

# KVH-4685DAAN

## Description

The KVH-4685DAAN consist of a ultra high power VCSEL in TO-46 Aspheric 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  $\leq$  10 seconds (At a distance of 1 mm from the package).

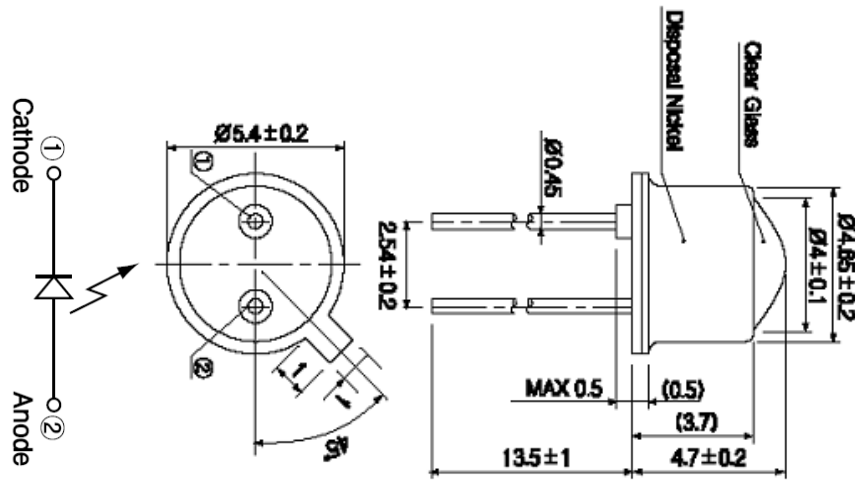
## Electro-Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Threshold Current	$I_{th}$		5.0		mA	CW
Slope Efficiency	$\eta$	0.2	0.4		mW/mA	IF=20mA
Optical Output Power	$P_o$		10		mW	IF=20mA
Peak Wavelength	$\lambda_p$	840	850	860	nm	IF=20mA
Ith Temperature Variation	$\Delta I_{th}$		2.5		mA	Ta=0 to 70°C
$\eta$ Temperature Coefficient	$\Delta\eta/\Delta T$		-0.5		%/°C	Ta=0 to 70°C at 20mA
$\lambda_p$ Temperature Coefficient	$\Delta\lambda_p/\Delta T$		0.06		nm/°C	Ta=0 to 70°C at 20mA
Spectral Bandwidth	$\Delta\lambda$			0.9	nm	IF=20mA
Forward Voltage	$V_f$	1.6	1.9	2.2	V	IF=20mA
Breakdown Voltage	$V_b$		-10		V	
Dynamic Resistance	$R_d$		25	40	$\Omega$	IF=20mA
Beam Divergence	$\Theta$		2		deg	IF=20mA, FWHM

\* These specifications are subject to change without notice.

**KVH-4685DAAN**

Outline Drawing



Ordering information

KVH	PKG type	Wavelength	Output Power	PKG Method	Beam Divergence	Pin Config.
<b>KODENSHI VCSEL High power</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
	18:TO18	<b>85:850nm</b>	C: 3mW	T: Tilted Window	D: ±10	C:CASE GND
	01: φ1	98:980nm	<b>D: 10mW</b>	<b>A: Aspherical lens</b>	E: ±15	D:CASE Anode
	02: φ2	31:1310nm	E: 20mW	D: Dome lens		<b>N: Normal</b>
	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			