

CMD28-21 Series

SMT LED Gull Wing Leads

CMD28-21 Series features a SMD LED with a high intensity light output and a clear lens

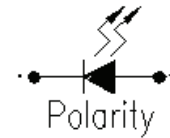
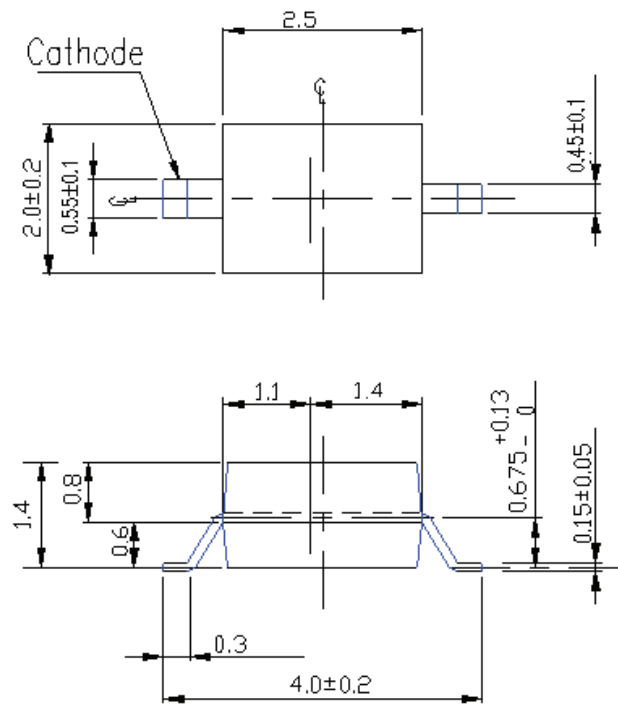


Applications

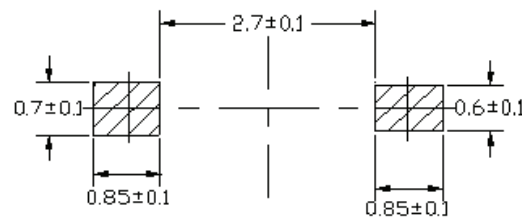
- Wearable and Portable Devices
- Automotive Features
- Navigations Systems
- Home and Smart Appliance
- Backlit Keypads
- Medical Devices
- Health Care Application
- Industrial Control Systems
- Status Indicator

Key Features

- Surface mount technology
- Tape and reel packaged for high-speed automatic insertion
- Convection and vapor-phase reflow compatible
- Compact form enables high density placement
- Packaged 2000 pieces per reel
- Leading edge LED optoelectronic performance
- Consistent high brightness
- Low current types available
- Exceptional reliability
- Stringent process controls assure quality
- Extensive qualification testing to meet strictest requirements
- Designed to permit easy post-reflow solder joint inspection
- Compliant with RoHS and REACH requirements



