

KVH-1885DDAN

Description

The KVH-1885DDAN consist of a ultra high power VCSEL in TO-18 dome lens package. The VCSEL has a high output power, low operating current and provides high optical performance. It emits parallel infrared lights.

Features

- 10mW High power VCSEL
- 850nm Wavelength Range
- High Reliability
- Low Current and Voltage
- Other Configurations Available on Request

Applications

- Free Space Optics
- Sensor

Absolute Maximum Ratings

[Ta = 25°C]

Parameter	Symbol	Ratings	Unit
Continuous Forward Current	I_F	30	mA
Continuous Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	$T_{stg.}$	-40 ~ +85	°C
Soldering Temperature *1	$T_{sol.}$	260	°C

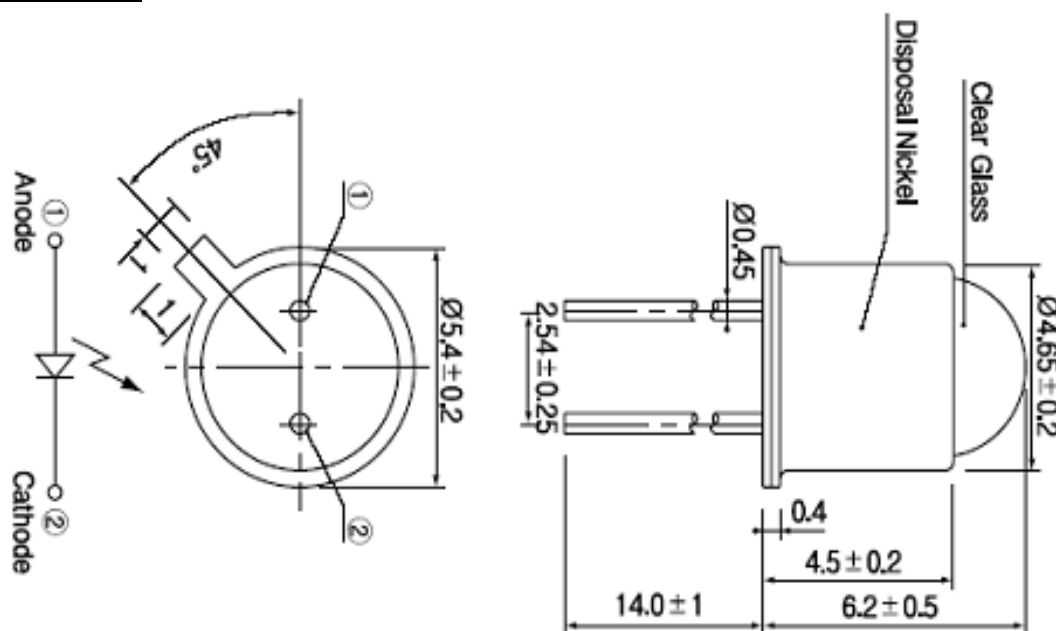
*1 : Soldering Time ≤ 10 seconds (At a distance of 1 mm from the package).

Electro-Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I_{th}		5.0		mA	CW
Slope Efficiency	η	0.2	0.4		mW/mA	$I_F=20\text{mA}$
Optical Output Power	P_o		10		mW	$I_F=20\text{mA}$
Peak Wavelength	λ_p	840	850	860	nm	$I_F=20\text{mA}$
Ith Temperature Variation	ΔI_{th}		2.5		mA	$T_a=0$ to 70°C
η Temperature Coefficient	$\Delta\eta/\Delta T$		-0.5		%/°C	$T_a=0$ to 70°C at 20mA
λ_p Temperature Coefficient	$\Delta\lambda_p/\Delta T$		0.06		nm/°C	$T_a=0$ to 70°C at 20mA
Spectral Bandwidth	$\Delta\lambda$			0.9	nm	$I_F=20\text{mA}$
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	Ω	$I_F=20\text{mA}$
Beam Divergence	Θ		2		deg	$I_F=20\text{mA}$, FWHM

* These specifications are subject to change without notice.

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Outline DrawingOrdering information

KVH	PKG type	Wavelength	Output Power	PKG Method	Beam Divergence	Pin Config.
KODENSHI HI VCSEL High power	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:φ1	98:980nm	D: 10mW	A: Aspherical lens	E: ± 15	D:CASE Anode
	02:φ2	31:1310nm	E: 20mW	D: Dome lens		N: Normal
	03:φ3	55:1550nm		R: CAN With Receptacle		
	05:φ5			C: Resin Port with Ceramic		
				M :Resin Port with Metal		
				T: Transfer Mold PKG		
				L:Lamp Casting Mold		