

## KVHZ-1885BDAN

### Description

The **KVHZ-1885BDAN** consist of a high power VCSEL and zener diode in TO-18 package. The VCSEL has a high output power, low operating current and provides high optical performance. It emits parallel infrared lights.

### Features

- 1mW High power VCSEL
- 850nm Wavelength Range
- High Reliability
- Low Current and Voltage
- Other Configurations Available on Request
- Consist of a Zener Diode for ESD

### Applications

- Free Space Optics
- Sensor
- Hight limit of resolution encoder

### Absolute Maximum Ratings

[Ta = 25 °C ]

Parameter	Symbol	Ratings	Unit
Continuous Forward Current	$I_F$	12	mA
Continuous Reverse Voltage	$V_R$	5	V
Operating Temperature	$T_{opr}$	-30 ~ +100	°C
Storage Temperature	$T_{stg.}$	-40 ~ +125	°C
Soldering Temperature *1	$T_{sol.}$	260	°C

\*1 : Soldering Time  $\leq 10$  seconds (At a distance of 1 mm from the package).

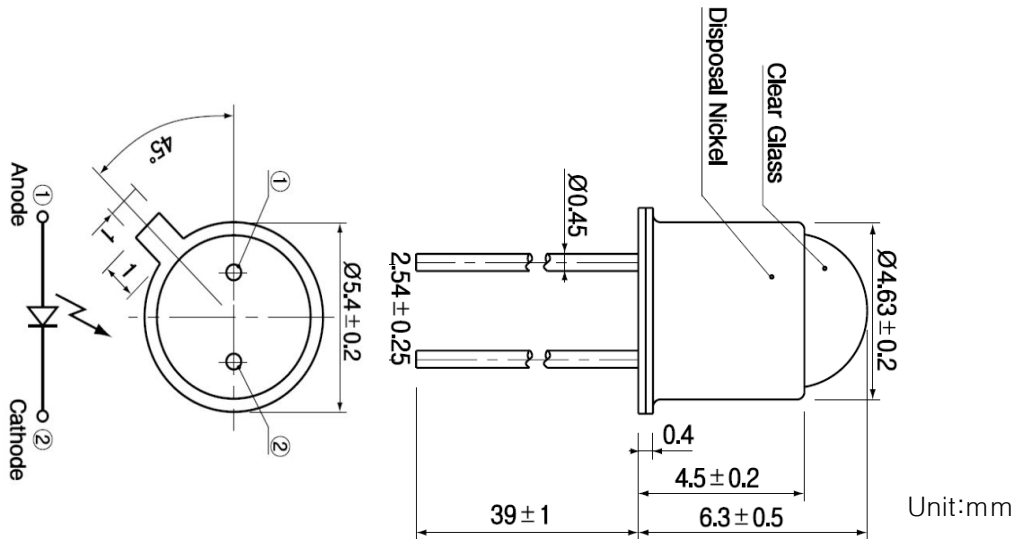
### Electro-Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	$I_{th}$		1.5	3.0	mA	CW
Slope Efficiency	$\eta$	0.2	0.4		mW/mA	$I_F=7mA$
Optical Output Power	$P_o$	1.0	1.2		mW	$I_F=7mA$
Peak Wavelength	$\lambda_p$	840	850	860	nm	$I_F=7mA$
Ith Temperature Variation	$\Delta I_{th}$		2.5		mA	$T_a=-30$ to $100^\circ C$
$\eta$ Temperature Coefficient	$\Delta\eta/\Delta T$		-0.5		%/°C	$T_a=-30$ to $100^\circ C$ at $7mA$
$\lambda_p$ Temperature Coefficient	$\Delta\lambda_p/\Delta T$		0.06		nm/°C	$T_a=-30$ to $100^\circ C$ at $7mA$
Spectral Bandwidth	$\Delta\lambda$			0.9	nm	$I_F=7mA$
Forward Voltage	$V_f$	1.6	1.8	2.2	V	$I_F=7mA$
Breakdown Voltage	$V_b$	-5			V	$I_R=1\mu A$
Dynamic Resistance	$R_d$		25	40	$\Omega$	$I_F=7mA$
Beam Divergence	$\Theta$		2		deg	$I_F=7mA$ , FWHM

\* These specifications are subject to change without notice.

**KVHZ-1885BDAN**

Outline Drawing



Ordering information

KVHZ	PKG type	Wavelength	Output Power	PKG Method	Beam Divergence	Pin Config.
<b>KODENSHI VCSEL High power Zener diode</b>	46:TO46	65:650nm	A: 0.3 mW	F:CAN with Flat Window	A: ±2	A:Cathode Common
	56:TO56	78:780nm	B: 1mW	B:CAN with Ball lens	C: ±5	B:Anode Common
	<b>18:TO18</b>	<b>85:850nm</b>	C: 3mW	T: Tilted Window	D: ±10	C:CASE GND
	01:Ø1	98:980nm	D: 5mW	A: Aspherical lens	E: ±15	D:CASE Anode
	02:Ø2	31:1310nm	E: 10mW	<b>D: Dome lens</b>		<b>N: Normal</b>
	03:Ø3	55:1550nm	F: 20mW	R: CAN With Receptacle		
	05:Ø5			C: Resin Port with Ceramic		
				M :Resin Port with Metal		
			TM: Transfer Mold PKG			
			CM : Casting Mold PKG			