Solder Pad Geometry



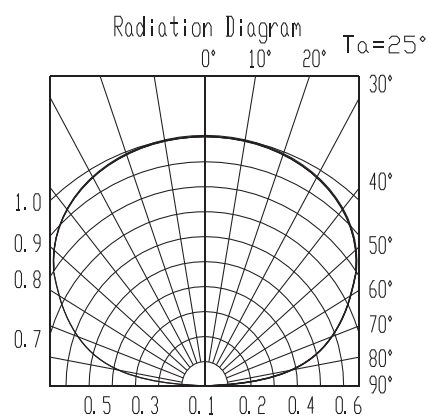
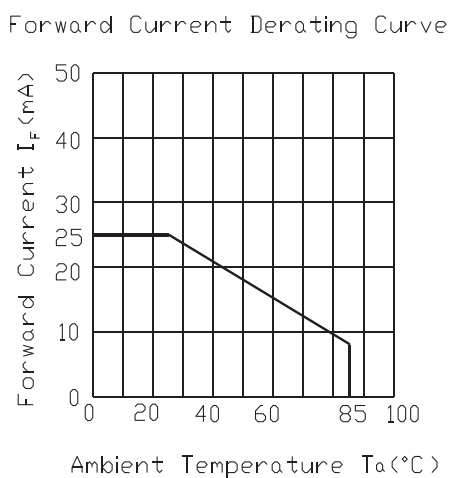
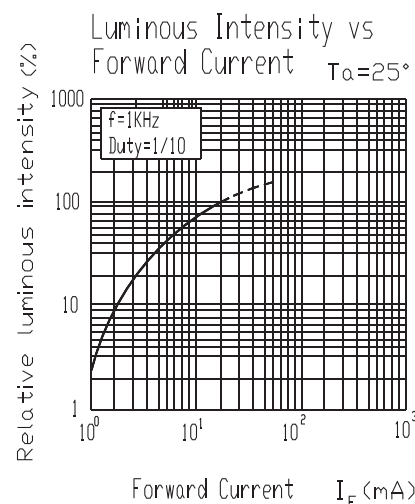
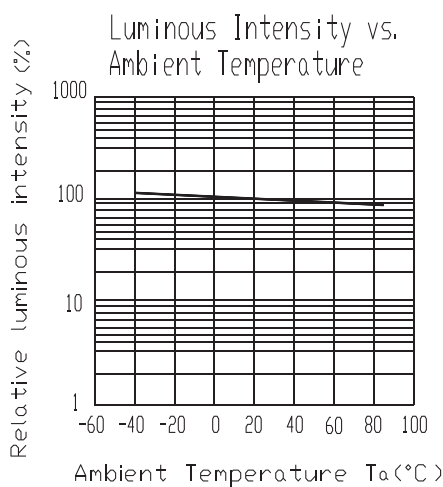
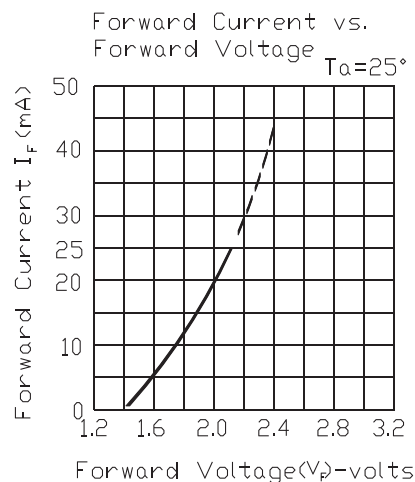
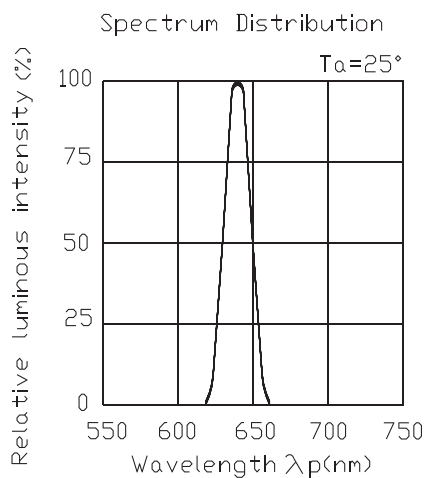
Notes:

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

Part Number	CMD28-21VGC/TR8	CMD28-21VYC/TR8	CMD28-21VRC/TR8
Output Color	Yellow Green	Yellow	Hyper Red
Package Type	Single	Single	Single
Lens Color	Clear	Clear	Clear
Forward Current (mA)	20	25	25
Forward Voltage Typ.(V)	2.0	2.0	2.0
Forward Voltage Max.(V)	2.4	2.4	2.4
Luminous Intensity Min.(mcd)	13 (Typical)	21	12
Luminous Intensity Typ.(mcd)	23 (Typical)	33	29
Luminous Intensity Max.(mcd)	-	-	-
Peak Wavelength Typ (nm)	575	591	632
Viewing Angle 2 θ 1/2 (degrees)	150	150	150
Power Dissipation (mW)	60	60	60
Operating Temperature(°C)	-40 to +85	-40 to +85	-40 to +85
Storage Temperature(°C)	-40 to +100	-40 to +90	-40 to +100
Peak Forward Current (Duty 1/10@ 1KHz) (mA)	60	60	160
Reverse Voltage (V)	5.0	5.0	5.0
Lead Solder Time@260°C \pm 5°C (sec.)	10 Max	10	10 Max

CMD28-21VRC/TR8



Precautions

Over-current-proof

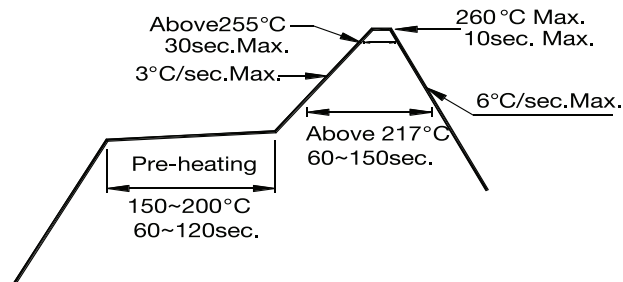
- Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

