

Technical Data Sheet

Top View LEDs

62-227B/QK2C-S5757P4Q3S2Z6/2T

Features

- Top view white LED
- High luminous flux output
- High current capability
- White package
- Wide viewing angle
- Pb-free
- The product itself will remain within RoHS compliant version.



Descriptions

- Due to the package design, 62-227B has wide viewing angle, and white LEDs are devices which are materialized by combing blue chip and special phosphor. This feature makes the LED ideal for light guide application.

Applications

- Decorative and Entertainment Lighting.
- Light pipe application
- Indicator and backlight in office and family equipment
- General use

Device Selection Guide

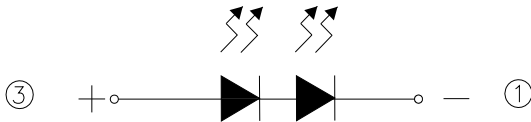
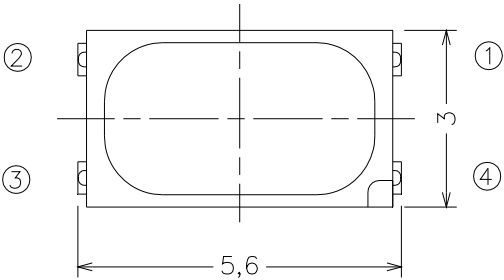
Chip	Emitted Color	Resin Color
Material		
InGaN	Cold White	Water Clear

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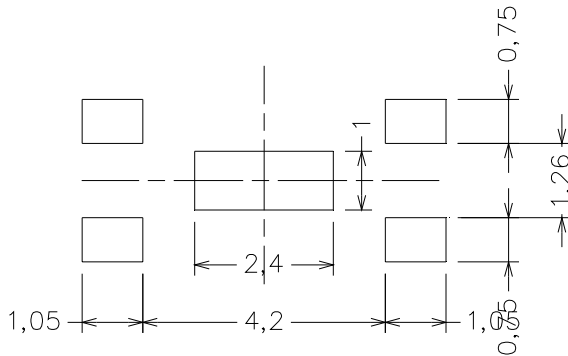
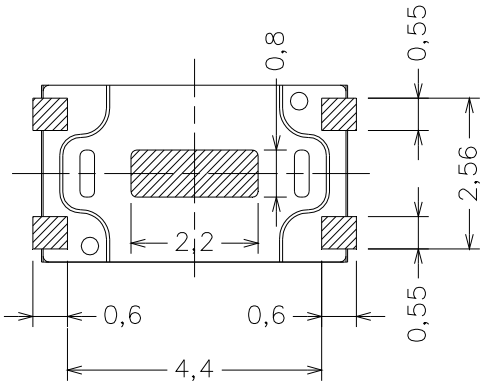
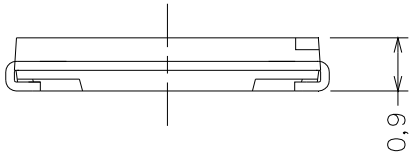
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Package Outline Dimensions



Polarity



Note: The tolerance unless mentioned is ± 0.1 mm, unit = mm.

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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage ^{*1}	V _R	10	V
Forward Current ^{*1}	I _F	100	mA
Peak Forward Current (Duty 1/10 @10ms) ^{*1}	I _{FP}	300	mA
Power Dissipation ^{*1}	P _d	350	mW
Electrostatic Discharge(HBM) ^{*1}	ESD	1000	V
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +90	°C
Soldering Temperature	T _{sol}	Reflow Soldering: 260 °C for 10 sec. Hand Soldering: 350 °C for 3 sec.	

Notes:

- * 1. The value are based on single die
- The products are sensitive to static electricity and must be carefully taken when handling products.

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Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Flux *	Φ	39	-----	52	lm	$I_F=60mA^*$
Viewing Angle *	$2\theta_{1/2}$	-----	120	-----	deg	
Forward Voltage *	V_F	5.80	-----	7.00	V	
Color Rendering Index	Ra	75	----	----	----	
Reverse Current *	I_R	-----	-----	50	μA	$V_R=5V^*$

* When two LED dies are operated simultaneously.

