DATA SHEET

CMD17-21VYDS/TR8

Top-mount 0805 amber chip LED with high brightness and low power, consumption ideal for compact SMD applications.

Product Specifications

Item	Specification	Material
Luminous Intensity (Iv)	Yellow:45.0-180.0 mcd @20mA/ Ts= 25°C;Tolerance: + 10%	
Wavelength	Yellow:584.5-594.5 nm @20mA/ TS= 25°C;Tolerance: + 0.5nm	
V_f	Yellow:1.6-2.4V @20mA/ TS= 25°C ;Tolerance: + 0.05V	
I_r	< 10 µA @ VR = 5 V	
Resin	Diffused	Epoxy
Carrier tape	EIA 481-1A specs	Conductive black tape
Reel	EIA 481-1A specs	Conductive black
Label	HT standard	Paper

Packaging parameters are subject to change without prior notice.

ATTENTION: Handle with Electrostatic Discharge (ESD) Precautions

The adjacent symbol indicates that ESD protection is required. While GaP and AlGaAs chips are relatively resistant to low static discharge, proper ESD handling is still recommended. Devices using AlGaInP, GaN, or InGaN are highly sensitive to static and must be protected throughout design and assembly.

If manual handling is necessary, ensure proper ESD safeguards are in place.

Product Features

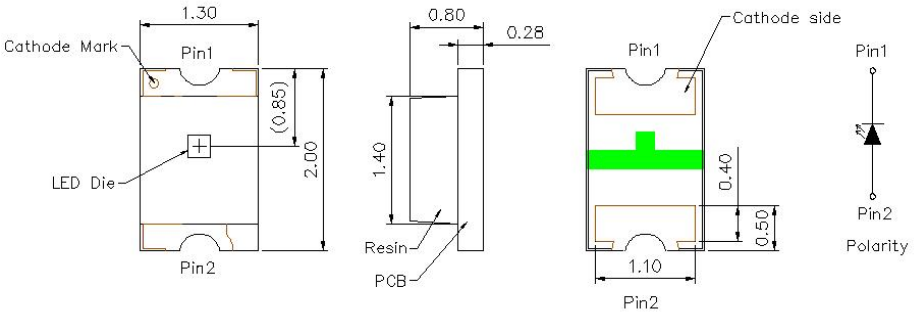
Electro-Optical Characteristics

($T_{Soldering}$, 25°C)

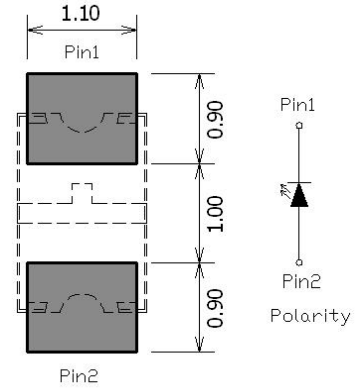
Part Number	Emitting Color	Material	V_F(V)		Wavelength λ(nm)			I_V(mcd)	Viewing
			typ	max	λ_D	λ_P	△λ	Typical	Angle $2\theta\frac{1}{2}$
CMD17-21VYDS/TR8	Yellow	AlGaInP	2.0	2.4	589	591	20	71.5	130

Package Outline Dimension and Recommended Soldering Pattern for Reflow Soldering

Outline Dimensions



Suggest Soldering Pattern



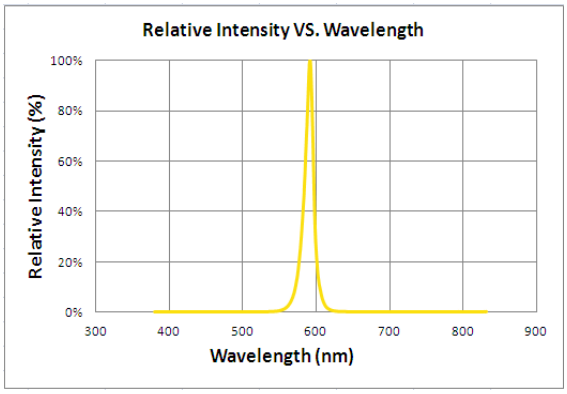
(Unit:mm Tolerance: +/-0.25)
(T soldering 25°C)

