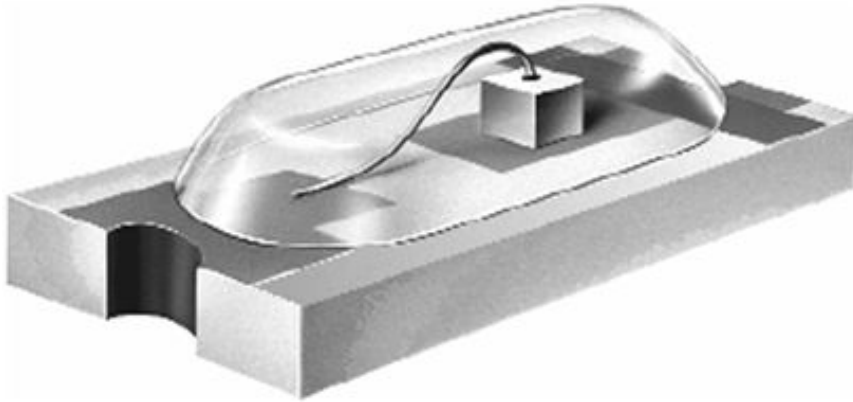


# CERLED<sup>®</sup>

## Ceramic Chip SMD

SMD - Wide-Viewing Angle  
CR 50 IRD infrared



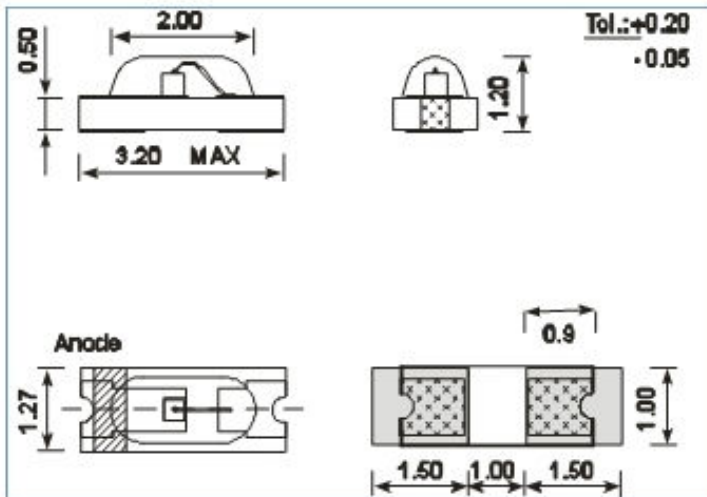
### Description

The solder pads provide an excellent heat sink. For multi-chip arrays just choose 2 or more CERLEDs and mount them side by side or even antiparallel. Small true chip - LED to build custom configurations.

Available on special order in 8 mm blister tape or solid strips of up to 12 pcs with a true pitch of 1.27 mm.

### Features and Benefits

- ▶ Surface mounting device
- ▶ High thermal conductivity
- ▶ Superior light uniformity
- ▶ End - to - end and side - to - side stackable down to a pitch of 1.3 mm
- ▶ Solder pads conform with Mil-Std 883 B



### Maximum Ratings at 25° C

Power dissipation	P <sub>tot</sub>	130 mW
Derating linear		2.4 mW / ° C
Peak forward current	I <sub>FSM</sub> (10 μs)	800 mA
Continuous forward current	I <sub>F</sub>	75 mA
Junction temperature	T <sub>J</sub>	120° C
Storage temperature	T <sub>st</sub>	-25° C to 120° C
Operating temperature	T <sub>op</sub>	-25° C to 80° C
Soldering temperature	T <sub>sold</sub> (10 s)	240° C

Adequate heat sink is required. Derating must be observed to maintain junction temperature below maximum. Please note our recommended solder profile at [www.excelitas.com](http://www.excelitas.com).

