

# PH85-D1P0S2

850nm VCSEL Dome Lens Can Package

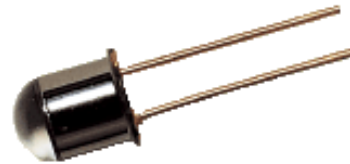
## Features

- : **10mW** High power VCSEL
- : Narrow beam angle
- : High output power
- : Cost effective TO can
- : High reliability
- : Other configurations available on request

## Applications

- : High speed Data Communications
- : Free Space Optics (FSO)
- : Sensor
- : Position Sensing
- : Encoder

## Description



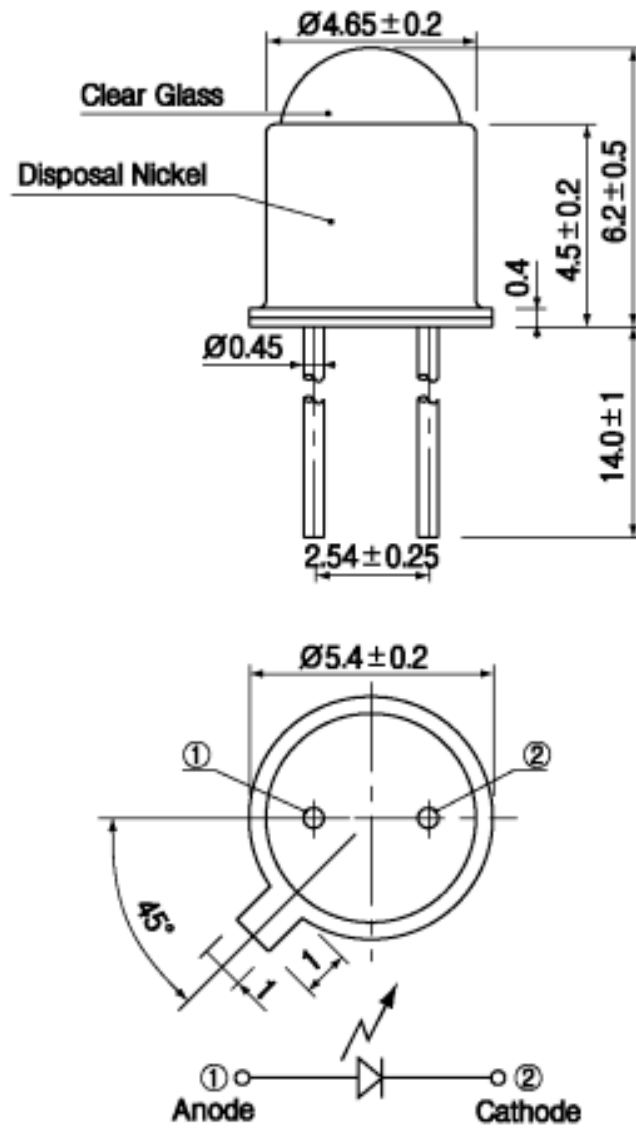
## Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 °C
Operating Temperature	0 to 70 °C
Lead Solder Temperature	260 °C, 10 sec
Continuous Forward Current	30mA
Continuous Reverse Voltage	5V (@10µA)

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## Dimensions



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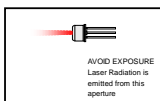
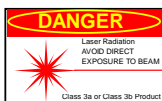
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### Electro-Optics Characteristics ( $T_a=25^{\circ}\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	$I_{th}$		5		mA	CW
$I_{th}$ Temperature Variation	$\Delta I_{th}$		2.5		mA	$T_a=0$ to $70^{\circ}\text{C}$
Slope Efficiency	$\eta$	0.2	0.4		W/A	$I_f = 20\text{mA}$
$\eta$ Temperature Coefficient	$\Delta\eta / \Delta T$		-0.5		%/ $^{\circ}\text{C}$	$T_a=0$ to $70^{\circ}\text{C}$ at $20\text{mA}$
Optical Output Power	$P_o$		10		mW	$I_f = 20\text{mA}$
Peak Wavelength	$\lambda$	840	850	860	nm	$I_f = 20\text{mA}$
$\lambda_p$ Temperature Coefficient	$\Delta\lambda / \Delta T$		0.06			$T_a=0$ to $70^{\circ}\text{C}$ at $20\text{mA}$
Spectral Bandwidth (RMS)	$\Delta\lambda$			0.85	nm	$I_f = 20\text{mA}$
Beam Divergence	$\Theta$		2		$^{\circ}$	$P_o=10\text{mW}$ , ( FWHM)
Forward Voltage	$V_f$	1.6	1.9	2.2	V	$I_f = 20\text{mA}$
Breakdown Voltage	$V_b$		-10		V	
Dynamic Resistance	$R_d$		25	40	Ohm	$I_f = 20\text{mA}$

### 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

