PH85-D2P0U4

850nm VCSEL Dome Lens Can Package

Features

: **20mW** High power VCSEL

: Narrow beam angle

: High output power

: Other configurations available on request

Applications

: High speed Data Communications

: Free Space Optics (FSO)

: Sensor

: Position Sensing

: Encoder

Description

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 °C
Operating Temperature	0 to 60 °C
Lead Solder Temperature	260 °C, 10 sec
Continuous Forward Current	70 mA
Continuous Reverse Voltage	5V (@10μA)

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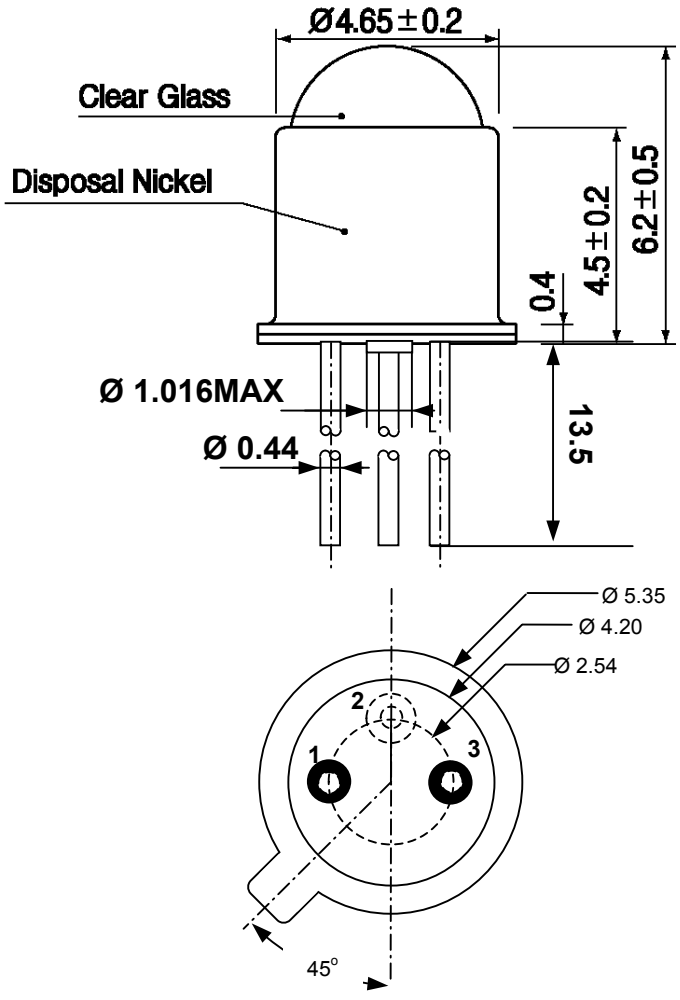
Dimensions



Bottom view

PINOUT

Number	Function
1	A_{LD}
2	K_{LD}
3	NC

Unit:mm

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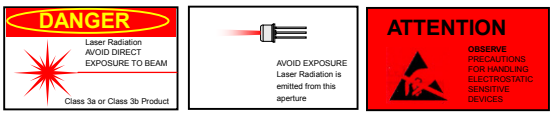
Electro-Optics Characteristics (T_a=25°C unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	I_{th}		15		mA	CW
I_{th} Temperature Variation	ΔI_{th}		10		mA	T_a=0 to 60 °C
Slope Efficiency	η	0.2	0.4		W/A	I_f = 50mA
η Temperature Variation	Δη / ΔT		-0.5		%/ °C	T_a=0 to 60 °C at 50mA
Optical Output Power	P_o	18	**20**		mW	I_f = 50mA
Peak Wavelength	λ	840	850	860	nm	I_f = 50mA
λ Temperature Variation	Δ λ / ΔT		0.06			T_a=0 to 60 °C at 50mA
Spectral Bandwidth (RMS)	Δ λ			0.85	nm	I_f = 50mA
Beam Divergence	Θ		2		°	P_0=20mW, (FWHM)
Operating Voltage	V_f		2.1	2.6	V	I_f = 50mA
Breakdown Voltage	V_b		-10		V	
Dynamic Resistance	R_d		10	20	Ohm	I_f = 50mA

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.

