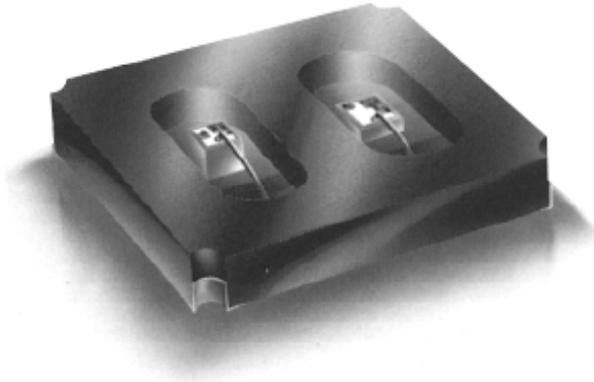


CERLED[®] Ceramic Chip SMD

SMD - Reflective Sensor
CRS 20



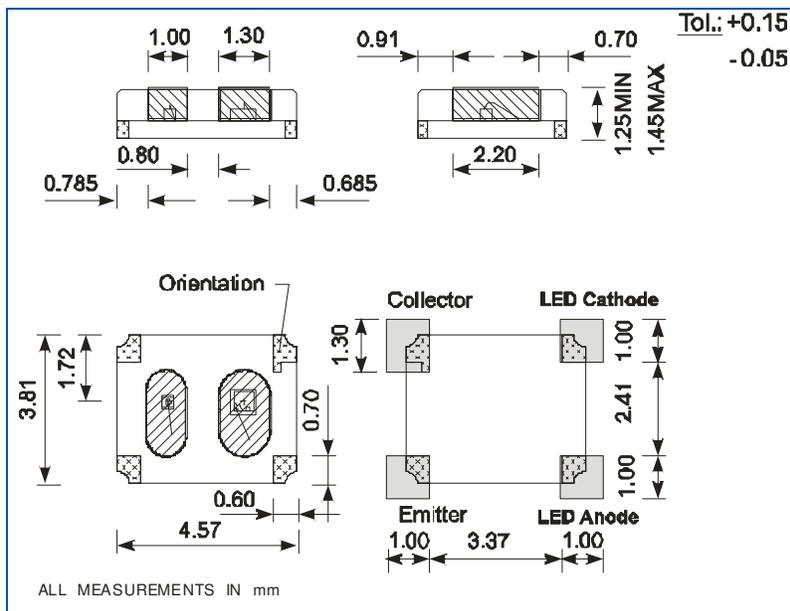
Description

This opto device is specially designed for all applications where the space is very limited and a highly reliable product is needed. Especially for hybrid and SMT.

The solder pads are a very good heat sink, so that high power dissipation is achievable. Best reflective distance: 0.9 mm (paper).

Features and Benefits

- ▶ Surface mounting device
- ▶ Complete ceramic housing
- ▶ High temperature range
- ▶ Miniature size
- ▶ Solder pads conform with Mil-Std. 883 B



Maximum Ratings at 25 °C

Total power dissipation	P_V	200 mW
Storage temperature	T_{stg}	-25 °C to 125 °C
Operating temperature	T_{op}	-25 °C to 85 °C
Soldering temperature	T_{sold} (10 s)	240 °C

Note: During solder process the component must not be held or fixed mechanically on the upper part.

Emitter

Wavelength	λ	950 nm
Reverse voltage	V_R	5 V
Continuous forward current	I_F	60 mA
Pulse current (10usec)	I_{Peak} 10 μ sec	800 mA
Forward voltage	V_F	1.2 ... 1.4 V

Detector

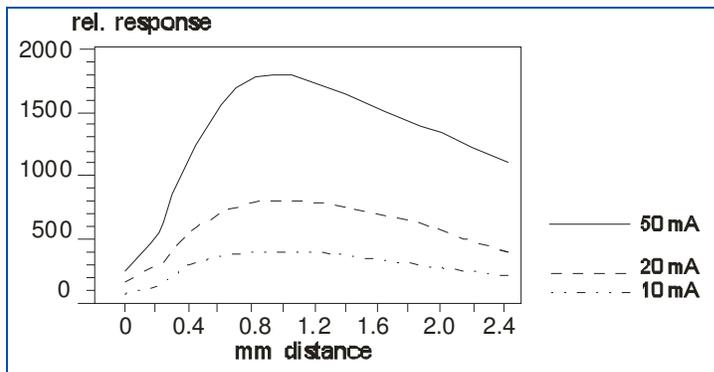
Collector emitter breakdown	V_{CEO}	40 V ($I = 100 \mu A$)
Emitter collector breakdown	V_{ECO}	4.5 V ($I = 100 \mu A$)
Dark current	I_{CEO}	400 nA ($V = 20 V$)
Saturation voltage	$V_{CE sat}$	0.3 V ($I_B = 1 mA$) ($I_C = 2 mA$)
Rise / Fall time ($f = 1 Mhz$)	t_{on} / t_{off}	10 μ s ($R = 50 \Omega$)

Note: according IEC 60825-1 (EN60825):

LED Radiation

Do not view directly with optical instruments.

Figure 1



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