

XM67-R5P0U

670nm VCSEL Epoxy molded Package (Round Type)

Features

- : 670nm wavelength range
- : Operating to over 50 °C
- : Low current and voltage
- : Narrow beam angle
- : High reliability
- : Other configurations available on request

Applications

- : Consumer Electronics
- : Position Sensors
- : Medical Instruments
- : Home Networking
- : Data Link Communication, IEEE1394b
- : Low power consumption application
such as battery-operated equipment

Description



Absolute Maximum Ratings

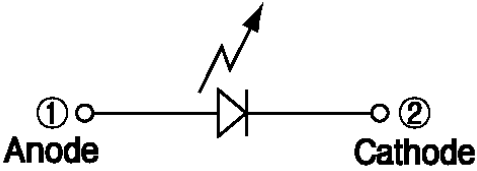
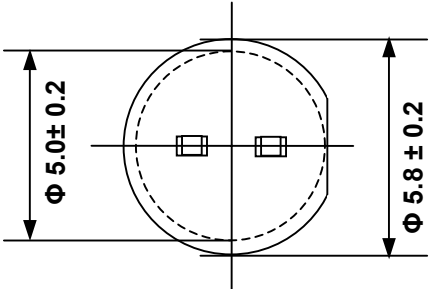
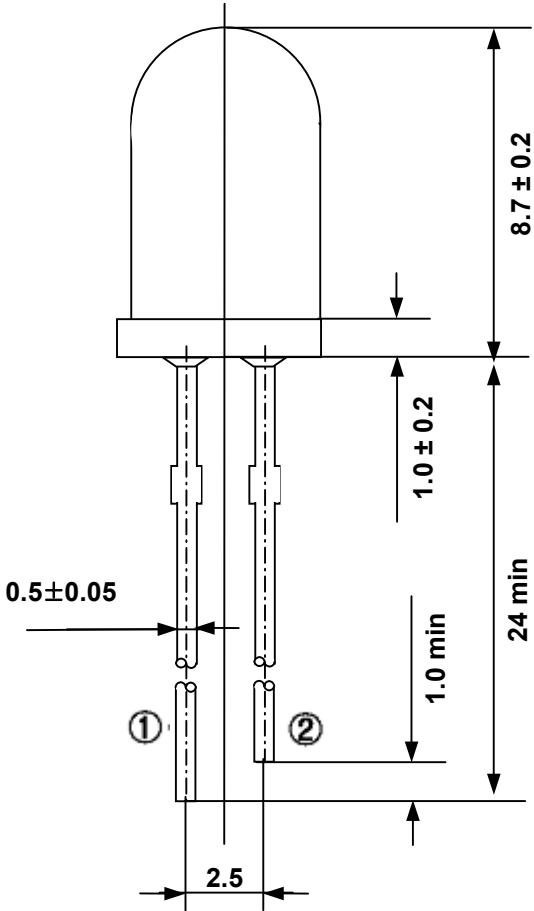
Parameter	Rating
Storage Temperature	-40 to 85 °C
Operating Temperature	-20 to 50 °C
Lead Solder Temperature	260 °C, 5 sec
Continuous Forward Current	7mA
Continuous Reverse Voltage	5V (@10µA)

XM67-R5P0U

670nm VCSEL Epoxy molded Package (Round Type)

Dimensions

Units: mm



Electro-Optics Characteristics (T_a=25°C unless otherwise stated)

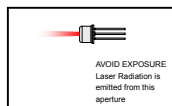
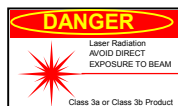
Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I _{th}		2	3.5	mA	CW
Slope Efficiency	η	0.2	0.4		W/A	I _f = 4mA
Optical Output Power	P _o		1.0		mW	I _f = 4mA
Peak Wavelength	λ	660	670	690	nm	I _f = 4mA
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I _f = 4mA
Beam Divergence	Θ		5		°	P ₀ =1.0mW, (FWHM)
Operating Voltage	V _f		2.1	2.5	V	I _f = 4mA
Dynamic Resistance	R _d		60	90	Ohm	I _f = 4mA

