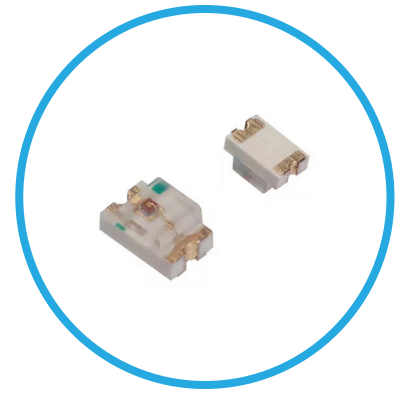


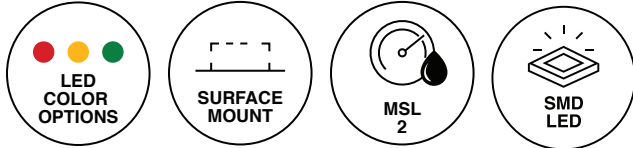
CMD17-21 Series

0805 Package Size

Surface Mount Technology LED



SMD LED available in three colors. Available in clear and diffused lens options



Application

- Wearable and Portable Devices
- Automotive Features
- Navigations Systems
- Home and Smart Appliance
- Backlit Keypads
- Medical Devices
- Health Care Application
- Industrial Control Systems
- Status Indicator

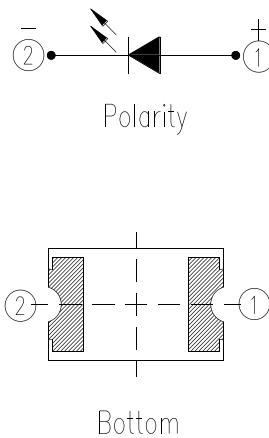
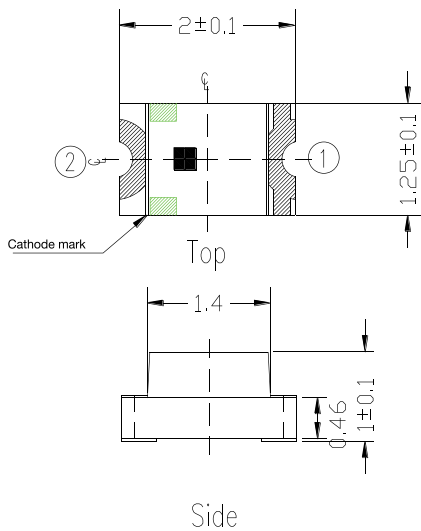
Key Features

- Surface mount technology
- Tape and reel packaged for high-speed auto insertion
- Convection and vapor-phase reflow compatible
- Compact form enables high density placement
- Packaged 3000 pieces per reel
- Lead Finish (Plating): Au
- Under Plating Material: NiCu
- Leading edge LED optoelectronic performance
- Consistent high brightness
- Exceptional Reliability
- Stringent process controls assure quality
- Extensive qualification testing to meet strictest requirements
- Designed to permit easy post-reflow solder joint inspection
- MSL Rating 2
- For custom LED color contact VCC
- RoHS and REACH Compliant

