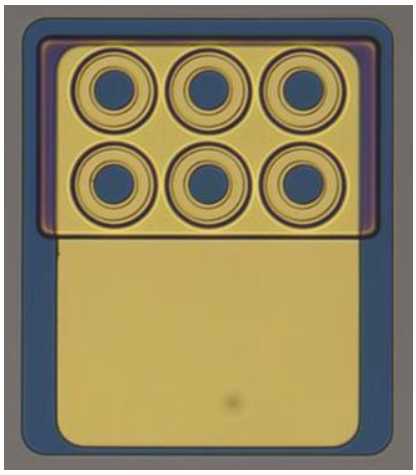
680nm 18mW VCSEL Laser Chip

Part No.: D-V0680M-0018-0007

Suitable for pulse power applications and the power is 18mW



January 2023

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

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

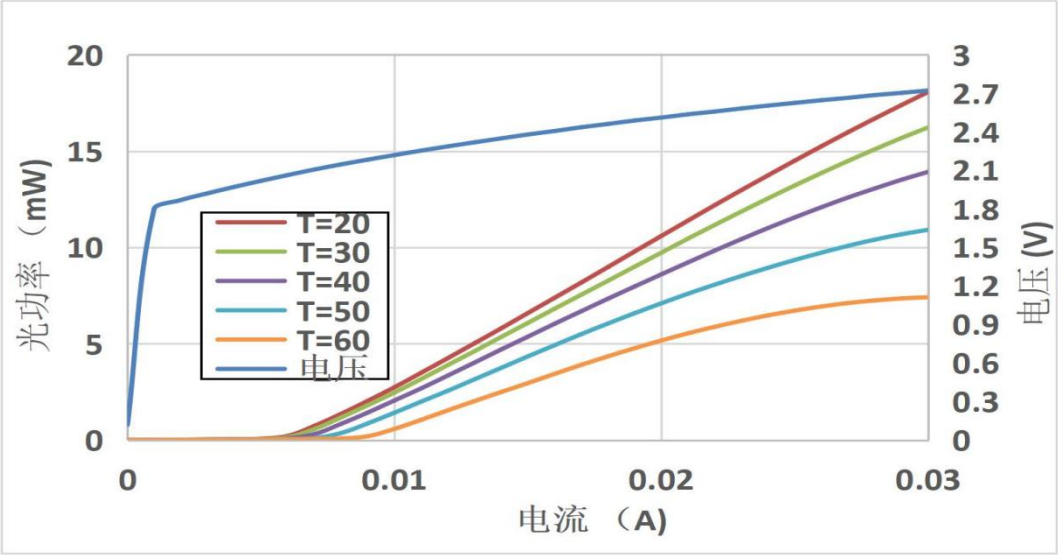
Features

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

Applications

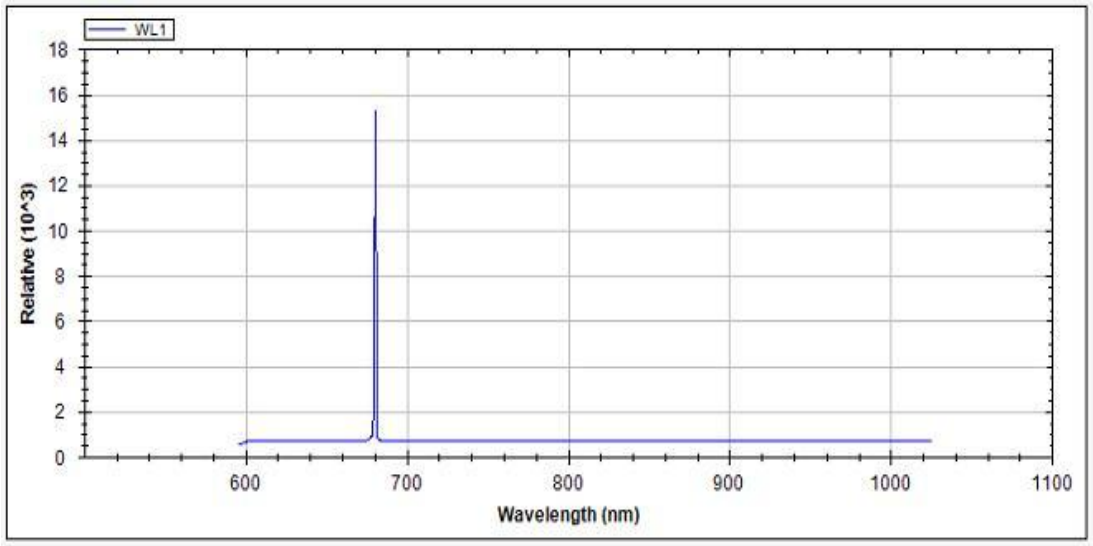
- Sensor light source
- Consumer electronic products
- Machine vision
- Red lighting