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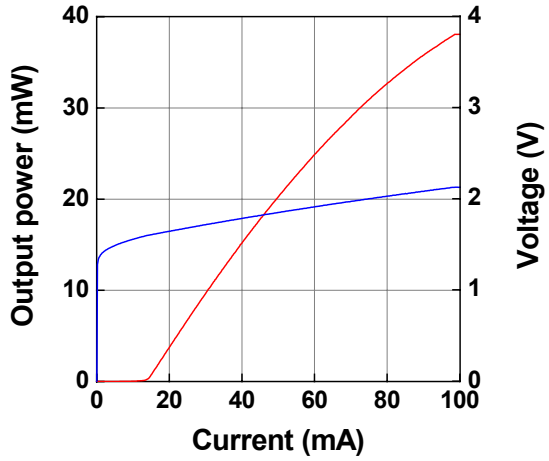
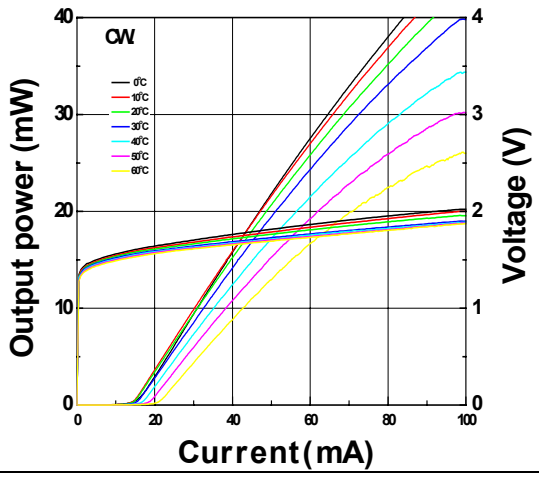
Characteristics Curves

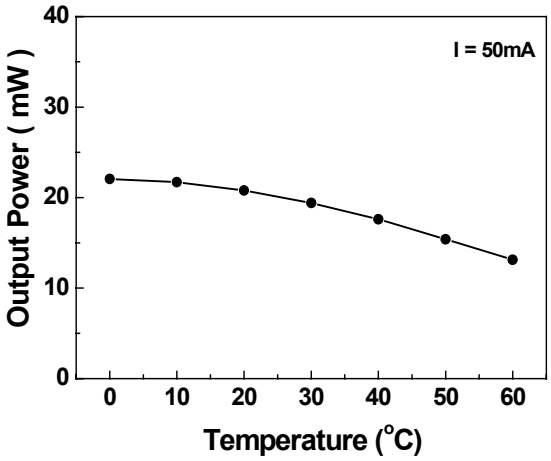
LIV Curve



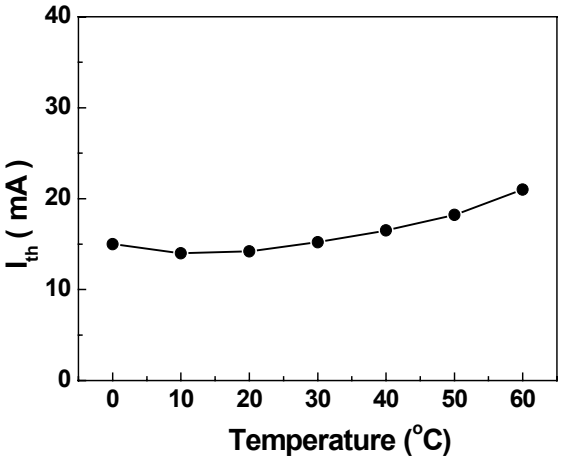
LIV vs Temperature



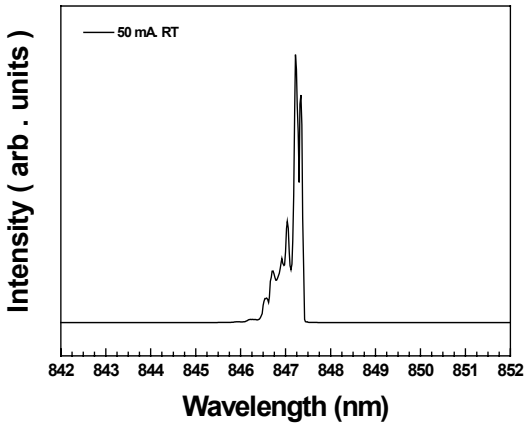
P_O vs Temperature



I_{th} vs Temperature



EL Spectrum



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