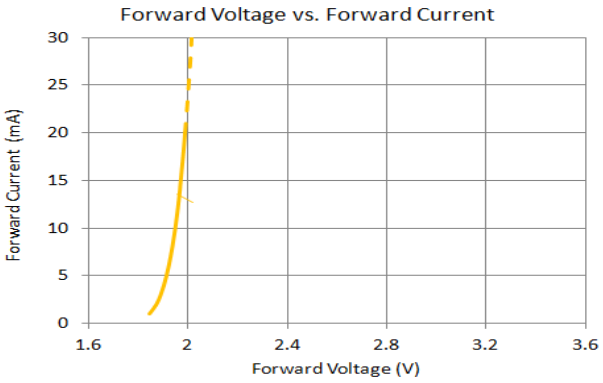
Absolute Maximum Ratings

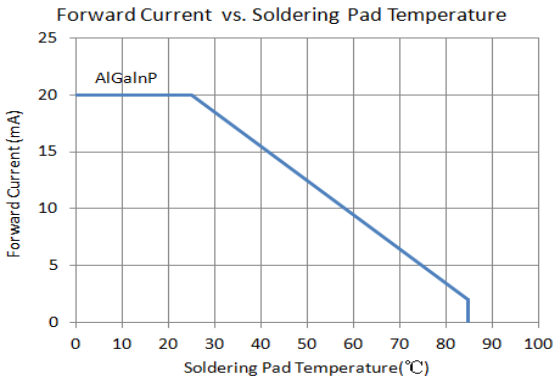
Series	P_D(mW)	I_F (mA)	I_{FP}(mA)*	T_{OP} (°C)	T_{ST} (°C)
Color	Power Dissipation	Forward Current	Pulse Forward Current	Operating Temperature	Storage Temperature
Yellow	48	20	100	-40 ~ +85	-40 ~ +100

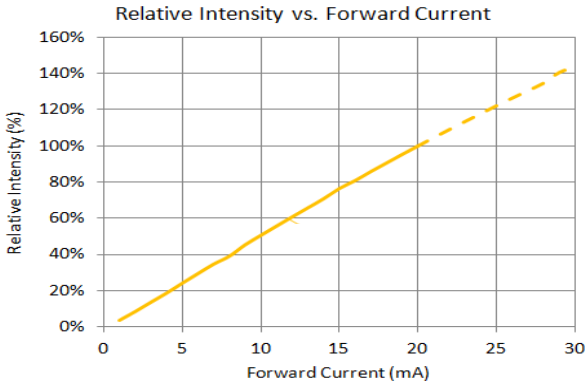
*Condition for I_{FP} is pulse of 1/10 duty and 0.1 msec width

