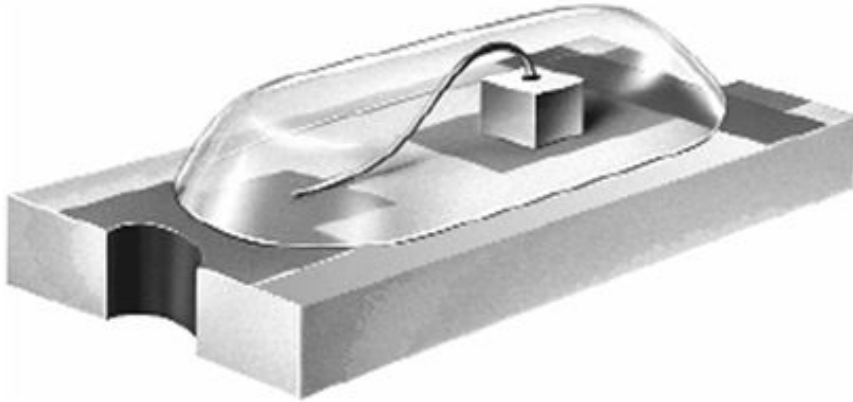


# CERLED<sup>®</sup>

## Ceramic Chip SMD

SMD - Wide-Viewing Angle  
CR 50 UR ultra red



### Description

The solder pads provide an excellent heat sink. For multi-colour arrays just choose 2 or more CERLEDs and mount them side by side or even antiparallel.

Ideal for backlighting, light piping and status indication in high brightness or low current applications.

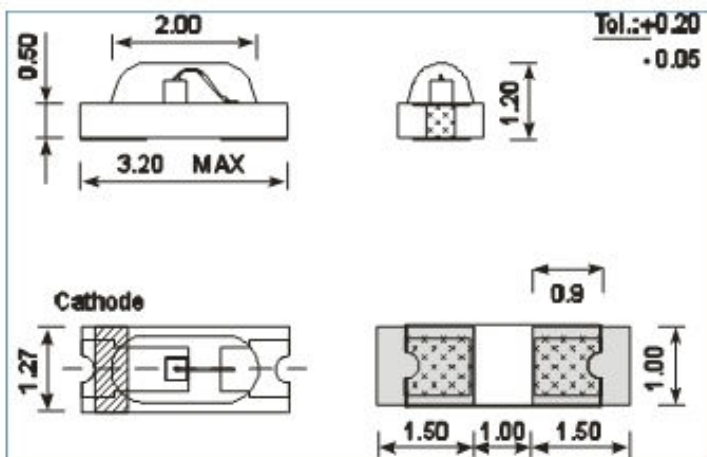
Small true chip - LED to build custom configurations.

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.

The CR 50 UR has a clear epoxy lens.

### Features and Benefits

- ▶ Solid state ceramic chip
- ▶ 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	$P_{tot}$	130 mW
Derating linear		2.2 mW / ° C
Peak forward current	$I_{FSM}$ (10 $\mu$ s)	600 mA
Continuous forward current	$I_F$	70 mA
Junction temperature	$T_J$	120° C
Storage temperature	$T_{st}$	-25° C to 120° C
Operating temperature	$T_{op}$	-25° C to 80° C
Soldering temperature	$T_{sold}$ (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

$I_F = 20$  mA, ambient temperature = 25° C

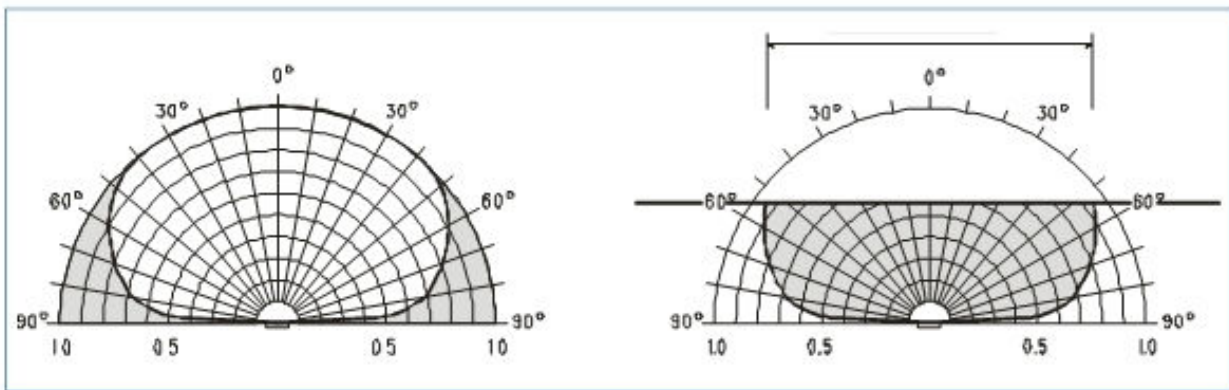
	min	typ	max	unit
Luminous intensity	17	40		mcd
Peak emission wavelength		660		nm
Spectral half bandwidth		20		nm
Forward voltage		1.8	2.2	V
Reverse leakage			100	$\mu$ A
Reverse voltage	5			V
Light emission angle		180°		Degree

