



850nm VCSEL with Dome Lens Can Package

Part No. VCT-D85A20

Features

- 850nm wavelength range
- Narrow beam angle
- High output power
- Cost effective

Applications

- Encoder
- Position sensor



Specifications

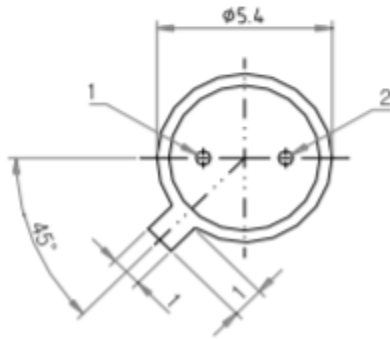
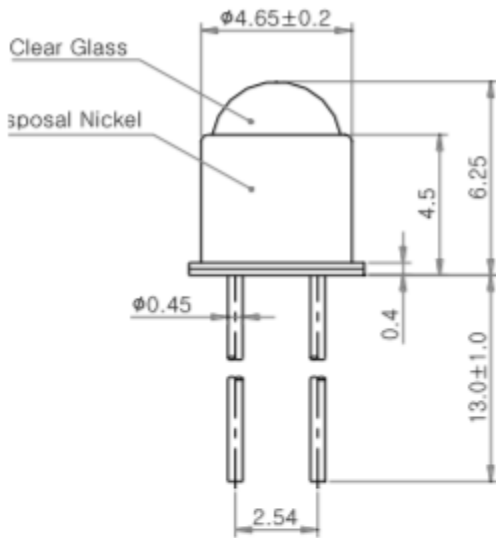
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage Temperature	-40	100	°C	
Operating Temperature	0	85	°C	
Lead Solder Temperature		260	°C	10 seconds
Continuous Forward Current		12	mA	
Continuous Reverse Voltage		5	V	10uA

Electro-Optical Characteristics (T _a =25°C unless otherwise stated)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I _{th}		1.5	3	mA	CW
Slope Efficiency	η	0.3	0.4	0.7	W/A	I _f =6mA
Optical Output Power	P _o		2		mW	I _f =6mA
Peak Wavelength	λ	840	850	860	nm	I _f =6mA
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I _f =6mA
Beam Divergence	Θ		5		°	P _o =2.0mW, (FWHM)
Operating Voltage	V _f		1.8	2.2	V	I _f =6mA
Breakdown Voltage	V _b		-10		V	
Dynamic Resistance	R _d	20	35	55	Ohm	I _f =6mA

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I _{th} Temperature Variation	ΔI _{th}		1		mA	T _a =0 to 85°C
η Temperature Coefficient	Δη/ΔT		-0.5		%/°C	T _a =0 to 85°C, I _f =6mA
λ Temperature Coefficient	Δλ/ΔT		0.06		nm/°C	T _a =0 to 85°C, I _f =6mA



Outline Dimensions (unit: mm)



Pin Configuration



Additional Notes

- 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.
- Specifications are subject to change without notice.