### Optical and Electronic Characteristics at 25° C

I<sub>F</sub> = 20 mA, ambient temperature = 25° C

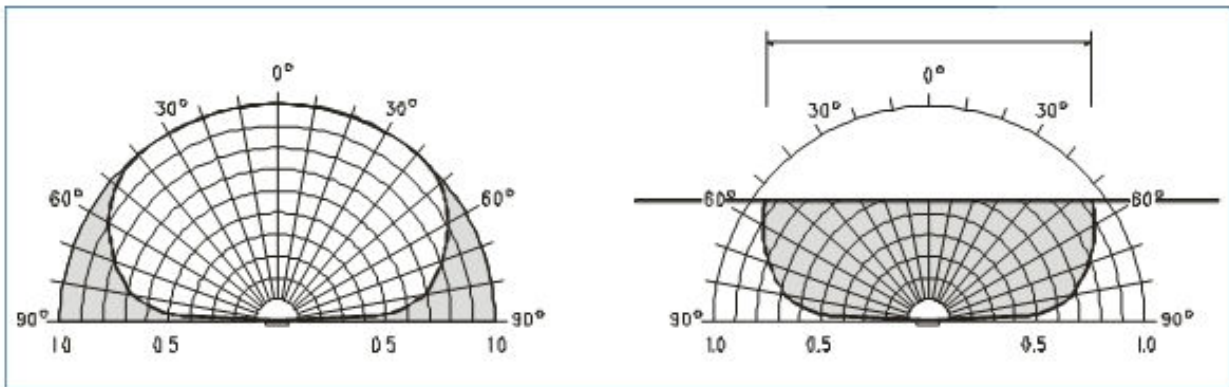
	min	typ	max	unit
Radiant power (50 mA)	2.9	6.3		mW
Radiant power (20 mA)	1.1	2.4		mW
Peak emission wavelength		770		nm
Spectral half bandwidth		30		nm
Forward voltage (50 mA)		1.75	2.05	V
Forward voltage (20 mA)		1.6	1.9	V
Reverse leakage current			100	μA
Reverse voltage	5			V
Rise/fall - time		40 / 30		ns
Light emission angle		160°		Degree

Note: according IEC 60825-1 (EN60825):

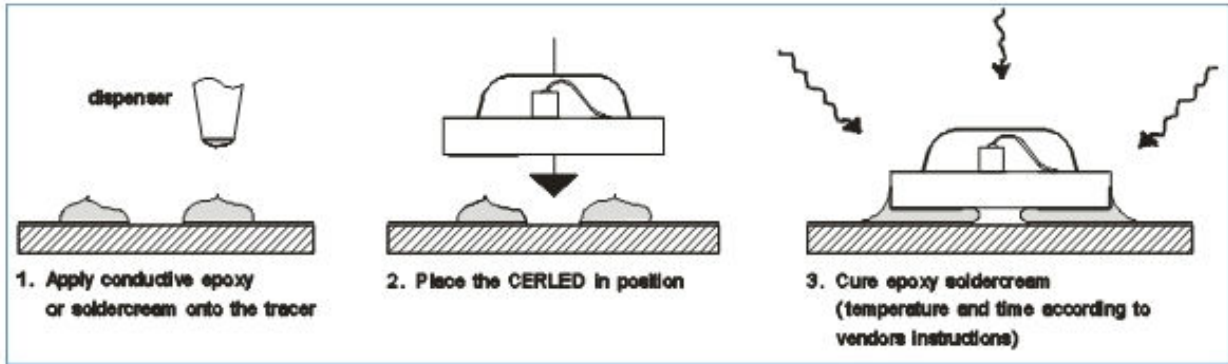
LED Radiation

Do not view directly with optical instruments.

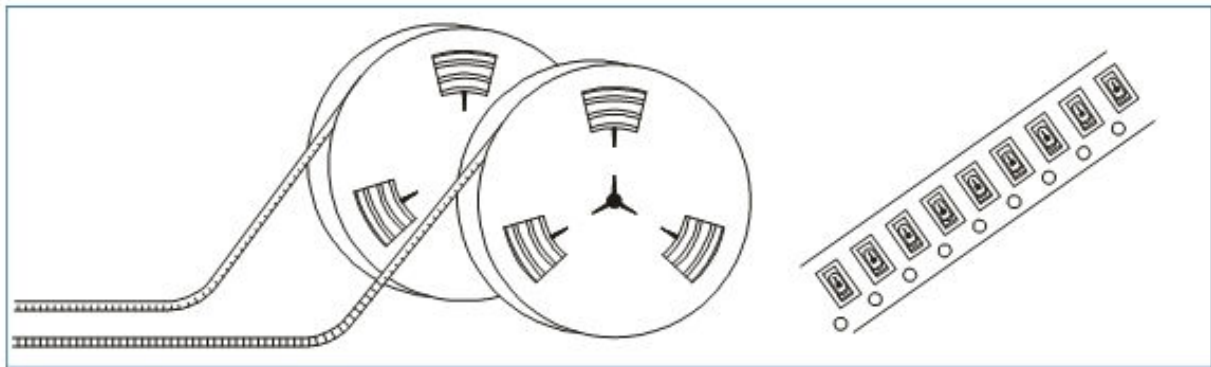
Figure 1



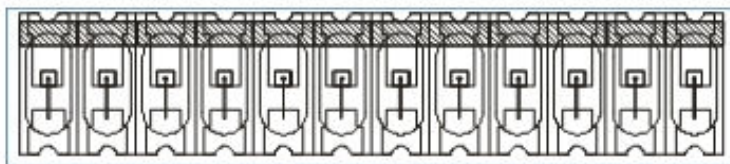
**Figure 2**  
Suggested Mounting Method



**Figure 3**  
Special Packaging Standard 8 mm Blister Tape



**Figure 4**  
Arrays: Available in strips up to 12 CERLEDs with a max. pitch tolerance in spacing and linearity of  $\pm 0.01$  mm between chip centers.



Code to order strips:  
CR 50 ird - XX (no. of LEDs)

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