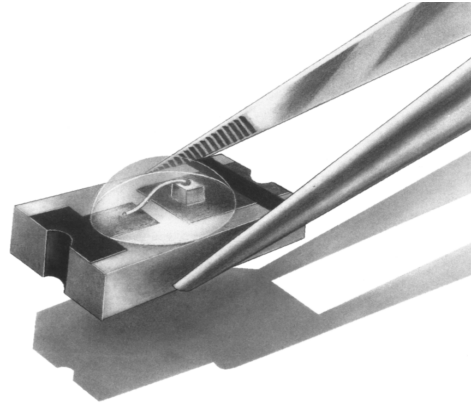


# CERLED<sup>®</sup>

## Ceramic Chip SMD

SMD – Wide-Viewing Angle  
CR 10 – 1M hyper red special



### Description

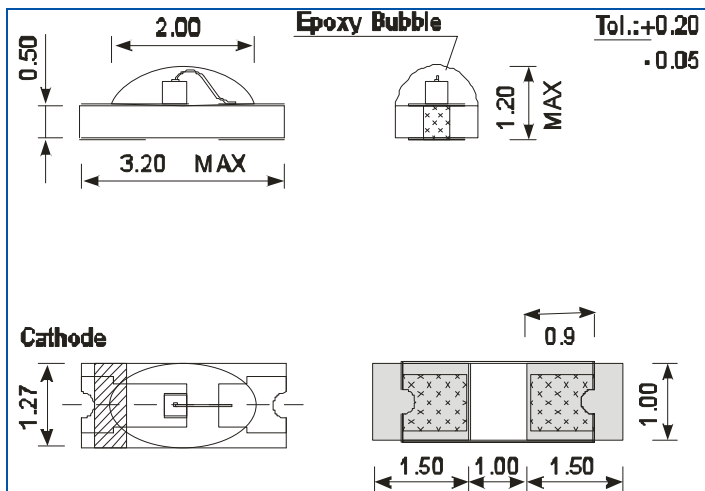
The solder pads provide an excellent heat sink. For multi-chip arrays just choose 2 or more CERLEDs and mount them side by side or even antiparallel. Ideal for back - light applications. Small true chip - LED to build custom configurations.

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 10 - 1M has a clear epoxy lens.

### Features and Benefits

- ▶ Solid state ceramic chip
- ▶ Surface mounting device
- ▶ High thermal conductivity
- ▶ Superior light uniformity
- ▶ No IR-emission
- ▶ Esp. for medical applications
- ▶ 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	$T_{solid}$ (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.optoelectronics.perkinelmer.com](http://www.optoelectronics.perkinelmer.com).

### Optical and Electronic Characteristics at 25 °C

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

	min	typ	max	unit
Luminous intensity	25	50		mcd
Peak emission wavelength	655	658	661	nm
Spectral half bandwidth		20		nm
Forward voltage		1.8	2.2	V
Reverse leakage			100	$\mu$ A
Reverse voltage	5			V
Rise/fall - time		40 / 30		ns
Light emission angle		180°		Degree

Note: according IEC 60825-1 (EN60825):

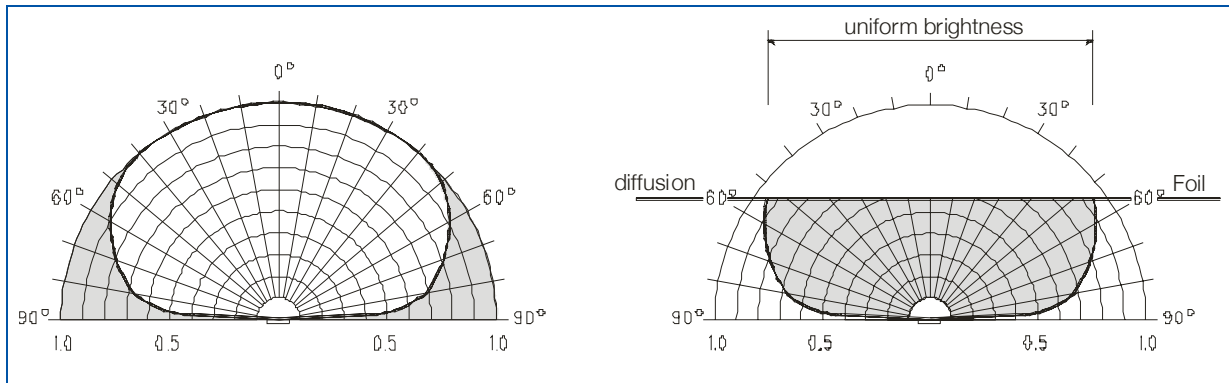
LED Radiation

Do not view directly with optical instruments.

