

CERLED<sup>®</sup>

## Ceramic Chip SMD

SMD - Wide-Viewing Angle  
CR 50 TE Photo Transistor

## Description

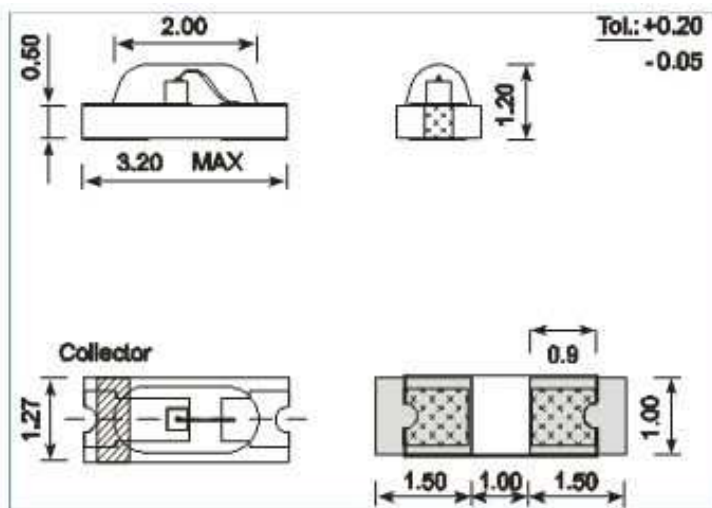
The solder pads provide an excellent heat sink. For multi-sensors just choose 2 or more CERLEDs. Clear epoxy lens.

Special Type (CR50TE-DLF) with daylight filter on request.

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

- Solid state ceramic chip
- Surface mounting device
- High thermal conductivity
- 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

Storage temperature	$T_{st}$	-25° C to 120° C
Operating temperature	$T_{op}$	-25° C to 80° C
Soldering temperature	$T_{sld}$ (10 s)	240° C

### Optical and Electronic Characteristics at 25° C

	min	typ	max	unit	conditions
Collector emitter breakdown voltage ( $V_{CE}$ )	40			V	$I = 100 \mu A$
Dark current ( $I_{CEO}$ )			400	nA	$V_{CE} : 20V, E_v : 0Lx$
Saturation voltage ( $V_{CEsat}$ )			0.3	V	$I_c : 2 mA, I_b : 1000 \mu A$
Wavelength of max. sensitivity ( $\lambda_{max}$ )		900		nm	
Photo current rise / fall time ( $t_{on} / t_{off}$ )		4		$\mu s$	$R_L = 50 \Omega, f = 1 MHz$
Photosensitive area (A)		0.18		mm <sup>2</sup>	
Power dissipation ( $P_{tot}$ )		200		mW	
Current gain ( $h_{FE}$ )	1000		1800		$V_{CE} = 5V, I_b = 3 \mu A$

Figure 1

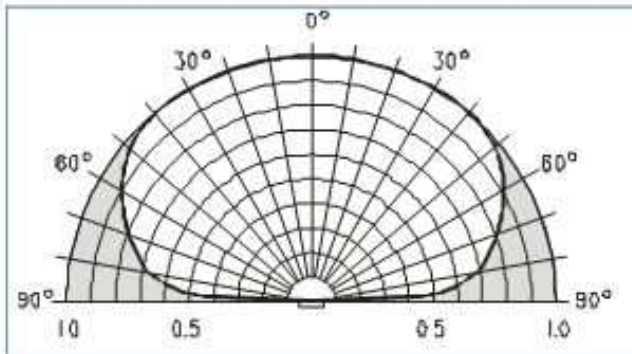
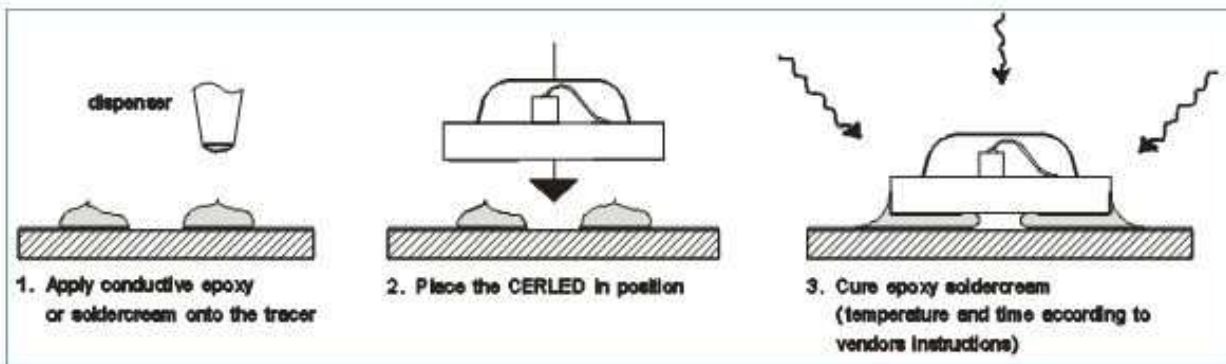


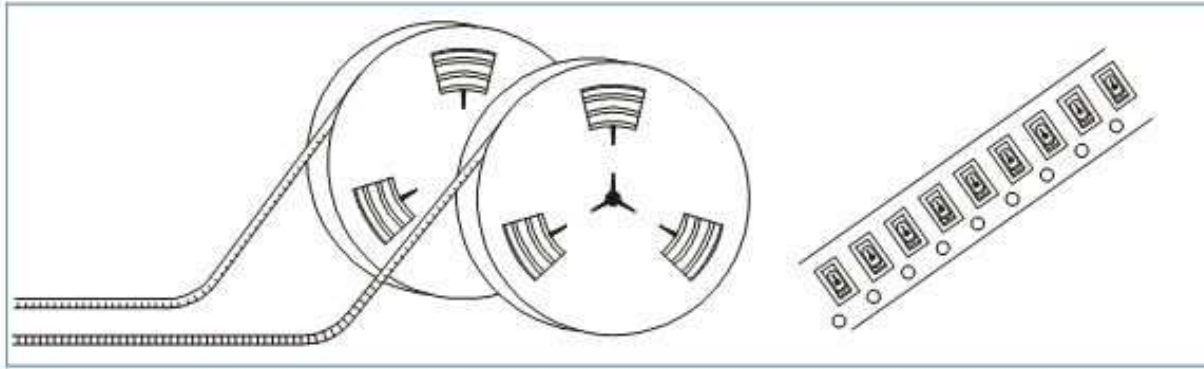
Figure 2

Suggested Mounting Method



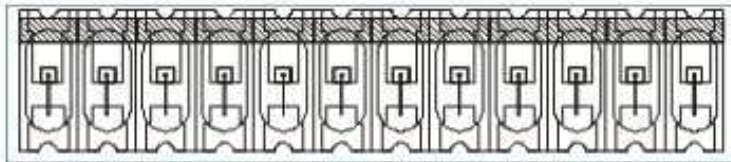
**Figure 3**

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 te - XX (no. of LEDs)

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