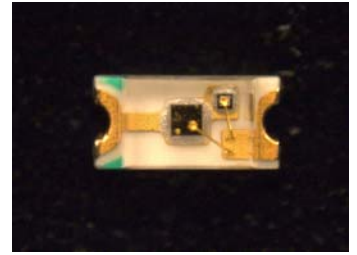


850 LD-0603SMD-V2.00z

850nm VCSEL with 0603SMD package

■ Features

- * Infrared 850nm Center Optical Wavelength
- * High ESD threshold
- * High Power and Uniformity
- * Low Dependence of Electrical-Optical Characteristics over Temperature
- * Standard 0603 Surface Mount Device with water clear plastic flat surface package



■ Applications

- * Optical Communications and Digital Data Link
- * High Speed Optical Switch
- * Infrared Laser Indicator
- * Light Source for Infrared CCTV
- * Positioning for High Precise Machines and Surface Scanning

■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Reverse Voltage(10 μ A)	V_R	8	V
Operating Temperature	T_{opr}	0 ~ +50	$^{\circ}$ C
Storage Temperature	T_{stg}	-30 ~ +85	$^{\circ}$ C
Lead Solder Temperature*	T_{sol}	260	$^{\circ}$ C
Maximum Forward Current	I_f	15	mA

*Solder Time < 10 seconds

■ Electrical and optical characteristics (Ta = 25 $^{\circ}$ C)

Item	Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
1	Threshold Current	I_{th}	-	-	3	6	mA
2	Forward Voltage	V_F	$I_f=6mA$	1.6	1.8	2.3	V
3	Breakdown voltage	V_{BD}	$I_r=10uA$	7	10	-	V
4	Output Power	P_o	$I_f=6mA$	0.3	1.2	-	mW
5	Center Wavelength	λ_c	$I_f=6mA$	830	850	860	nm
6	Slope Efficiency	η	$I_f=6mA$		0.4		mW/mA
7	Series Resistance	R_s	$I_f=6mA$		40	60	Ω
8	Beam Divergence (FWHM)	θ	$I_f=6mA$	-	12	-	Deg.

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■ Outline Dimension

Unit: mm(Inch)

1.60 [0.06]
1.20 [0.05"]
0.80 [0.03]
0.60 [0.02"]
0.70 [0.03]
0.55 [0.02]
0.20 [0.01"]

RECOMMEND PAD LAYOUT

2.40 [0.09"]
0.80 [0.03"]
0.80 [0.03"]
0.80 [0.03"]

ITEM	MATERIALS
Resin (mold)	Epoxy
Bonding wire	ϕ 25 μ m Au
Lens color	Water transparent
Printed circuit board	BT (White)
Dice	GaAs

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are ± 0.1 mm (0.004inch) unless otherwise

ATTENTION
OBSERVE
PRECAUTIONS
FOR HANDLING
ELECTROSTATIC

WARNING:

The VCSEL is a class IIIb laser in the safety standard ANSI Z136.1 and should be treated as a potential eye hazard.

