

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @20mA		Viewing Angle
			Min.	MAX.	2 θ 1/2
CL-BITZ1608DBW-10 K-02	White (GaN)	Yellow Diffused	250	550	120

Note:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ _{peak}	Peak Wavelength	White	10000	16000	k	IF=20mA
λ _D	Dominant Wavelength	White			nm	IF=20mA
Δλ _{1/2}	Spectral Line Half-width	White			nm	IF=20mA
C	Capacitance	White			pF	VF=0V;f=1MHz
VF	Forward Voltage	White	2.6	3.3	V	IF=0mA
IR	Reverse Current	White		2	uA	VR =5V

Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters

Absolute Maximum Ratings at TA=25°C

Parameter	White	Units
Power dissipation	135	mW
DC Forward Current	30	mA
Peak Forward Current [1]	140	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



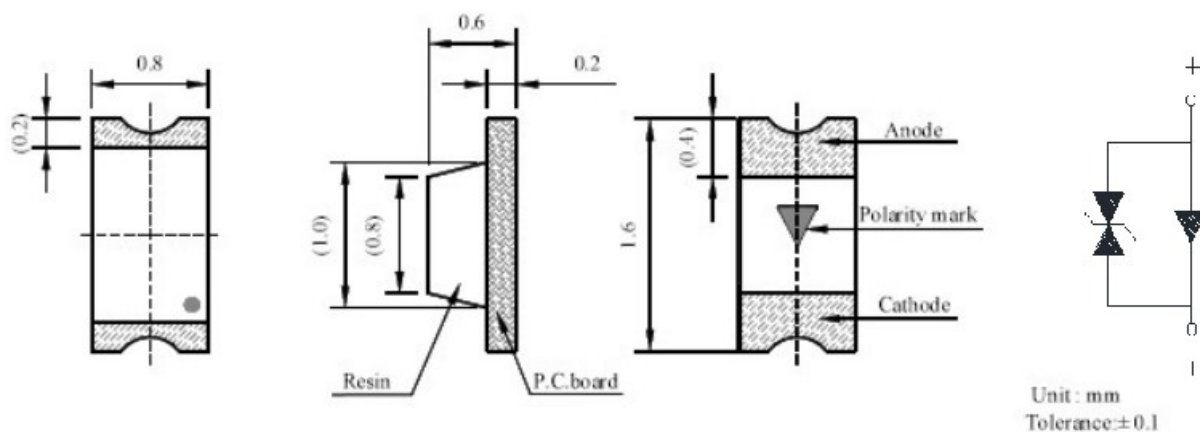
Features

- _1.6mmX0.8mm SMT LED, 0.60mm THICKNESS.
- _LOW POWER CONSUMPTION.
- _WIDE VIEWING ANGLE.
- _IDEAL FOR BACKLIGHT AND INDICATOR.
- _VARIOUS COLORS AND LENS TYPES AVAILABLE.
- _PACKAGE: 4000 PCS / REEL.
- _RoHS COMPLIANT.