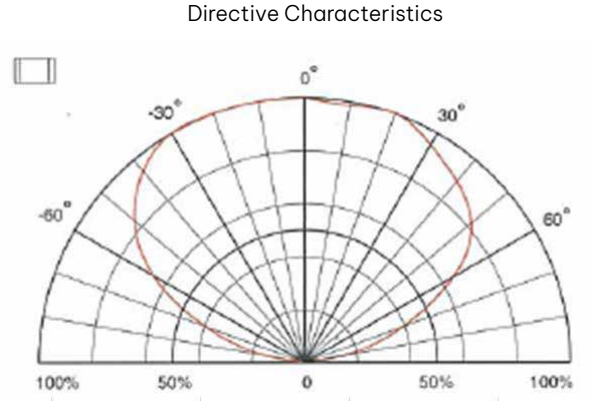
Characteristics of B1701UY

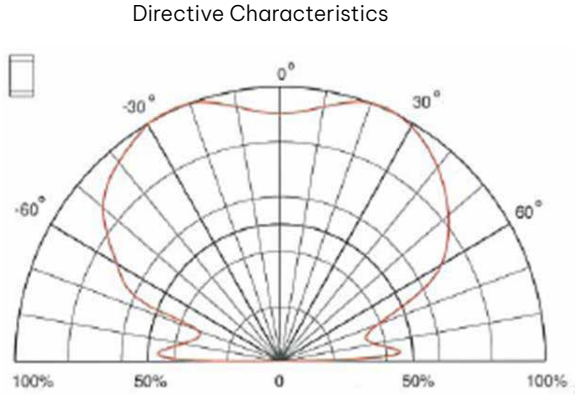




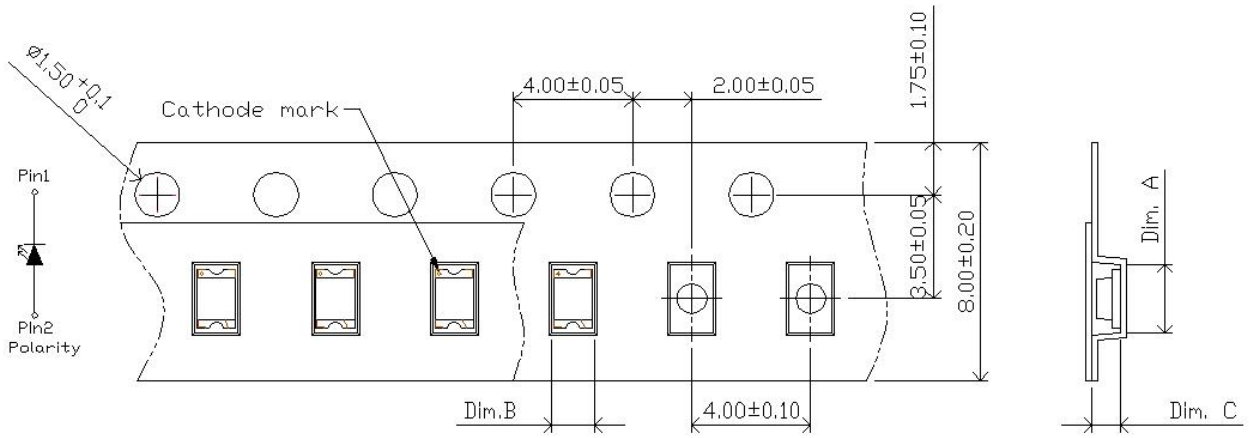




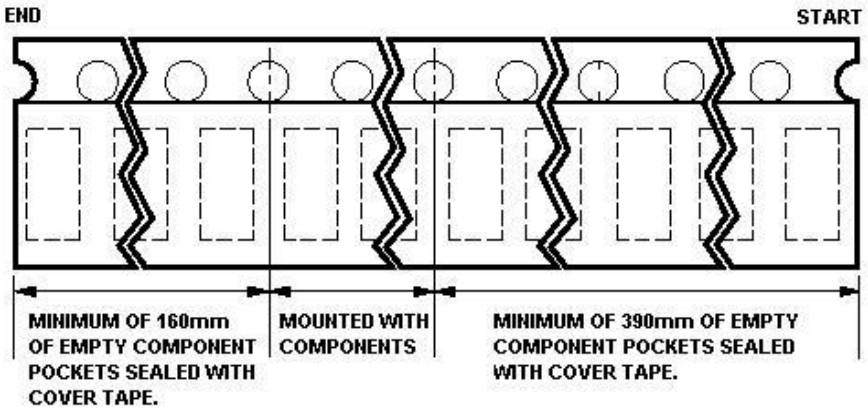




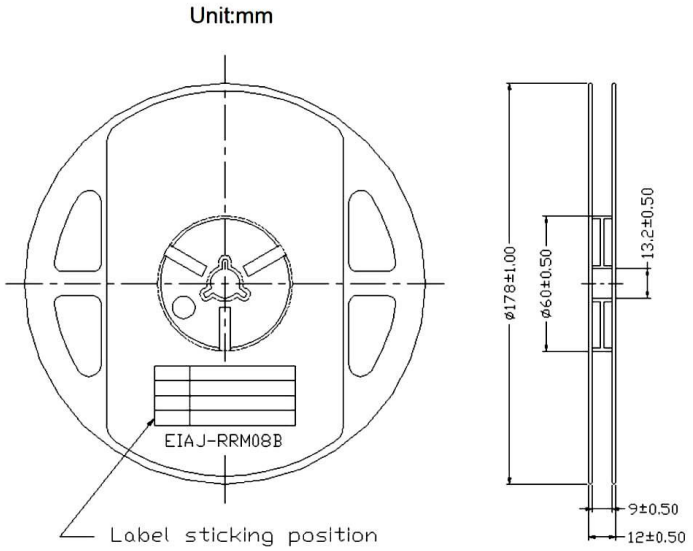
Packaging
Tape Dimension



Dim. A	Dim. B	Dim. C	Qty/Reel
2.20±0.05	1.42±0.05	0.88±0.05	4K



Reel Dimension



Precautions

1. Do not expose the chips directly to any liquids like water, oil, or solvents.

2. Before operation, ensure the ambient temperature does not exceed the LED's limits while illuminated.

3. Store LEDs in a clean area. If storage exceeds 3 months after shipping, use a nitrogen-sealed container.

4. Once unpacked, use LEDs within 4 weeks. Unused parts must be repackaged in anti-static bags and kept in a dry, cool place.