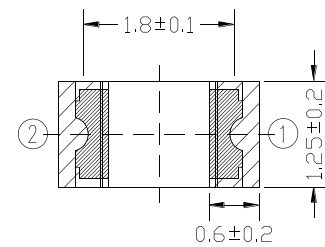
Ordering Data

Series	Emitted Color/Lens Color														
CMD17-21	SRC/TR8														
	<table border="1"> <tbody> <tr> <td>SRC/TR8</td> <td>Super Red/Clear</td> </tr> <tr> <td>VRC/TR8</td> <td>Brilliant Red/Clear</td> </tr> <tr> <td>VYC/TR8</td> <td>Brilliant Yellow/Clear</td> </tr> <tr> <td>VGC/TR8</td> <td>Green/Clear</td> </tr> <tr> <td>VRD/TR8</td> <td>Red/Red Diffused</td> </tr> <tr> <td>VYD/TR8</td> <td>Yellow/Yellow Diffused</td> </tr> <tr> <td>VGD/TR8</td> <td>Green/Green Diffused</td> </tr> </tbody> </table>	SRC/TR8	Super Red/Clear	VRC/TR8	Brilliant Red/Clear	VYC/TR8	Brilliant Yellow/Clear	VGC/TR8	Green/Clear	VRD/TR8	Red/Red Diffused	VYD/TR8	Yellow/Yellow Diffused	VGD/TR8	Green/Green Diffused
SRC/TR8	Super Red/Clear														
VRC/TR8	Brilliant Red/Clear														
VYC/TR8	Brilliant Yellow/Clear														
VGC/TR8	Green/Clear														
VRD/TR8	Red/Red Diffused														
VYD/TR8	Yellow/Yellow Diffused														
VGD/TR8	Green/Green Diffused														

Product Dimensions



Recommended Soldering Pattern



Notes:

1. All dimensions are in mm
2. Tolerance is ± 0.1 mm unless otherwise noted
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Product Specifications

Electrical-Optical Characteristics

Part Number	Emitted Color	Lens Color	Test Current (mA)	Luminous Intensity		Forward Voltage		Peak Wavelength (nm)	Viewing Angle (degrees)
				Min. (mcd)	Typ. (mcd)	Typ. (V)	Max. (V)		
CMD17-21SRC/TR8	Super Red	Clear	20	10.0	21.0	1.7	2.4	660	140
CMD17-21VRC/TR8	Brilliant Red	Clear	20	15	38	2.0	2.4	632	140
CMD17-21VYC/TR8	Brilliant Yellow	Clear	20	15	38	2.0	2.4	591	140
CMD17-21VGC/TR8	Brilliant Green	Clear	20	12	17	2.0	2.4	573	140
CMD17-21VRD/TR8	Red	Red Diffused	20	40	80	2.0	2.4	632	150
CMD17-21VYD/TR8	Yellow	Yellow Diffused	20	2.5	4.0	2.0	2.8	505	140
CMD17-21VGD/TR8	Green	Green Diffused	20	14	18	2.0	2.4	575	150

Absolute Maximum Ratings

Emitted Color	Power Dissipation (mW)	Operating/Storage Temperature (°C)	Average Forward Current (mA)	Peak Forward Current (1 μ s @ 10% duty cycle)	Reverse Voltage (IR=100 μ A) (V)	Lead Solder Time at 260°C (Seconds)
Super Red	100	-40 to +85	30	150	5.0	5
Brilliant Yellow	60	-40 to +85/-40 to +90	25	60	5.0	10 Max
Brilliant Green	60	-40 to +85/-40 to +90	25	60	5.0	10 Max
Green Diffused	60	-40 to +85/-40 to +90	25	60	5.0	10 Max
Brilliant Red	60	-40 to +85/-40 to +90	25	60	5.0	10 Max
Red Diffused	60	-40 to +85/-40 to +90	25	60	5.0	10 Max

Precautions

Over-current-proof

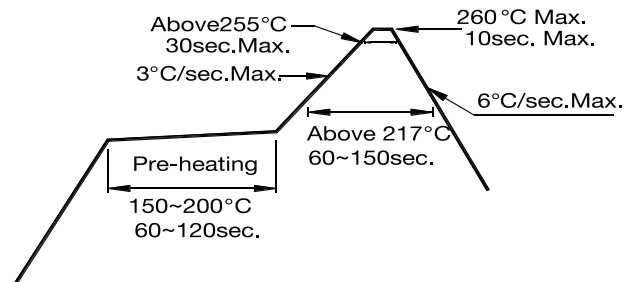
- Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

Storage

- Do not open moisture proof bag before the products are ready to use.
- After opening the package: The LEDs should be kept at 30°C or less and 60%RH or less.
- The LEDs should be used within 168 hours (7days) after opening the package. If unused LEDs remain, it should be stored in moisture proof packages.
- If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions. Baking treatment : 60±5°C for 24 hours.

Soldering Condition

- Pb-free solder temperature profile



- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.

Soldering Iron

- Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.

Repairing

- Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