L-I-V Curve

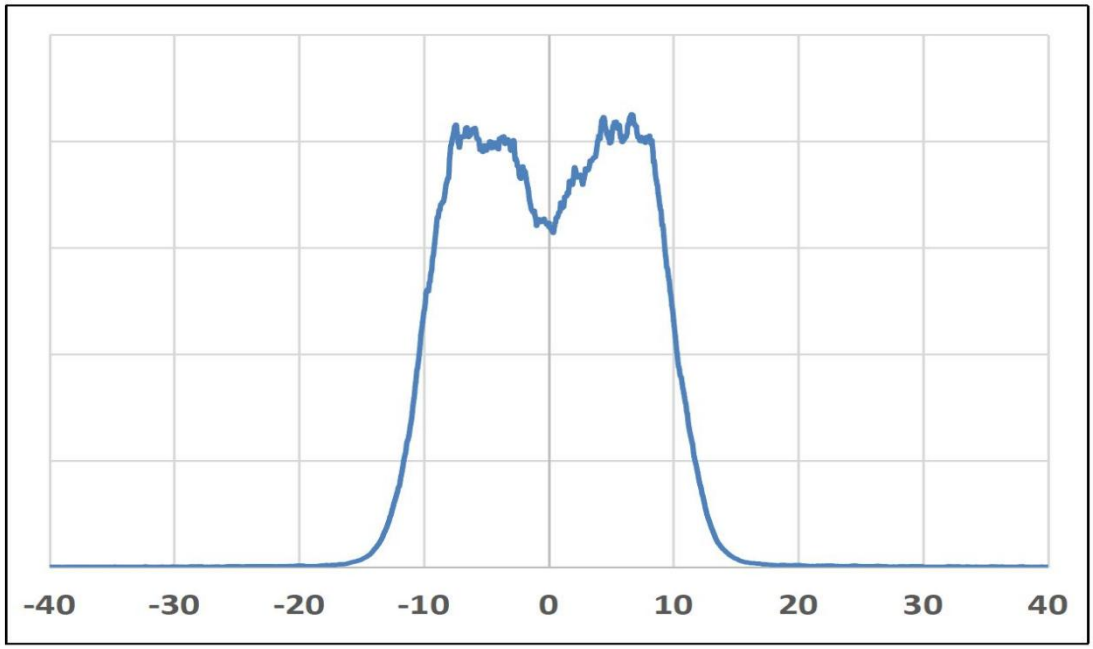


Email:info@deraysemi.com
DE-RAY Optoelectronics Co., Ltd.

Spectroscopy



FFDA (Far-Field Divergence Angle) (~23° at 30 mA)



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

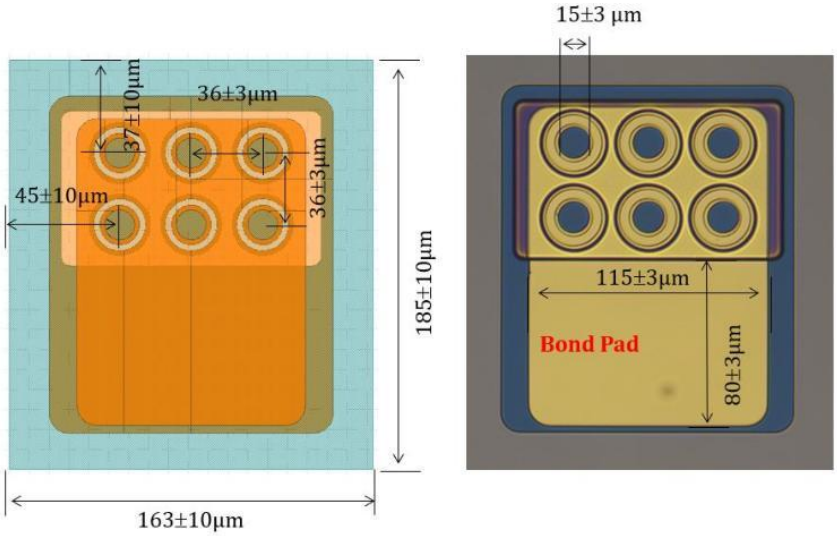
Electrical Optical Characteristics

Parameter	Symbol	Unit	Min.	Typ.	Max	Note
Threshold Current	Ith	mA		6.2		
Forward Voltage	V_F	V		2.7		IF = 30mA
Output Power	Pop	mW	15	18		IF = 30mA
Slop Efficiency	SE	W/A	0.6	0.7		
Power Conversion Efficiency	PCE	%		18		IF = 30mA
Wavelength	λop	nm	675	680		
Divergence Angle(1/e2)		deg		23		IF = 30mA

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	163±10um x 185±10um
芯片厚度 Die Thickness	130±10μm
光孔数目 Number of Emitters	6
焊盘尺寸（正极） Bond Pad Size（Anode Pad）	115±3μm x 80±3μm
背面电极尺寸（负极） Back Electrode Size（Cathode Pad）	163±10um x 185±10um

January 2023

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