

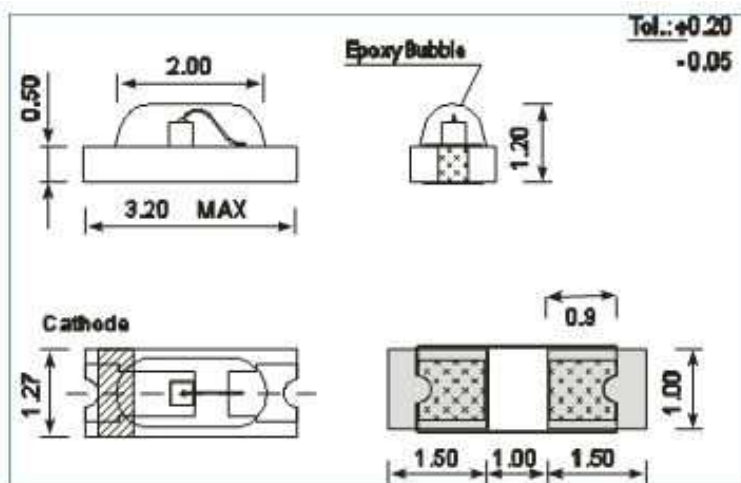
CERLED[®]

Ceramic Chip SMD

SMD - Wide-Viewing Angle
CR 50 IRDA infrared

Description

The solder pads $2 \times 1 \text{ mm}^2$ 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

- 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
- Ideal for data transmission

Maximum Ratings at 25° C

Power dissipation	P_{tot}	130 mW
Derating linear		2.4 mW / ° C
Peak forward current	I_{FSM} (10 μ s)	800 mA
Continuous forward current	I_F	75 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.

Optical and Electronic Characteristics at 25° C

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

	min	typ	max	unit
Radiant power (50 mA)	10.5	20		mW
Radiant power (20 mA)	4.5	8.2		mW
Peak emission wavelength		870		nm
Spectral half bandwidth		45		nm
Forward voltage (50 mA)		1.5	1.8	V
Forward voltage (20 mA)		1.4	1.7	V
Reverse leakage current ($V_R = 6$ V)			8.0	μ A
Reverse voltage	5			V
Rise / fall - time		30 / 15		ns
Light emission angle		160°		Degree

Note: according IEC 60825-1 (EN60825):

LED Radiation

Do not view directly with optical instruments.

Figure 1

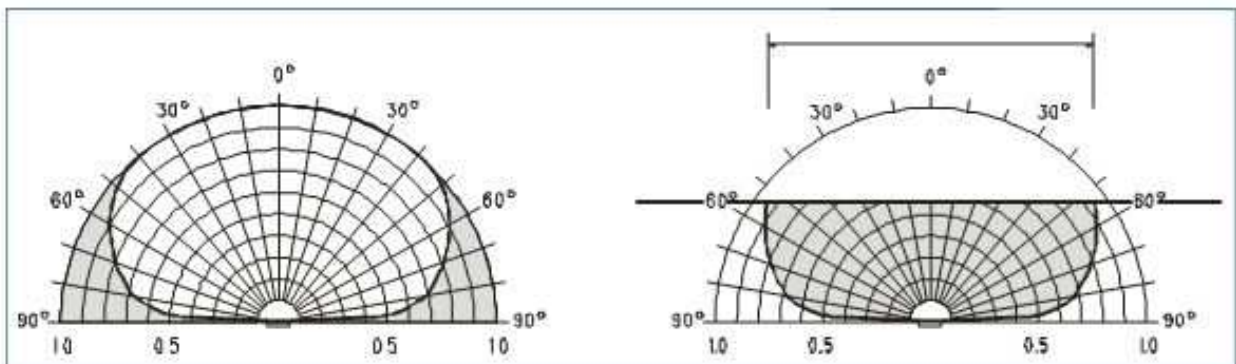


Figure 2
Suggested Mounting Method

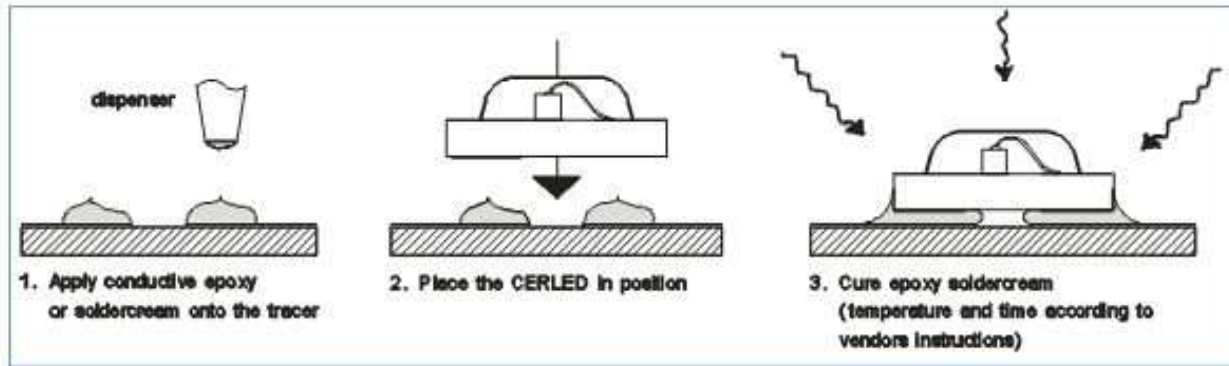


Figure 3
Special Packaging Standard 8 mm Blister Tape

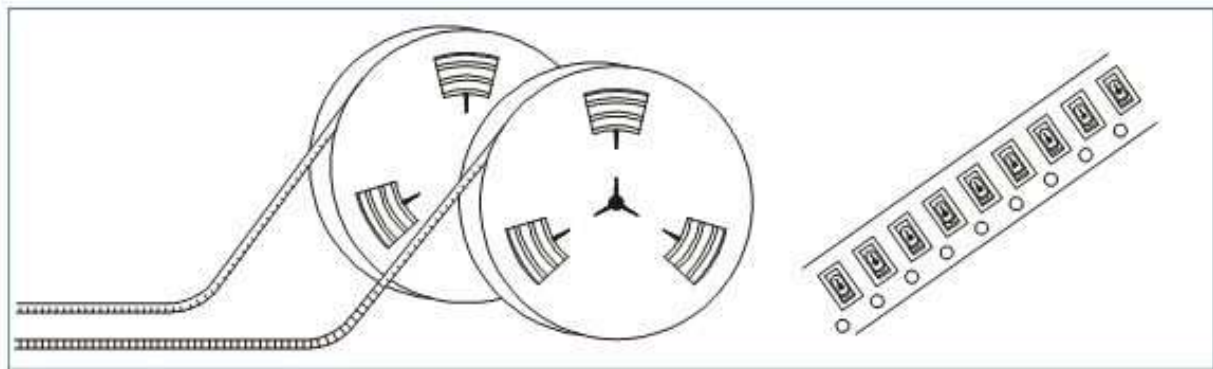
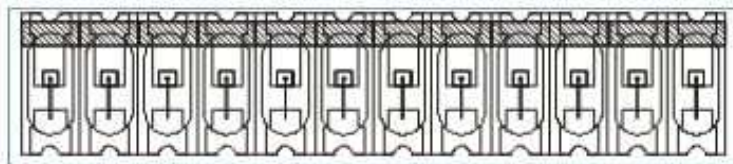


Figure 4
Arrays: Available in strips up to 12 CERLEDs with a max. pitch tolerance in spacing and linearity of ± 0.01 mm between chip centers.



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

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