- Notes:**
1. Tolerance of Luminous Flux: $\pm 11\%$
 2. Tolerance of Forward Voltage: $\pm 0.1V$
 3. Tolerance of Color Rendering Index: ± 2

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Bin Range of Luminous Flux*

Bin Code	Min.	Max.	Unit	Condition
P4	39	45	lm	I _F =60mA*
Q3	45	52		

Bin Range of Forward Voltage*

Group	Bin Code	Min.	Max.	Unit	Condition
S2	5#8	5.80	5.90	V	I _F =60mA*
	5#9	5.90	6.00		
	6#0	6.00	6.10		
	6#1	6.10	6.20		
	6#2	6.20	6.30		
	6#3	6.30	6.40		
	6#4	6.40	6.50		
	6#5	6.50	6.60		
	6#6	6.60	6.70		
	6#7	6.70	6.80		
	6#8	6.80	6.90		
	6#9	6.90	7.00		

* When two LED dies are operated simultaneously.

Notes:

1. Tolerance of Luminous flux: ±11%
2. Tolerance of Forward Voltage: ±0.05V

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Bin Range of Chromaticity Coordinates*

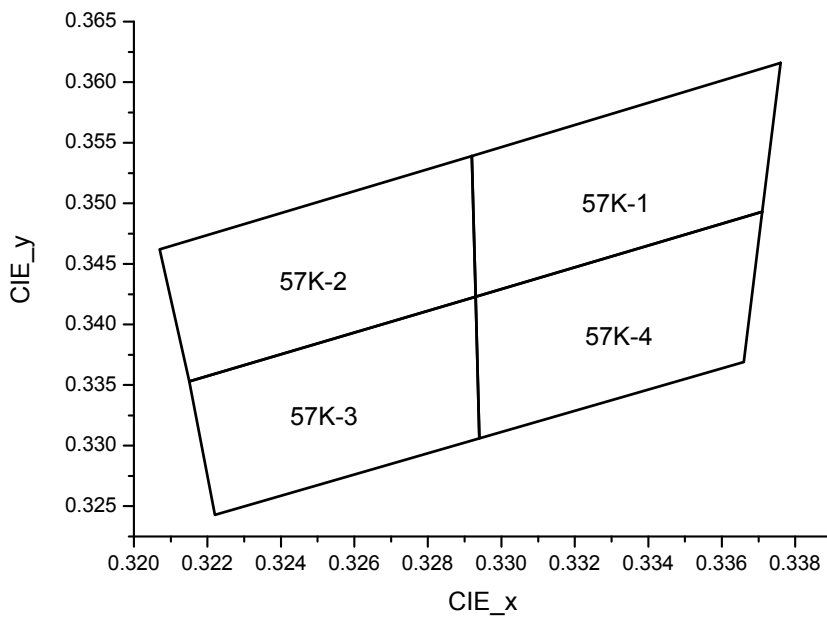
($I_F=60mA^*$)

CCT Group	Bin Code	CIE_x	CIE_y	Bin Code	CIE_x	CIE_y
5700K	57K-1	0.3376	0.3616	57K-3	0.3293	0.3423
		0.3292	0.3539		0.3215	0.3353
		0.3293	0.3423		0.3222	0.3243
		0.3371	0.3493		0.3294	0.3306
	57K-2	0.3292	0.3539	57K-4	0.3371	0.3493
		0.3207	0.3462		0.3293	0.3423
		0.3215	0.3353		0.3294	0.3306
		0.3293	0.3423		0.3366	0.3369

* When two LED dies are operated simultaneously.

