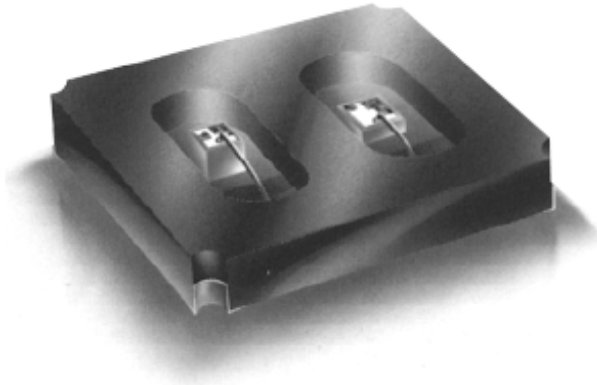


CERLED[®]

Ceramic Chip SMD

SMD – Reflective Sensor
CRS 20



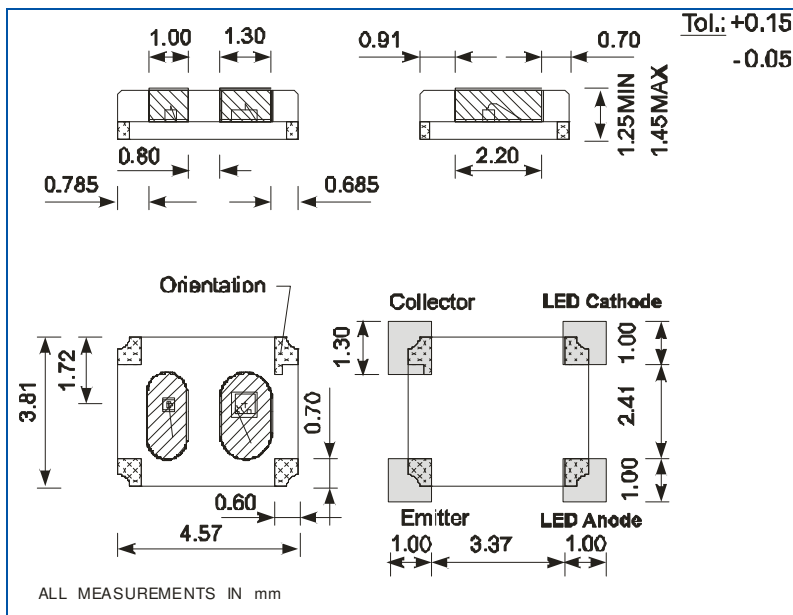
Description

This opto device is specially designed for all applications where the space is very limited and a highly reliable product is needed. Especially for hybrid and SMT.

The solder pads are a very good heat sink, so that high power dissipation is achievable. Best reflective distance: 0.9 mm (paper).

Features and Benefits

- ▶ Surface mounting device
- ▶ Complete ceramic housing
- ▶ High temperature range
- ▶ Miniature size
- ▶ Solder pads conform with Mil-Std. 883 B



Maximum Ratings at 25 °C

Total power dissipation	P_V	200 mW
Storage temperature	T_{stg}	-25 °C to 125 °C
Operating temperature	T_{op}	-25 °C to 85 °C
Soldering temperature	T_{sold} (10 s)	240 °C

Note: During solder process the component must not be held or fixed mechanically on the upper part.

Emitter

Wavelength	λ	950 nm
Reverse voltage	V_R	5 V
Continuous forward current	I_F	60 mA
Pulse current (10usec)	I_{Peak} 10 μ sec	800 mA
Forward voltage	V_F	1.2 ... 1.4 V

Detector

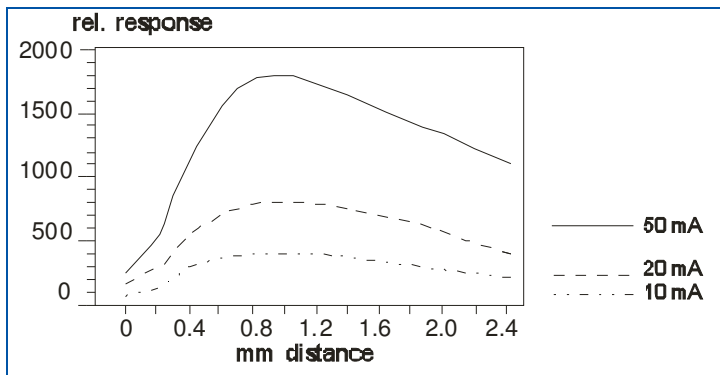
Collector emitter breakdown	V_{CEO}	40 V ($I = 100 \mu A$)
Emitter collector breakdown	V_{ECO}	4.5 V ($I = 100 \mu A$)
Dark current	I_{CEO}	400 nA ($V = 20 V$)
Saturation voltage	$V_{CE sat}$	0.3 V ($I_B = 1 mA$) ($I_C = 2 mA$)
Rise / Fall time ($f = 1 Mhz$)	t_{on} / t_{off}	10 μ s ($R = 50 \Omega$)

Note: according IEC 60825-1 (EN60825):

LED Radiation

Do not view directly with optical instruments.

Figure 1



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



For a complete listing of our global offices, visit www.optoelectronics.perkinelmer.com

©2005 PerkinElmer, Inc. All rights reserved. The PerkinElmer logo and design are registered trademarks of PerkinElmer, Inc. CERLED® is a trademark of PerkinElmer, Inc. or its subsidiaries, in the United States and other countries. All other trademarks not owned by PerkinElmer, Inc. or its subsidiaries that are depicted herein are the property of their respective owners. PerkinElmer reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.
 600054_01 DTS1005