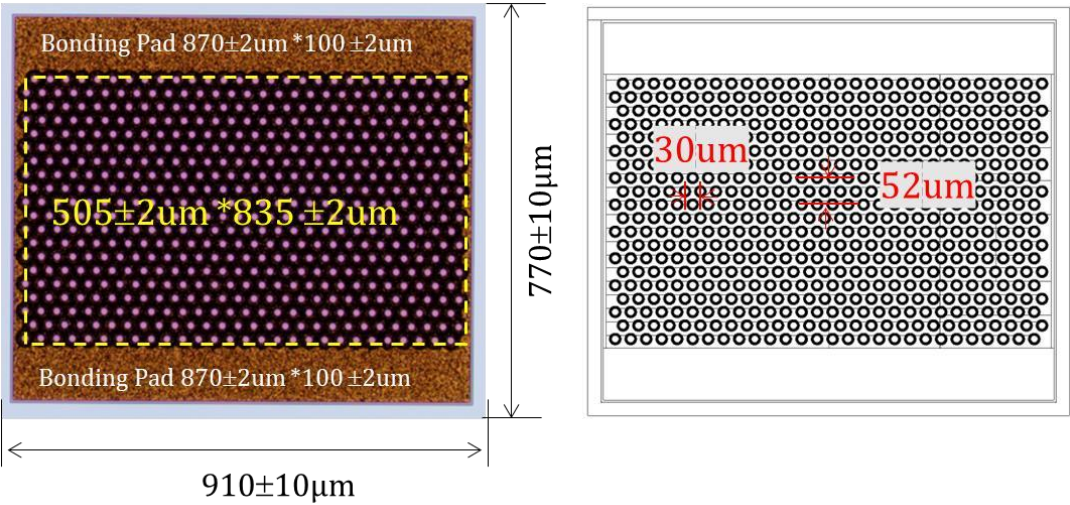
25°C, QCW Model (Pulse length 0.1ms, 6% Duty Cycle)

May 2024

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	910±10um * 770±10um
芯片厚度 Die Thickness	100±10μm
光孔数目 Number of Emitters	560
发光点尺寸 Emitting Aperture	10±1um
焊盘尺寸（正极） Bond Pad Size (Anode Pad)	870±2μm * 100±2μm *2
背面电极尺寸（负极） Back Electrode Size (Cathode Pad)	910±10um * 770±10um