Storage

- Do not open moisture proof bag before the products are ready to use.
 - Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.
 - After opening the package: The LEDs shelf life is 168 hours under 30°C or less and 60% RH or less.
- 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



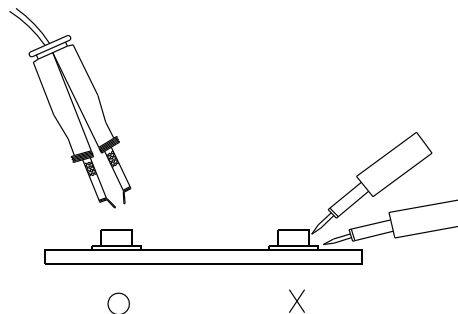
- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.

Soldering Iron

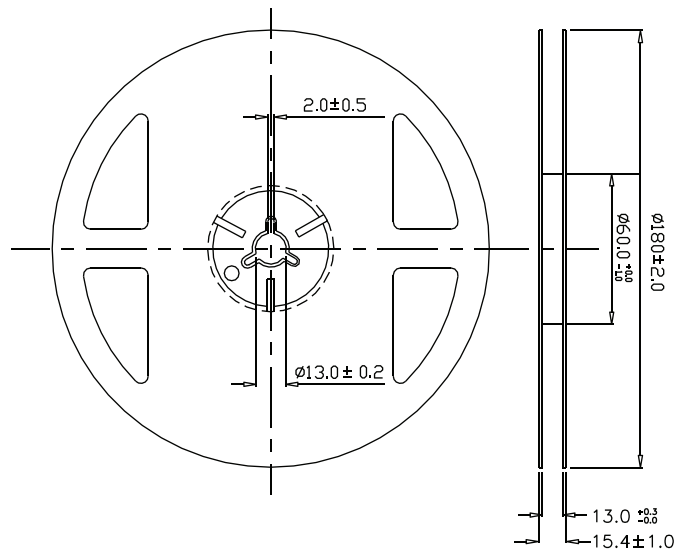
- Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time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

Repairing

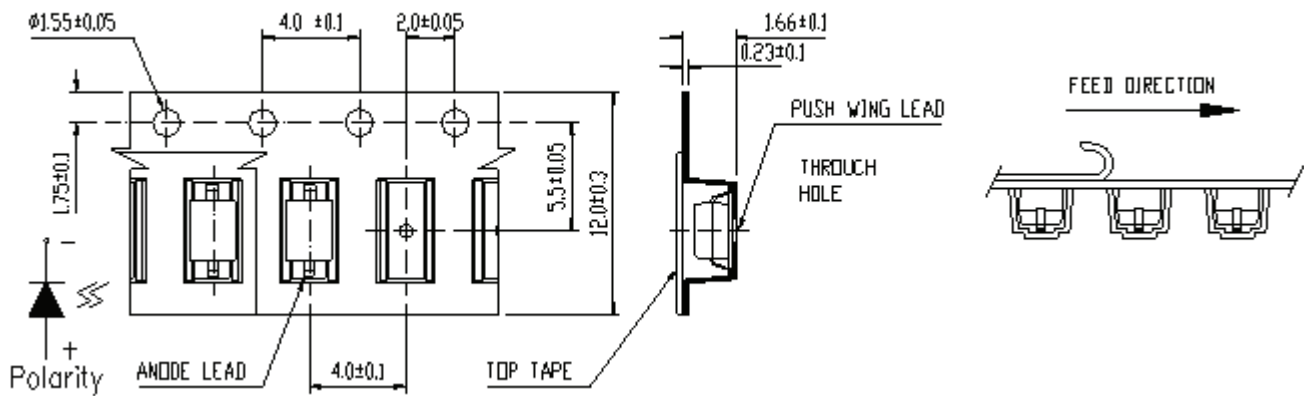
- Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.



Tape and Reel Dimensions



Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



Notes:

1. The tolerance unless mentioned is $\pm 0.1\text{mm}$

Compliances and Approvals



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

VCC:

[CMD28-21VRC/TR8](#)