

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

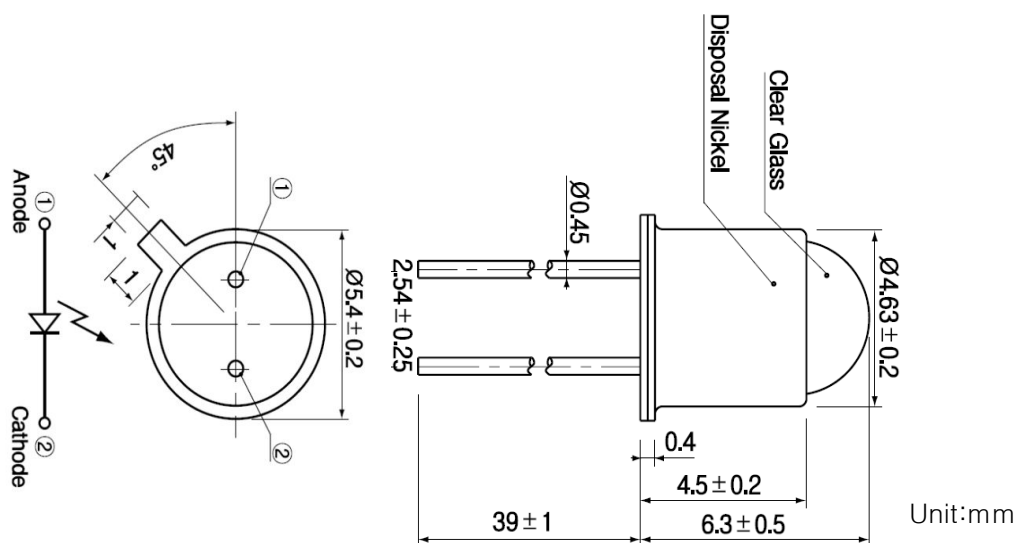
*1 : Soldering Time ≤ 10 seconds (At a distance of 1 mm from the package).

Electro-Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I _{th}		1.5	3.0	mA	CW
Slope Efficiency	η	0.2	0.4		mW/mA	I _F =7mA
Optical Output Power	P _o	1.0	1.2		mW	I _F =7mA
Peak Wavelength	λ _p	840	850	860	nm	I _F =7mA
Ith Temperature Variation	ΔI _{th}		2.5		mA	T _a =-30 to 100 °C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T _a =-30 to 100 °C at 7mA
λp Temperature Coefficient	Δλ _p /ΔT		0.06		nm/°C	T _a =-30 to 100 °C at 7mA
Spectral Bandwidth	Δλ			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 =1uA
Dynamic Resistance	R _d		25	40	Ω	I _F =7mA
Beam Divergence	Θ		2		deg	I _F =7mA, FWHM

* These specifications are subject to change without notice.

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Outline DrawingOrdering information

KVHZ	PKG type	Wavelength	Output Power	PKG Method	Beam Divergence	Pin Config.
KODENSHI VCSEL High power Zener diode	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
	18:TO18	85:850nm	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	D: Dome lens		N: Normal
	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		