

# CERLED<sup>®</sup>

## Ceramic Chip SMD

SMD - Wide-Viewing Angle  
CR 50 Y yellow



### 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 back - light applications. Small true chip - LED to build custom configurations.

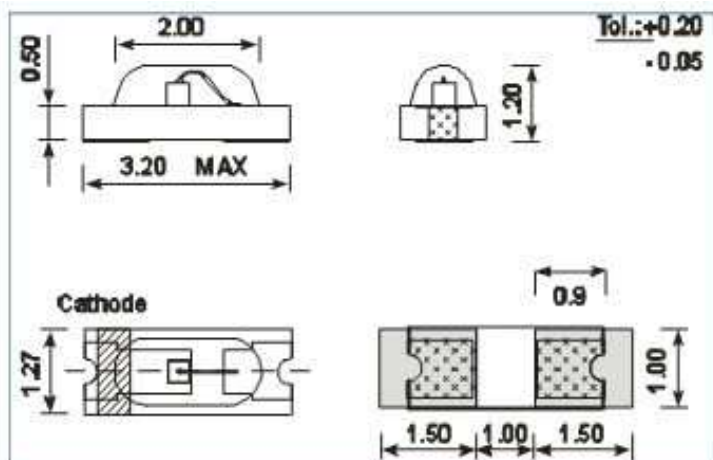
Available on special order in 8 mm blister tape or solid strips of up to 12 pcs with a true pitch of 1.27 mm.

The CR 50 Y has a clear yellow coloured epoxy lens.

Also available with diffused lens (CR 52 Y).

### 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            |                        | 2.4 mW / ° C     |
| Peak forward current       | $I_{FSM}$ (10 $\mu$ s) | 800 mA           |
| Continuous forward current | $I_F$                  | 50 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

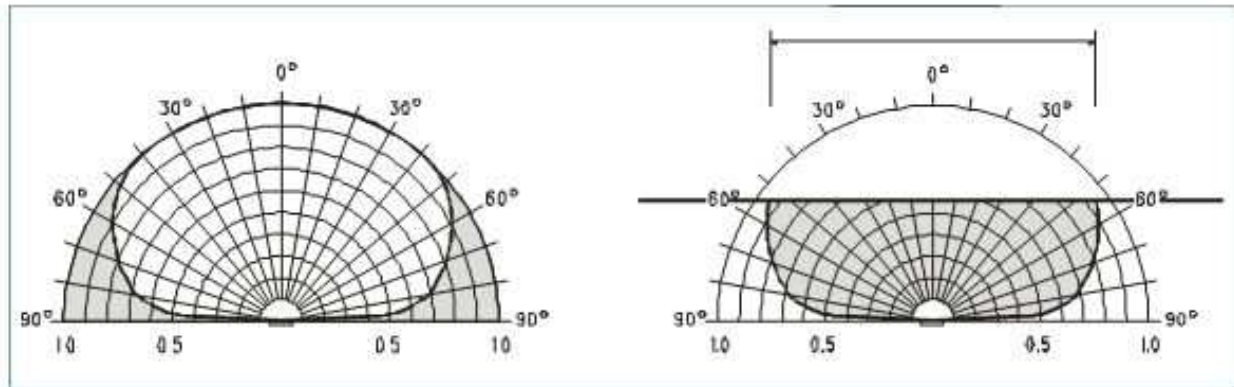
|                          | min | typ  | max | unit    |
|--------------------------|-----|------|-----|---------|
| Luminous intensity       | 6   | 12   |     | mcd     |
| Peak emission wavelength |     | 590  |     | nm      |
| Spectral half bandwidth  |     | 40   |     | nm      |
| Forward voltage          |     | 2.2  | 2.5 | V       |
| Reverse leakage          |     |      | 100 | $\mu$ A |
| Reverse voltage          | 5   |      |     | V       |
| Light emission angle     |     | 180° |     | Degree  |

Note: according IEC 60825-1 (EN60825):

