PM85-D1P0U

850nm VCSEL Dome Lens Can Package

Features

: 850nm wavelength range

: Narrow beam angle

: High output power

: Cost effective TO can

:Other configurations available on request

Applications

: Position Sensing

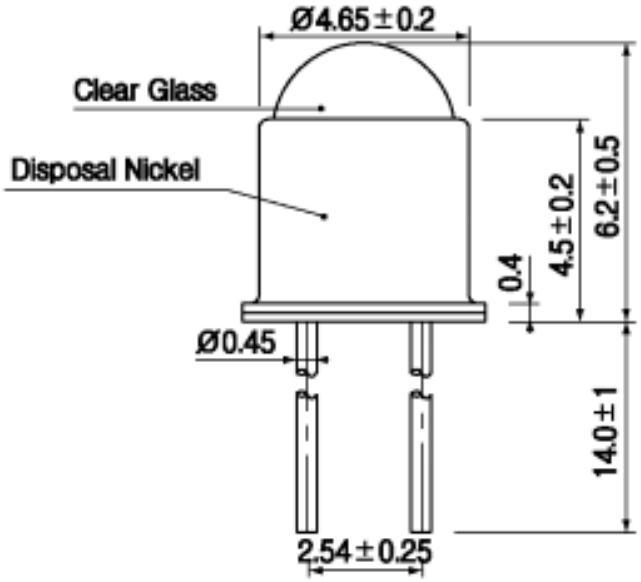
: Encoder

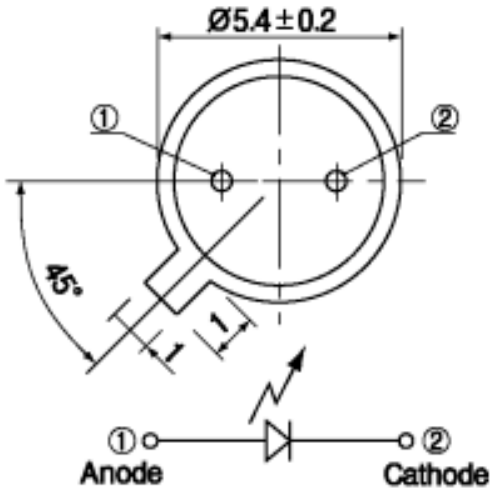
Description

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 ^{o}C
Operating Temperature	0 to 85 ^{o}C
Lead Solder Temperature	260 ^{o}C, 10 sec
Continuous Forward Current	12mA
Continuous Reverse Voltage	5V (@10μA)

Dimensions





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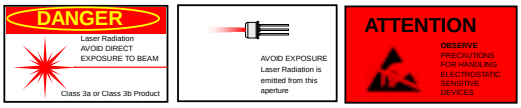
Electro-Optics Characteristics (T_a=25°C unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		1.5	3	mA	CW
I_{th} Temperature Variation	ΔI_{th}		1.5		mA	T_a=0 to 85 °C
Slope Efficiency	η	0.3	0.4	0.7	W/A	I_f = 6mA
η Temperature Variation	Δη / ΔT		-0.5		%/ °C	T_a=0 to 85 °C at 6mA
Optical Output Power	P_o		2		mW	I_f = 6mA
Peak Wavelength	λ	840	850	860	nm	I_f = 6mA
λ Temperature Variation	Δ λ / ΔT		0.06			T_a=0 to 85 °C at 6mA
Spectral Bandwidth (RMS)	Δ λ			0.85	nm	I_f = 6mA
Beam Divergence	Θ		2		°	P_0=2.0mW, (FWHM)
Operating Voltage	V_f		1.8	2.2	V	I_f = 6mA
Breakdown Voltage	V_b		-10		V	
Dynamic Resistance	R_d	20	35	55	Ohm	I_f = 6mA

Notes

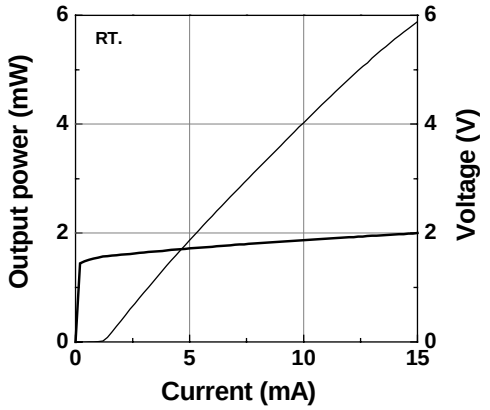
* These specifications are subject to change without notice.



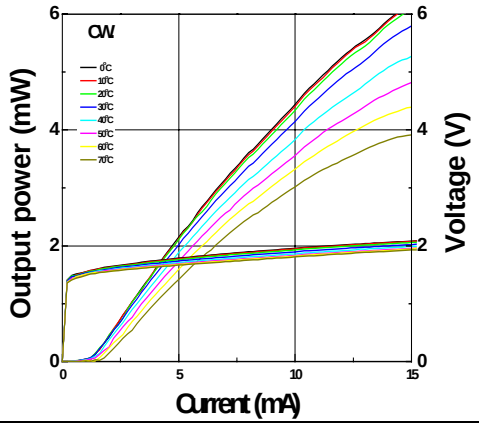
NOTICE	The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product
DANGER	The VCSEL is a class IIIb laser and should be treated as a potential eye 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

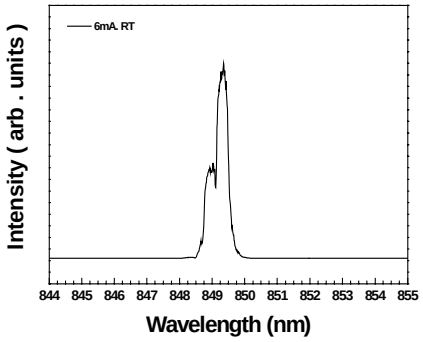
LIV Curve



LIV vs Temperature



EL Spectrum



I_{th} vs Temperature