Description

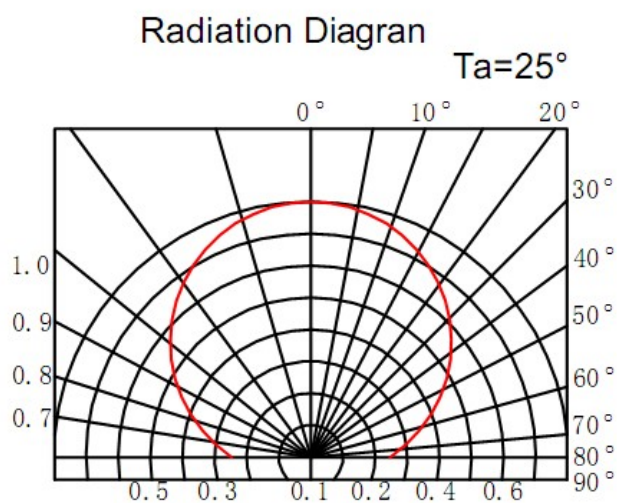
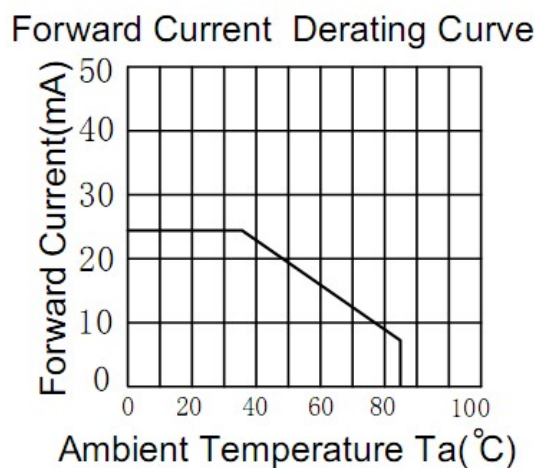
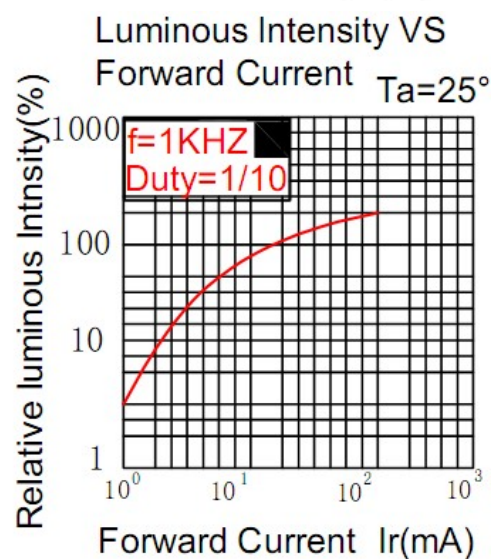
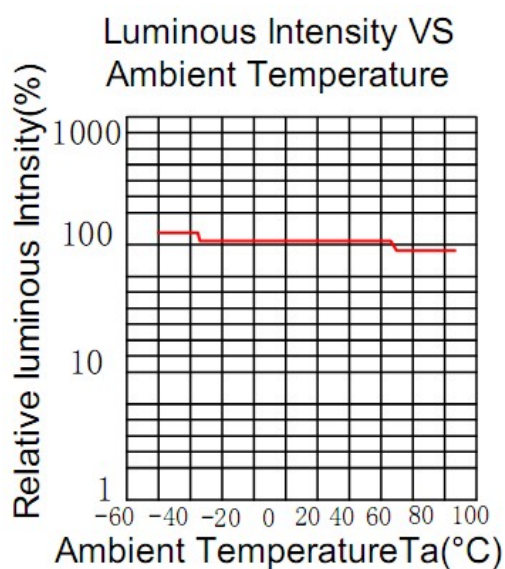
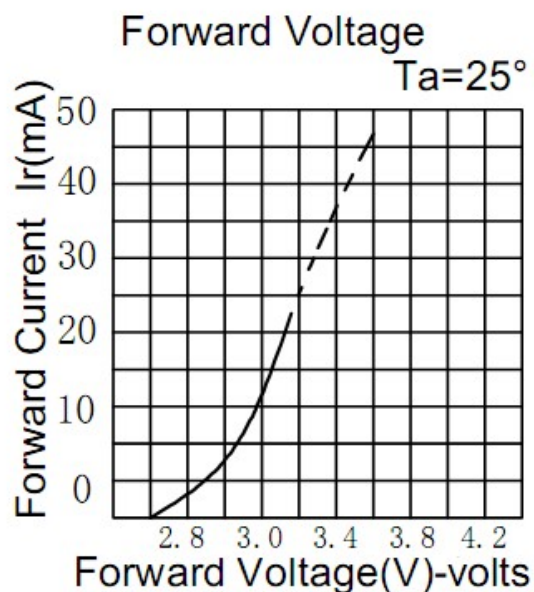
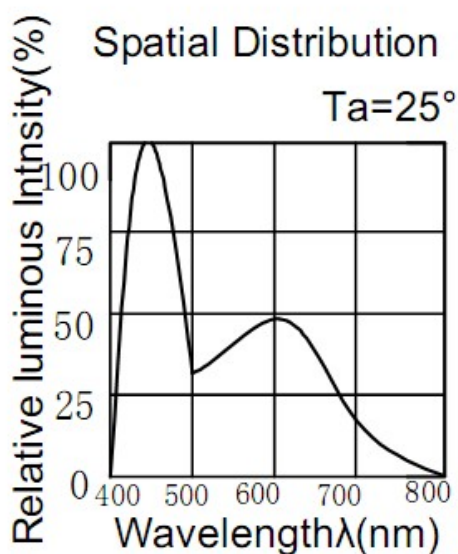
The Yellow source color devices are made with
Gallium
Arsenide Phosphide on Gallium Phosphide
Yellow Light