Note: Tolerance of Chromaticity Coordinates: ± 0.01

The C.I.E. 1931 Chromaticity Diagram

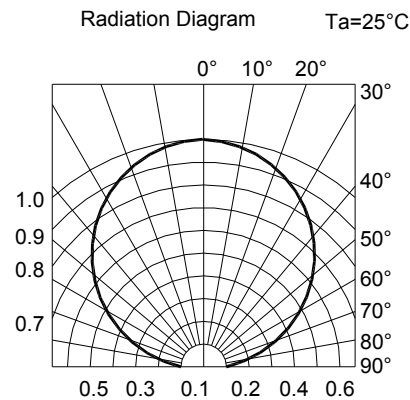
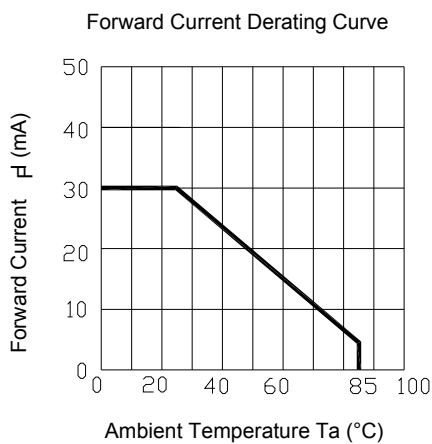
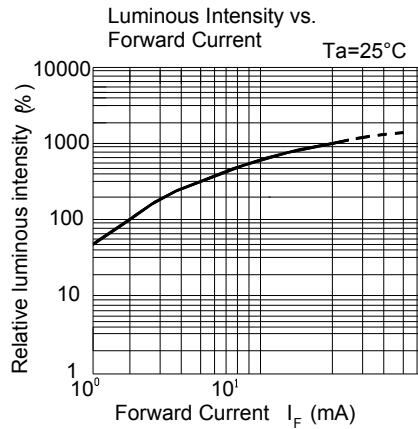
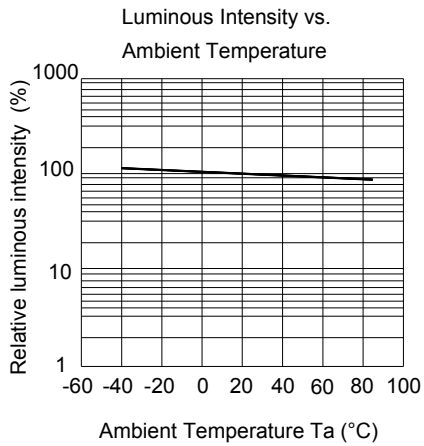
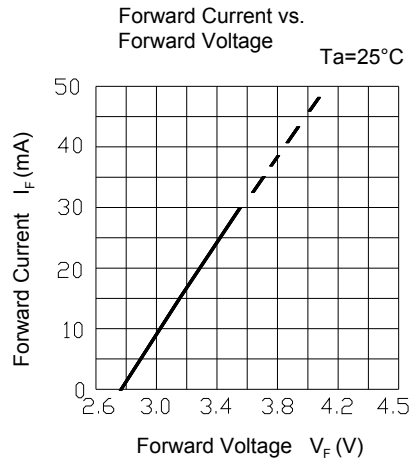
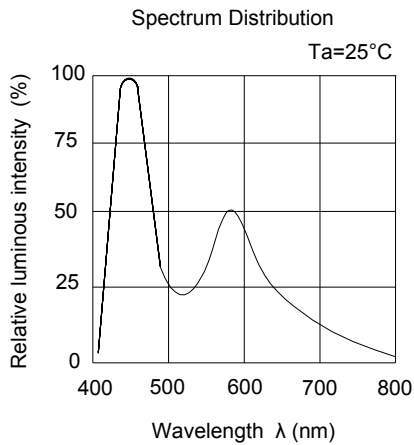


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Typical Electro-Optical Characteristics Curves



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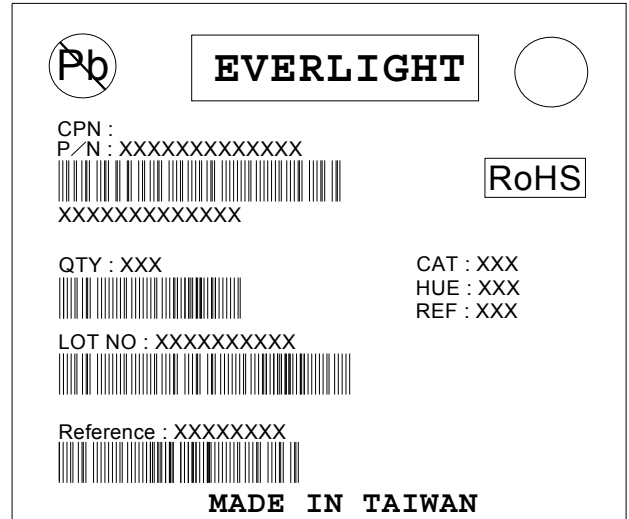
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Label Explanation