Note: according IEC 60825-1 (EN60825):

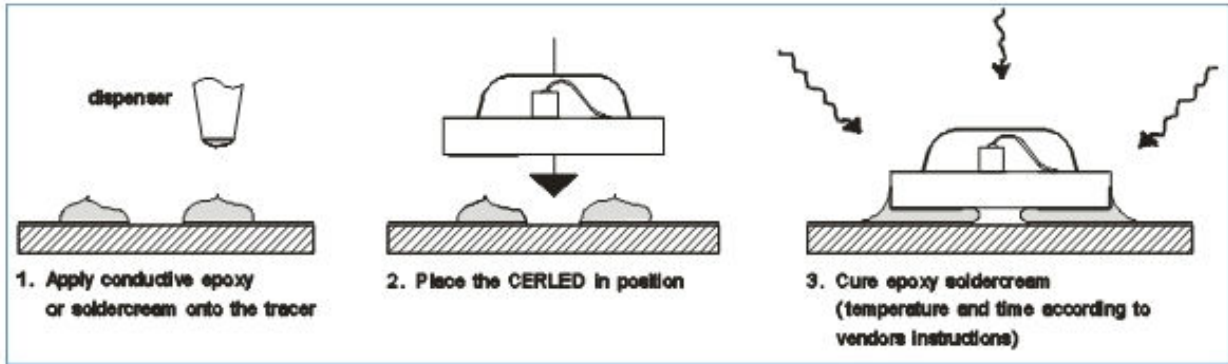
LED Radiation

Do not view directly with optical instruments.

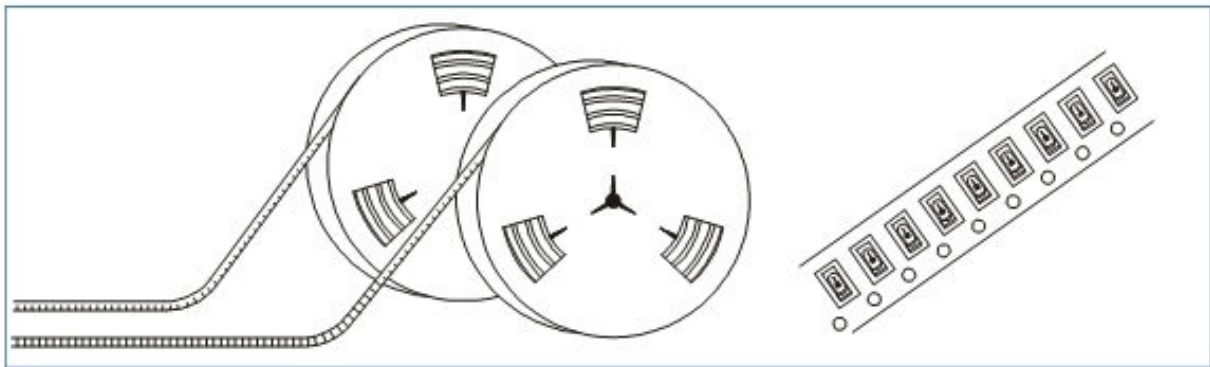
Figure 1



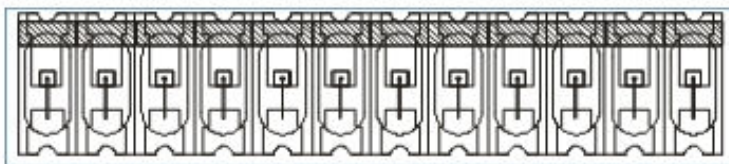
**Figure 2**  
Suggested Mounting Method



**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 ur - XX (no. of LEDs)

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