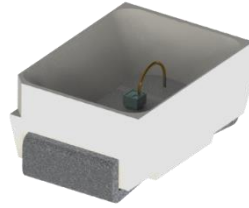


## Part V00147

Assy; 2222; 850; M; 3B; T15; 40mW; 0.22X0.22; PLCC; 3020; 2L; Encaps



### PRODUCT DESCRIPTION

An 850nm Multi-Mode 3 aperture VCSEL designed for applications that requires efficient optical power source.

### Major Applications:

- Point of care medical devices
- Biometric sensors
- Low light laser therapy
- Industrial sensors
- Pulse oximetry

### Features:

- Low divergence angle
- Narrow Spectral width
- Low operating current
- Linear polarization orientated along chip edge

### Package option:

- PLCC2-3020



COMPLIES WITH IEC 60825-1, 2<sup>nd</sup> Edition 2007.  
 COMPLIES WITH 21 CFR 1040.10 AND 1040-10.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER  
 NOTICE NO.50 DATED 27 MAY 2001.

## Absolute Maximum Ratings

Parameter	Rating	Notes
Storage temperature	-40 to 100 °C	For PLCC packages: -40 to 100°C
Operating temperature (VCSEL)	-20°C to 70 °C	
Lead solder temperature	260°C, 10 seconds	
CW current (VCSEL)	70 mA	(Note 1)

Note 1: The maximum CW laser current in the Absolute Maximum Ratings is valid for the operating temperature noted at the top of this table; however, the maximum CW laser current decreases with increasing temperature.

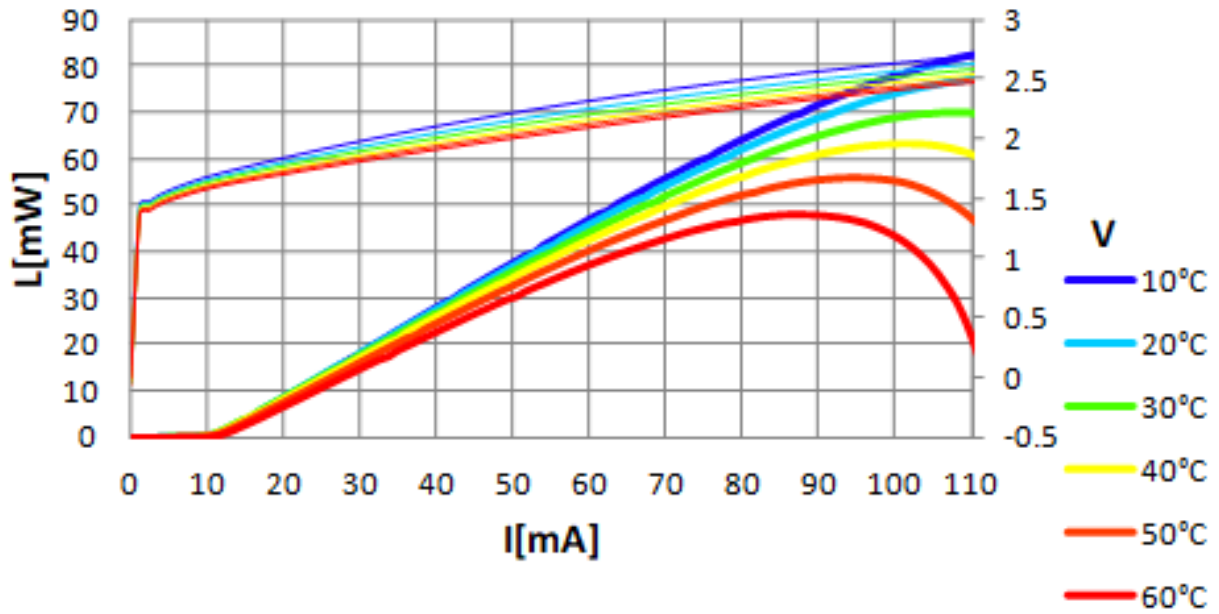
Stresses beyond those listed under Absolute Maximum Ratings may cause permanent damage to the device. Functional operation of the device at these or any other conditions beyond those indicated for extended periods of time may affect device reliability.

## Electro-Optical Characteristics

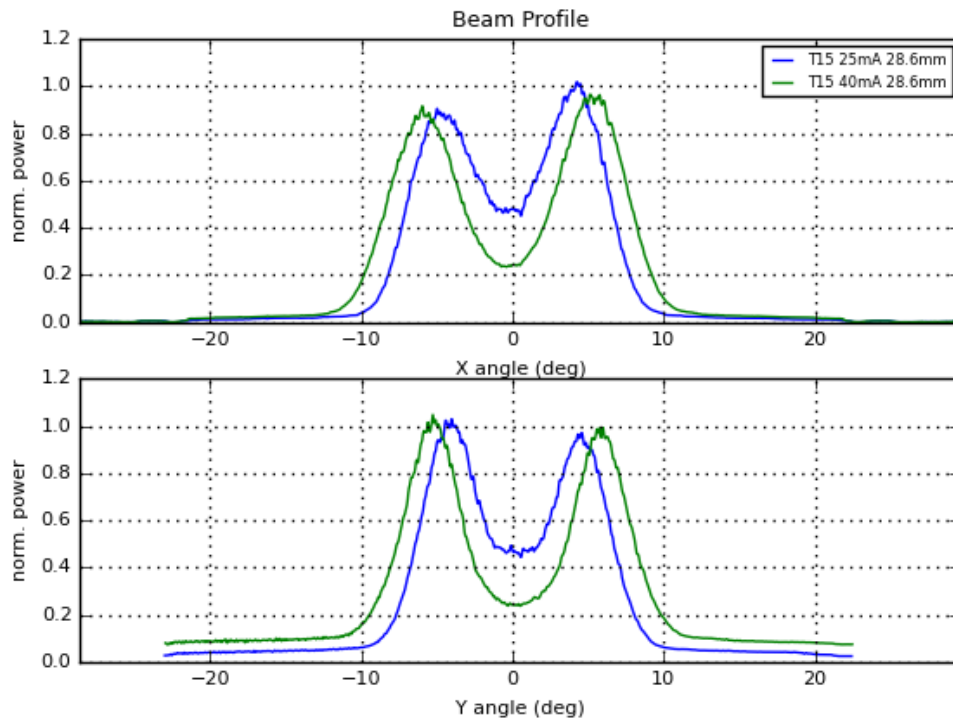
VCSEL Operating Temp (T<sub>v</sub>) =25°C & Operating Current=15mA unless otherwise stated)

Parameter	Symbol	Units	Minimum	Typical	Maximum	Notes
Threshold current	I <sub>th</sub>	mA	--	10	--	
Operating voltage	V <sub>f</sub>	Volts	--	2.3	--	
Series resistance (VCSEL)	R <sub>s</sub>	Ohms	--	10	--	
Slope efficiency	SE	mW/mA	--	0.8	--	
Optical output power	L <sub>op</sub>	mW	--	40	--	T=25°C
Reverse breakdown voltage		V	10	--	--	I <sub>r</sub> ≤ 1nA
Operating wavelength	λ <sub>op</sub>	nm	840	850	860	
Beam divergence FWHM	FWHM	deg	--	20	--	Whole angle
Wavelength temp. coefficient		nm/°C		0.06		

### Typical Performance



### Beam Divergence



## ORDERING INFORMATION

Description	Part Number
Assy; 2222; 850; M; 3B; T15; 40mW; 0.22X0.22; PLCC; 3020; 2L; Encaps	V00147



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