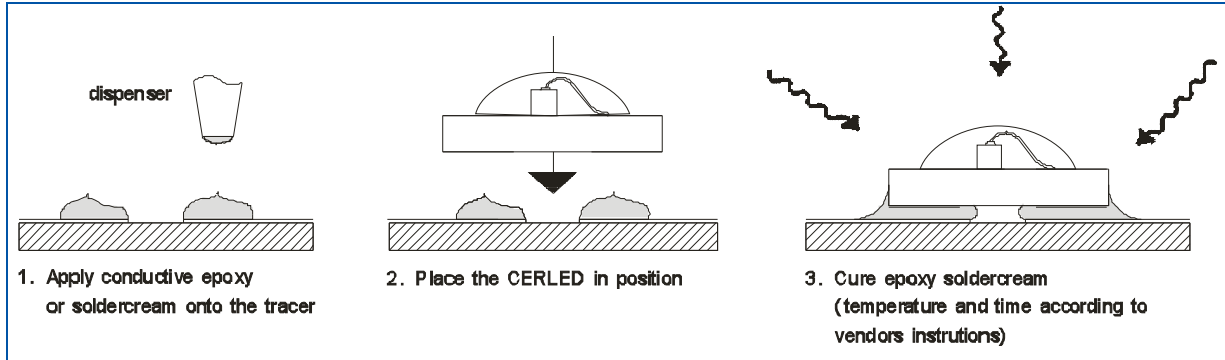
Hyper - red GaAlAs material, D-H - structure , peak wavelength 3nm Tol., no second IR – emission.

FOR MEDICAL APPLICATIONS!

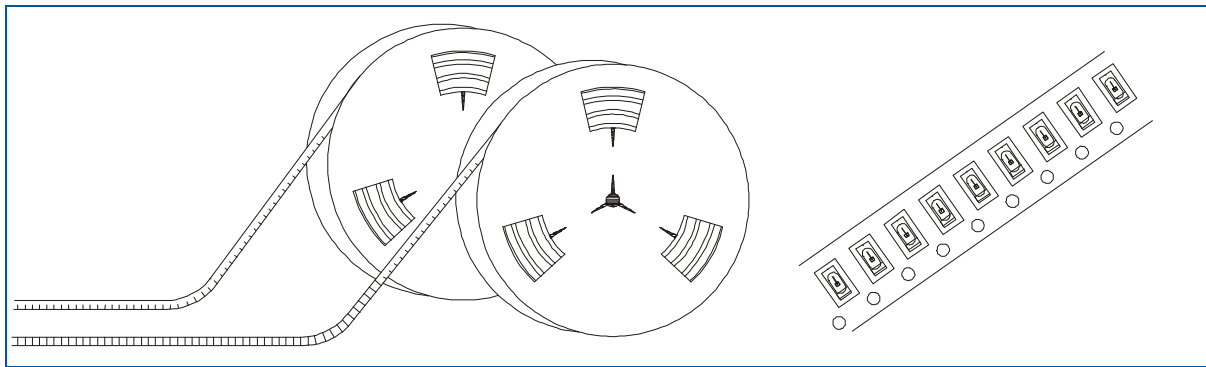
Figure 1



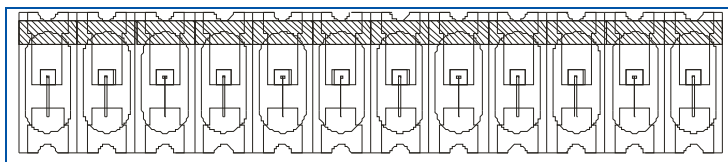
**Figure 2**  
Suggested Mounting Method



**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 10-1m – XX (no. of LEDs)

**PerkinElmer Elcos GmbH**  
European Customer Support for LED Solutions  
Luitpoldstrasse 6  
85276 Pfaffenhofen, Germany  
Telephone: (+49)8441-8917-0  
Fax: (+49)8441-71910  
Elcos.sales@perkinelmer.com

**European Headquarters**  
Wenzel-Jaksch-Strasse 31  
65199 Wiesbaden, Germany  
Telephone: (+49)611-492-247  
Fax: (+49)611-492-170  
opto.Europe@perkinelmer.com

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

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



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