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.1 (0.004") unless otherwise noted.
3. Specifications are subject to change without notice.



RELIABILITY

Test Items and Results

NO	Pilot projects	Guideline	Test conditions	Duration	SAMPLE QTY	Reception level (unqualified QTY/total)
1	Temperature cycle	JEITA ED-4701	-40℃ ~ 25℃ ~ 100℃ ~ 25℃ 30 minutes 5 minutes 30 minutes 5 minutes	Loop 100 rounds	50	0/50
2	Thermal shock	MIL-STD-202G	-40℃ ~ 100℃ 15 minutes 15 minutes	Loop 500 rounds	50	0/50
3	High temperature storage	JEITA ED-4701 200 201	T _a =100℃	1000 HOUR	50	0/50
4	Low temperature storage	JEITA ED-4701 200 201	T _a =-40℃	1000 HOUR	50	0/50
5	Normal temperature life test		T _a =25±5℃ I _F =20mA	1000 HOUR	50	0/50
6	High temperature & high humidity life test		T _a =60℃ RH=85% I _F =20mA	1000 HOUR	50	0/50
7	Solderability (reflow soldering)	JEITA ED-4701 300 303	T _{sol} =235℃±5℃, 5 seconds with flux	Solder once, 5 seconds	10	0/10
8	Solder resistance (reflow soldering)	JEITA ED-4701 300 301	T _{sol} =260℃, 10 seconds Pretreatment: 35℃ 95%RH 96 hours	Weld twice, 10 seconds each time	10	0/10
Prepare	If the above test items are different from the customer's test requirements or special customers have special requirements, they can be trial-made according to the customer's requirements according to the actual situation.					