Thermal Characteristics

Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Max. Operating Temperature						
Optical Output Power	P _{T=50 °C}		0.7		mW	T _a = 50 °C, 4mA
I _{th} Temperature Variation	ΔI _{th}		1		mA	T _a = -20 to 50 °C
η Temperature Variation	Δη / ΔT		-0.8		%/ °C	T _a = -20 to 50 °C at 4mA
λ Temperature Variation	Δλ / ΔT		0.05		nm/ °C	T _a = -20 to 50 °C at 4mA

Notes

* These specifications are subject to change without notice



NOTICE

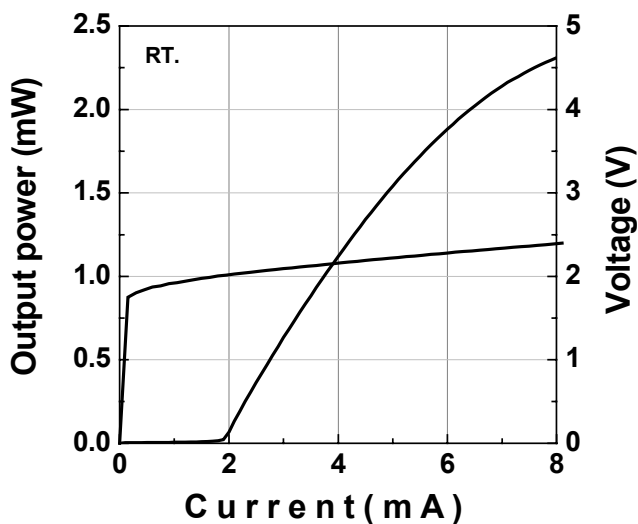
The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product

DANGER

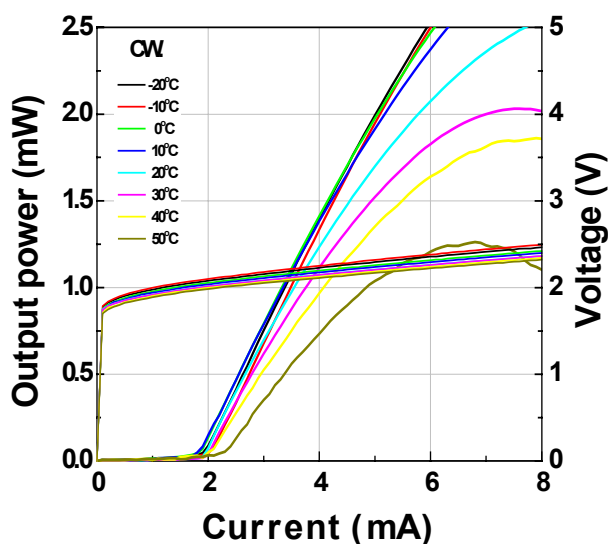
The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.

Characteristics Curves

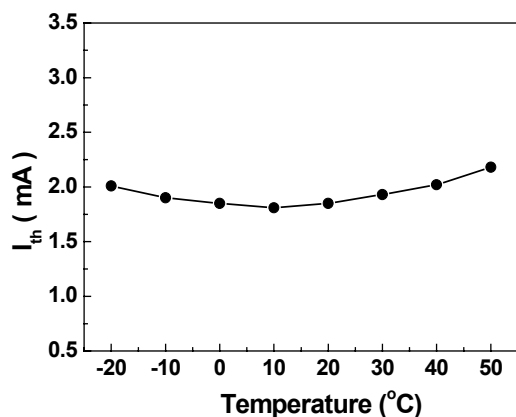
LIV Curve



LIV vs Temperature



I_{th} vs Temperature



P_o vs Temperature