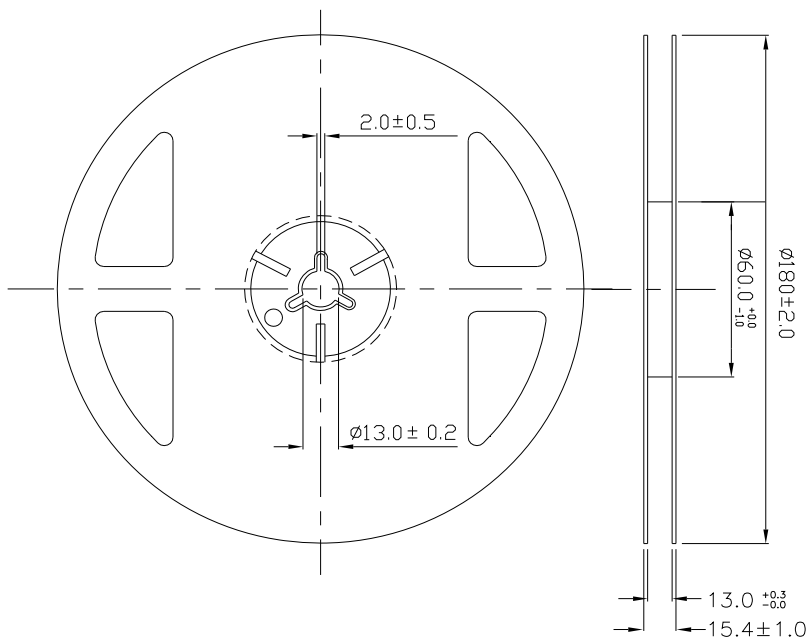
CAT: Luminous Intensity Rank

HUE: Chromaticity Coordinates

REF: Forward Voltage Rank



Reel Dimensions



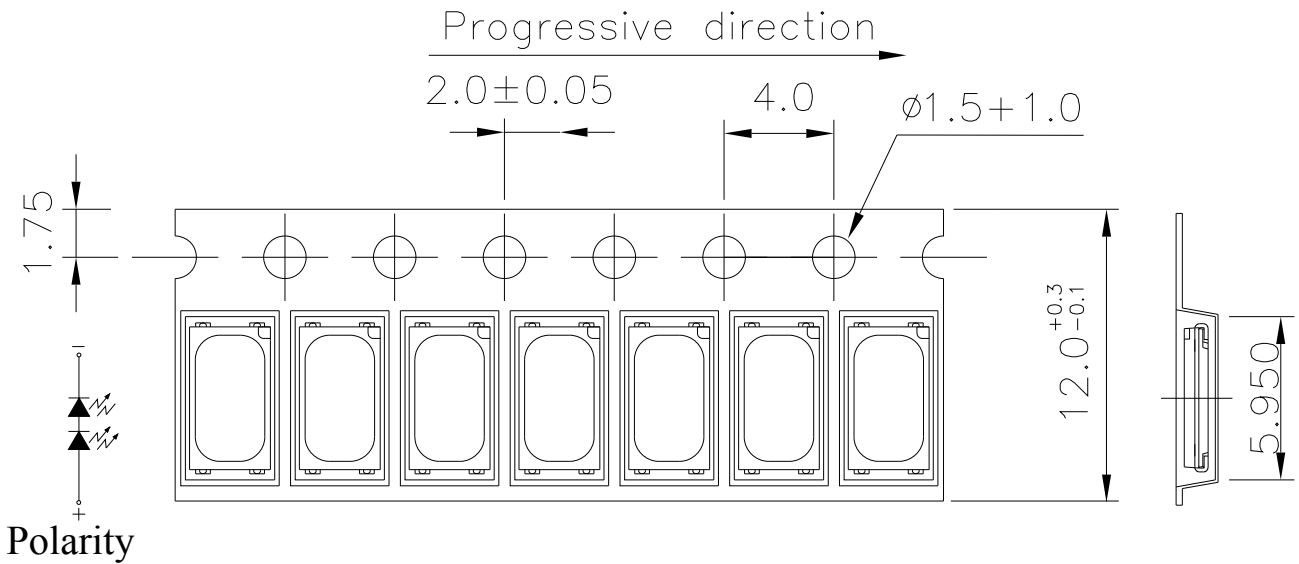
Note: The tolerances unless mentioned is : $\pm 0.1\text{mm}$, Unit = mm