5. Cautions

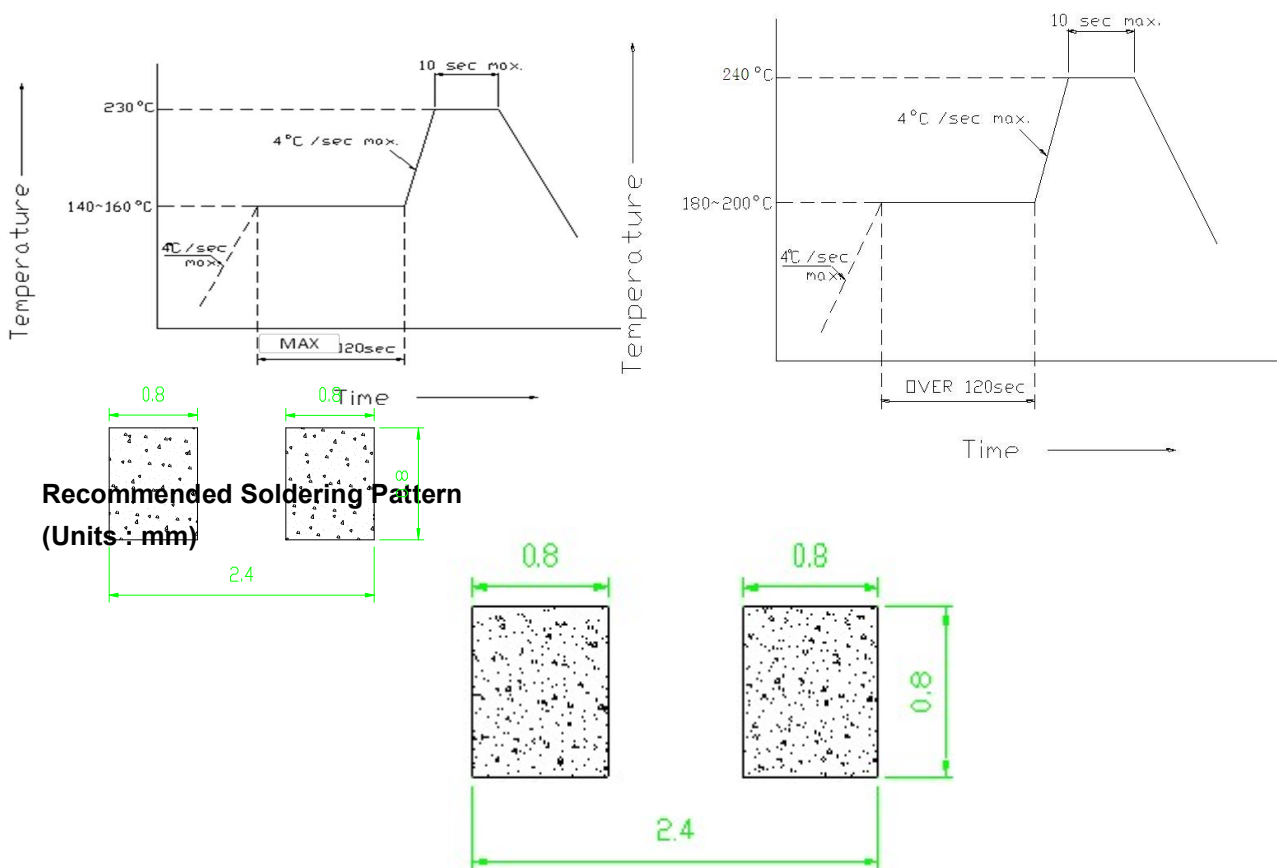
- (1) Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

(Recommended soldering conditions)

回流焊接 Reflow Soldering			手工焊接	
预热温度 Pre-heat	有铅 Lead Solder	无铅 Lead-free Solder	温度 Temperature	350° C Max.
预热时间 Pre-heat time	140 ~ 160° C 120 sec. Max.	180 ~ 200° C 120 sec. Max.	焊接时间 Soldering time	3 sec. Max. (one time only)
峰值温度 Peak temperature	230° C Max. 10 sec. Max.	240° C Max. 10 sec. Max.		
焊接时间 Soldering time	参考下图	参考下图		
条件 Condition				

有铅回焊 (Lead Solder)

无铅回焊 (Lead-Free Solder)



- (2) Static Electricity

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

All devices, equipment and machinery must be properly grounded.

2.0V Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current. Criteria : ($V_F > 2.0V$ at $I_F=0.5mA$)

(3) Moisture Proof Package

It is recommended that moisture proof package be used .

(4)

Cautions:

4.1.

Please check if there is air leak before opening the package, if so, please return the goods back to take drying process for later using.

4.2

Products can be used within 15days after packaging, after that, they must be:

4.2.1

Soldered within 24 hrs

4.2.2

Used in the condition: $30^{\circ}C$ within and 60%RH below

4.2.3

Stored in 30%RH for moisture below.

4.3.

Products cannot be used for and over 15days after being packaged unless opening the package and take drying our process in $85^{\circ}C/6H$.

4.4.

Products not be used for or over 60days after being packaged please return back to take drying out and packaging process for forward using.

4.5.

