

Features

- : **20mW** High power VCSEL
- : 850nm wavelength range
- : Flat window Type TO-46 Can Package
- : Common Anode Pin Configurations
- : Back monitor Photo diode
- : Other configurations available on request

Applications

- : Data Communications
- : Free Space Optics
- : Sensor

Description

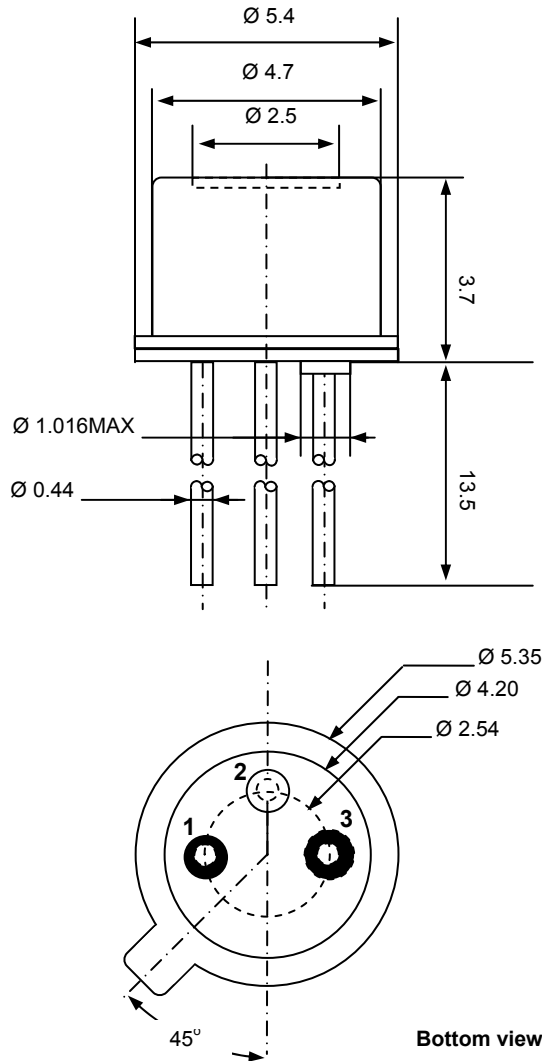


Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100 °C
Operating Temperature	0 to 60 °C
Lead Solder Temperature	260 °C, 10 sec
Continuous Forward Current	70 mA
Continuous Reverse Voltage	5V (@10μA)

Part Number :	Description :
PH85-F1P1U4-KC	850nm 20mW Highpower VCSEL TO-46 Package, Common Cathode Type
PH85-F1P1U4-AC	850nm 20mW Highpower VCSEL TO-46 Package , Common Anode Type

Dimensions



PIN OUT

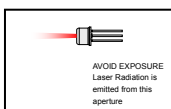
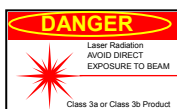
PH85-F1P1U4-KC		PH85-F1P1U4-AC	
Number	Function	Number	Function
1	A _{VCSEL}	1	K _{VCSEL}
2	K _{VCSEL} , A _{m-PD}	2	A _{VCSEL} , K _{m-PD}
3	K _{m-PD}	3	A _{m-PD}

Electro-Optics Characteristics (T_a=25°C unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Optical Output Power	P _o		20		mW	I _f = 50mA
Threshold Current	I _{th}		15		mA	CW
I _{th} Temperature Variation	ΔI _{th}		10		mA	T _a =0 to 60°C
Slope Efficiency	η	0.2	0.4		W/A	I _f = 50mA
η Temperature Variation	Δη / ΔT		-0.5		%/°C	T _a =0 to 60°C at 50mA
Peak Wavelength	λ	840	850	860	nm	I _f = 50mA
λ Temperature Variation	Δλ / ΔT		0.06			T _a =0 to 60°C at 50mA
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I _f = 50mA
Operating Voltage	V _f		2.1	2.6	V	I _f = 50mA
Breakdown Voltage	V _b		-10		V	
Dynamic Resistance	R _d		10	20	Ohm	I _f = 50mA
Parameters	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Monitor Current	I _{PD}	0.1	0.3		mA	P ₀ = 20mW
I _{PD} Temperature Variation	ΔI _{PD} /ΔT		0.2		%/°C	P ₀ = 20mW
Dark current	I _D			20	nA	P ₀ =0mW, V _R =3V
PD Reverse Voltage	BVR _{PD}	30	115		V	P ₀ =0mW, I _R =10μA
PD Capacitance	C			100	pF	V _R =0V, Freq=1MHz
				55		V _R =3V, Freq=1MHz

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.