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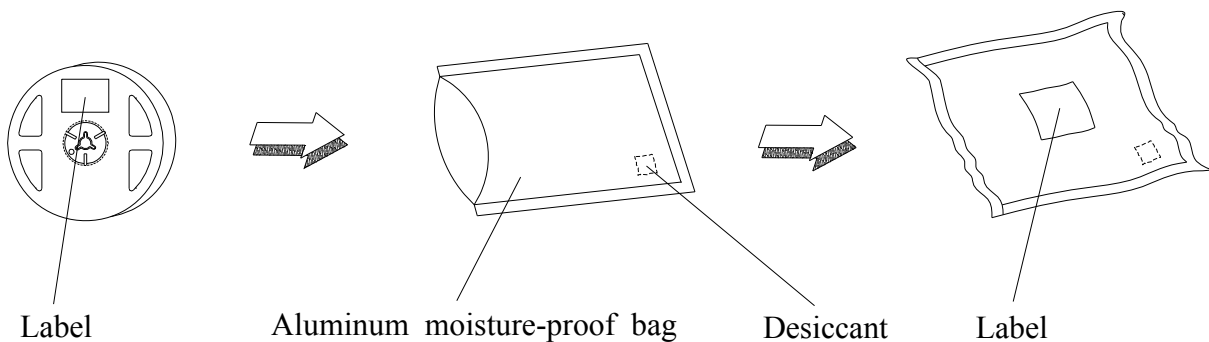
62-227B/QK2C-S5757P4Q3S2Z6/2T

Carrier Tape Dimensions: Loaded Quantity 2000 pcs Per Reel



Note: The tolerances unless mentioned is ± 0.1 mm, Unit = mm

Moisture Resistant Packaging



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Precautions For Use

1. Over-current-proof

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

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LEDs should be kept at 30°C or less and 90%RH or less.

2.3 After opening the package: 2.3 After opening the package: The LED's floor life is 72 hours under 30°C or less and 60% RH or less.

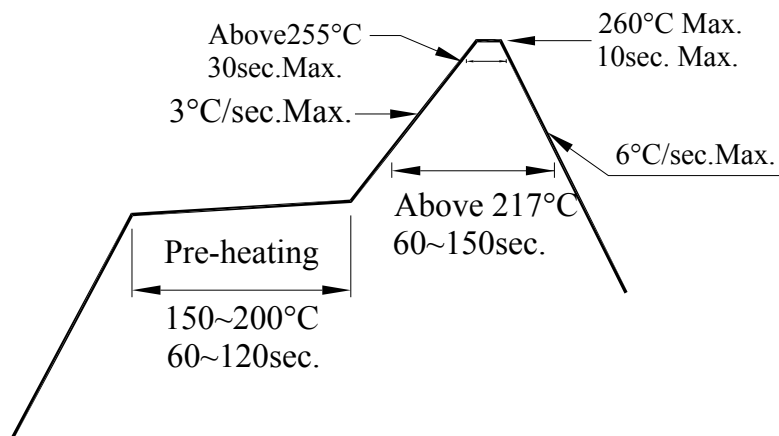
If unused LEDs remain, it should be stored in moisture proof packages.

2.4 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.

3. Soldering Condition

3.1 Pb-free solder temperature profile



3.2 Reflow soldering should not be done more than two times.

3.3 When soldering, do not put stress on the LEDs during heating.

3.4 After soldering, do not warp the circuit board.

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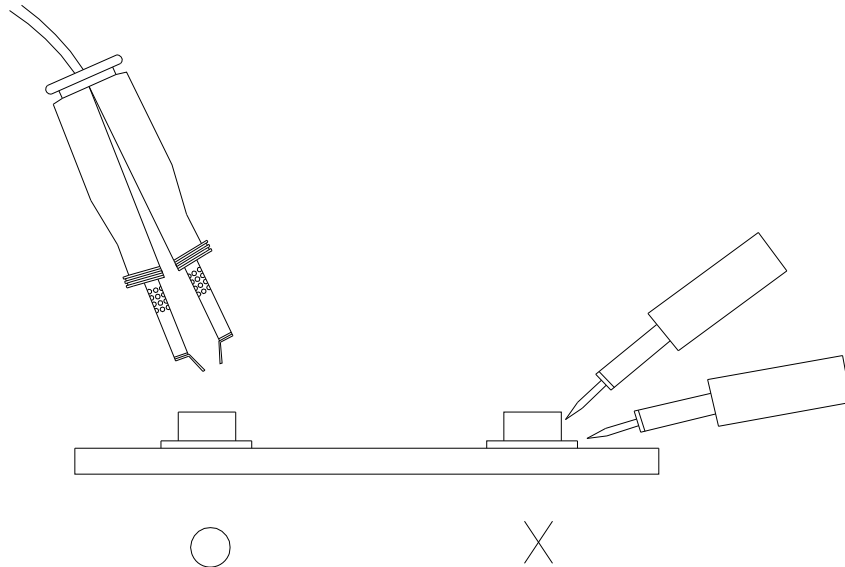
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4. Soldering Iron

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.

5. 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.



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