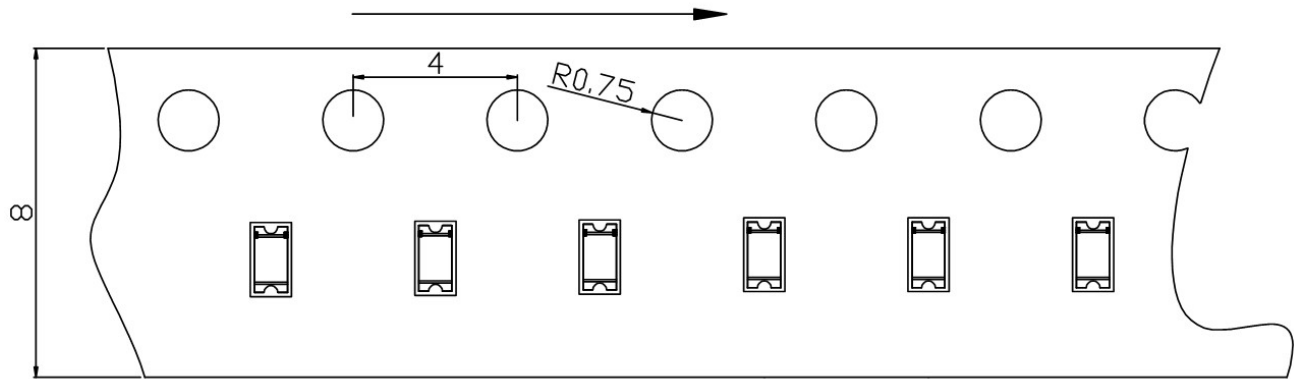
Products not be used after opening the package need to be dried out for $85^{\circ}C/6H$

PACKAGING

The LEDs are packed in cardboard boxes after taping.

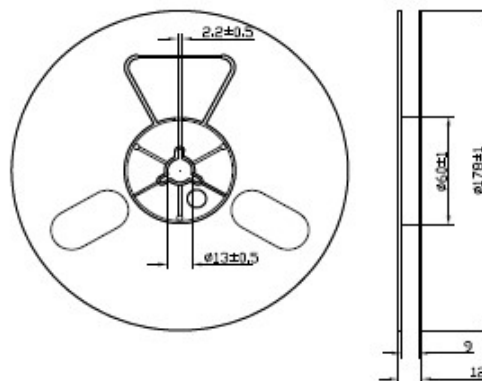
包装方式:

TAPE

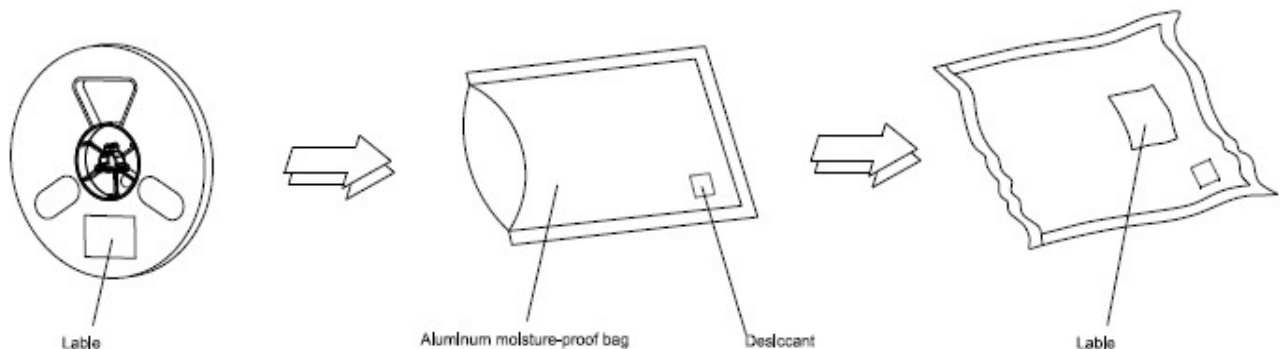


Package: 4000 pcs/reel

Reel Dimensions



Moisture Resistant Packaging



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit: mm