5. Product appearance and specs may change without prior notice for improvements.

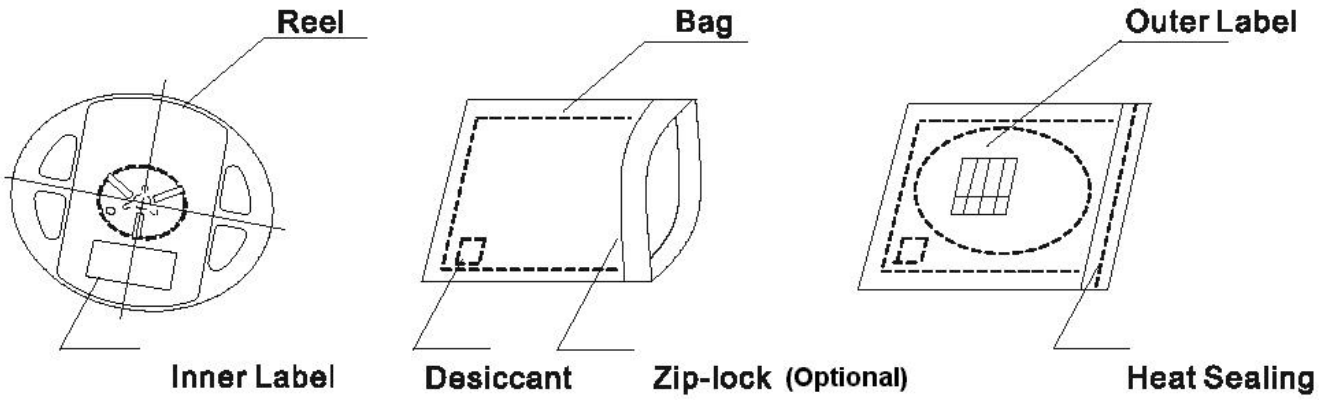
6. LEDs are sensitive to static and power surges. Always use anti-static gloves and a grounded wrist strap. Exceeding maximum voltage may damage the LED, causing high leakage current, low turn-on voltage, or failure to light.

Dry Pack Handing

All SMD optical components are **moisture sensitive** and must be protected from humidity during storage and transport. Each reel is sealed in a moisture-resistant, anti-static bag before shipping.

A humidity indicator is placed inside the bag to monitor moisture exposure.

The packaging sequence is as follows:



Baking Guidelines & Precautions

If the package has been open for more than 4 weeks, baking before soldering is recommended:

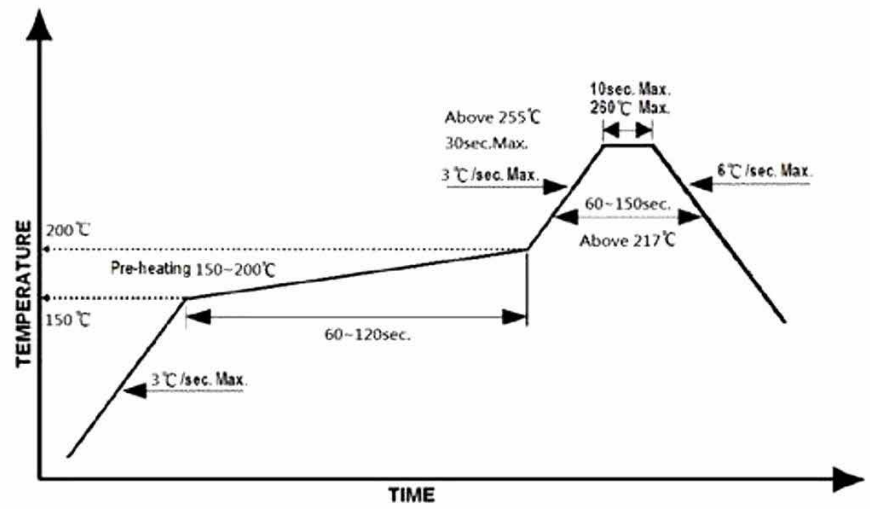
1. Taped reels: 60±3°C for 12–24 hours, <5% RH
2. Bulk type: 100±3°C for 45 minutes–1 hour
3. Bulk type (faster option): 130±3°C for 15–30 minutes

Precautions:

1. Always keep components protected from moisture during storage and transport.
2. Use anti-static protection when handling GaN, InGaN, or AlGaInP products.
3. Use a proper current-limiting resistor to prevent damage.
4. Do not exceed the absolute maximum ratings.
5. Avoid touching the LED's light-emitting surface.

Reflow Soldering Guidelines

1. **Operating temperature:** Above 217°C for 60–150 seconds
2. **Peak temperature**: Max 260°C for no more than 10 seconds
3. Limit reflow soldering to a maximum of **two cycles**
4. Allow the component to fully **cool to room temperature** before proceeding to the next process
5. Follow the recommended **reflow profile**, measured at the LED terminal surface, for optimal results



Reworking Guidelines

- Complete rework within **5 seconds** at a maximum of **260°C**
- Avoid contact between the **soldering iron** tip and **copper foil**
- Use a twin-head soldering iron for best results

Cleaning After Soldering

- Use **isopropyl alcohol** (IPA) or other alcohol-based solvents
- Cleaning time/temperature: **50°C for 30 sec or <30°C for up to 3 min**
- **Ultrasonic cleaning:** <15W, bath volume ≤ 1 liter
- **Curing**: Max 100°C, less than 3 minutes