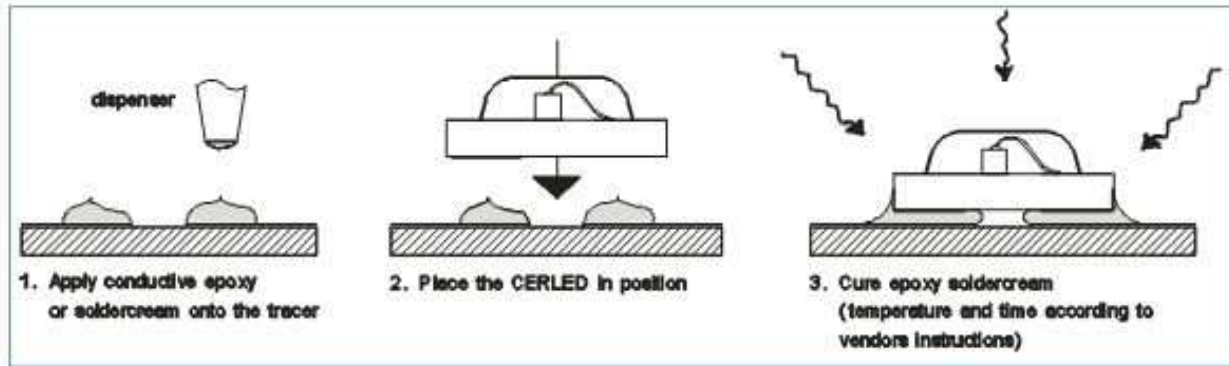
LED Radiation

Do not view directly with optical instruments.

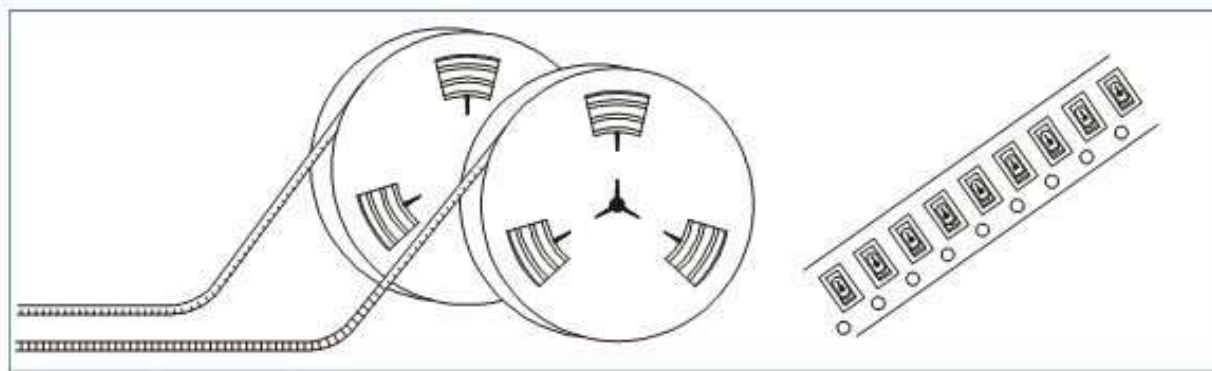
Figure 1



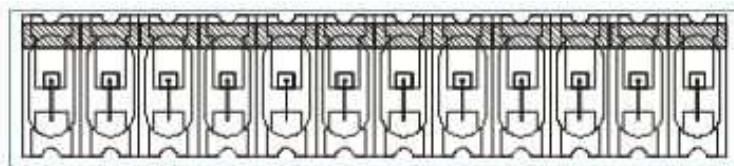
**Figure 2**  
Suggested Mounting Method



**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 y - XX (no. of LEDs)

**Excelitas Technologies**  
**European Customer**  
**Support for LED Solutions**  
Luitpoldstrasse 6  
85276 Pfaffenhofen, Germany  
Telephone: (+49)8441-8917-0  
Fax: (+49)8441-71910  
generalinquiries@excelitas.com

**European Headquarters**  
Wenzel-Jakob-Strasse 31  
65199 Wiesbaden, Germany  
Telephone: (+49)611-492-247  
Fax: (+49)611-492-170

**North America**  
**Customer Support Hub**  
22001 Dumberry Road  
Vaudreuil-Dorion, Quebec  
Canada J7V 8P7  
Telephone: (+1) 450-424-3300  
(+1) 866-574-6786 (toll-free)  
Fax: (+1) 450-424-3345

**Asia Customer Service Hub**  
47 Ayer Rajah Crescent #06-12  
Singapore 139947  
Telephone: (+65)6775-2022  
(+65)67704-366  
Fax: (+65)6775-1008

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