

Specification for approval

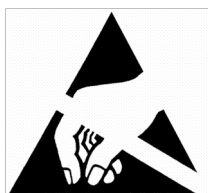
Customer :

Customer part no :

Product name : 3528 Super bright yellow LED (notched
for Positive)

Product Model : IE-35UY28-34B/J8

Customer Signatures	Inspection	Production
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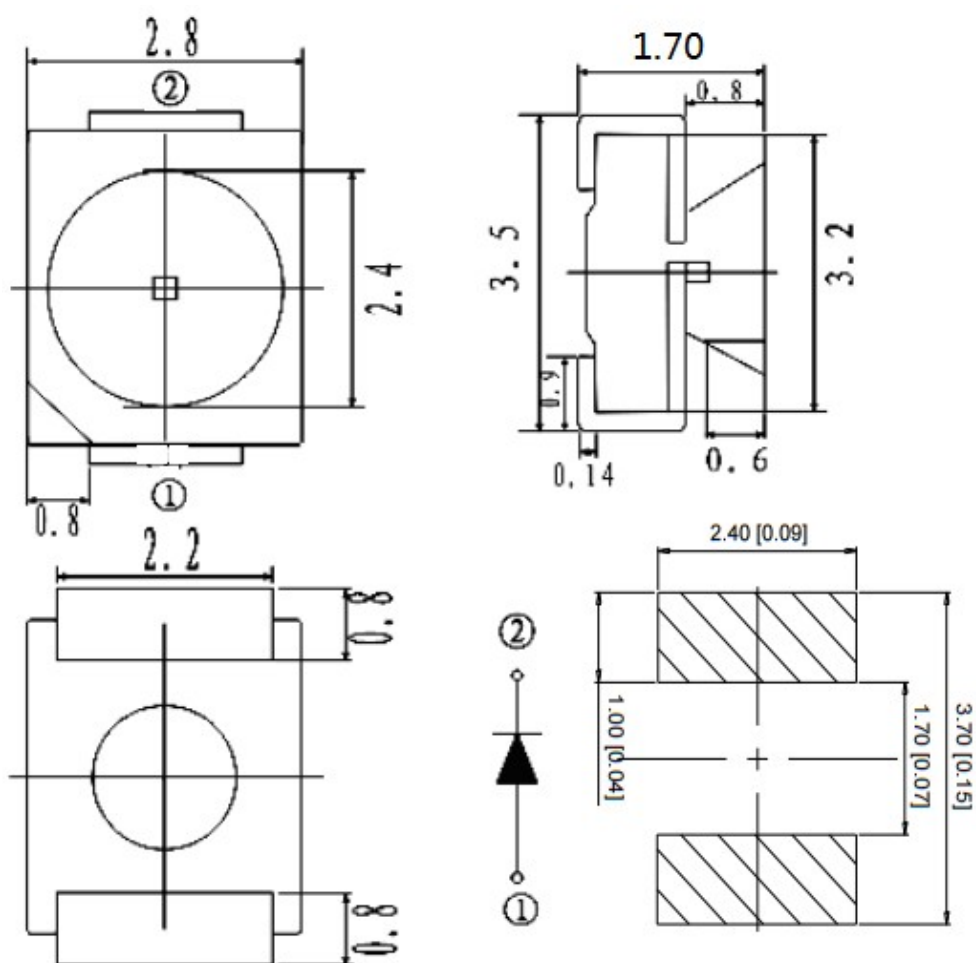


ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- Available on tape and reel
- Long life-solid state reliability
- Low power consumption
- RoHS compliant

Package Dimensions



建议焊盘尺寸图

Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is ± 0.15 mm unless otherwise noted.

Electrical characteristics data sheet

Selection Guide

Part No.	Emitted Color	Resin color	Viewing Angle $2\theta_{1/2}$
IE-35UY28-34B/J8	Yellow	Transparent	120

Note:(备注)

- $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

■Absolute Maximum Rating

Item	Symbol	Value	Unit单
Forward Current	IF	25	mA
Peak Forward Current*	IFP	70	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	625	mW
Electrostatic discharge (HBM)	ESD	2000	V
Operation Temperature	Topr	-40~+85	℃
Storage Temperature	Tstg	-40~+85	℃
Lead Soldering Temperature*	Tsol	Max. 260℃ for 5sec Max.	

Notes:

1. 1/10 duty cycle, 0.1ms pulse width;
2. The products are sensitive to static electricity and must be carefully taken when handling products.

■ Typical Optical/ Electrical Characteristics Ta=25℃

Item	Symbol	Condition	Emitting Color	Min.	Typ.	Max.	Unit
Luminous Intensity	Iv	IF=20mA	Y	400	600	1000	mcd
Forward Voltage	VF			2.0	2.2	2.5	V
Dominant Wavelength	λD			588	--	594	nm
Reverse Current	IR	Vr=5V	--	--	--	10	uA

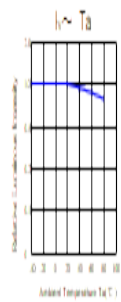
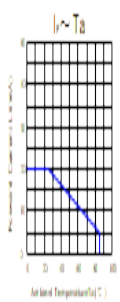
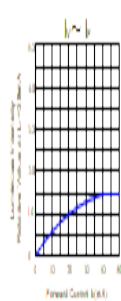
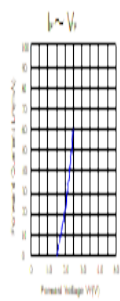
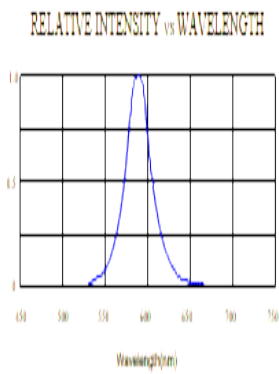
Notes:

1. Forward voltage: $\pm 0.1V$;
2. Wavelength: $\pm 2nm$;
3. Luminous Intensity: $\pm 10\%$.

■ Reliability Performance

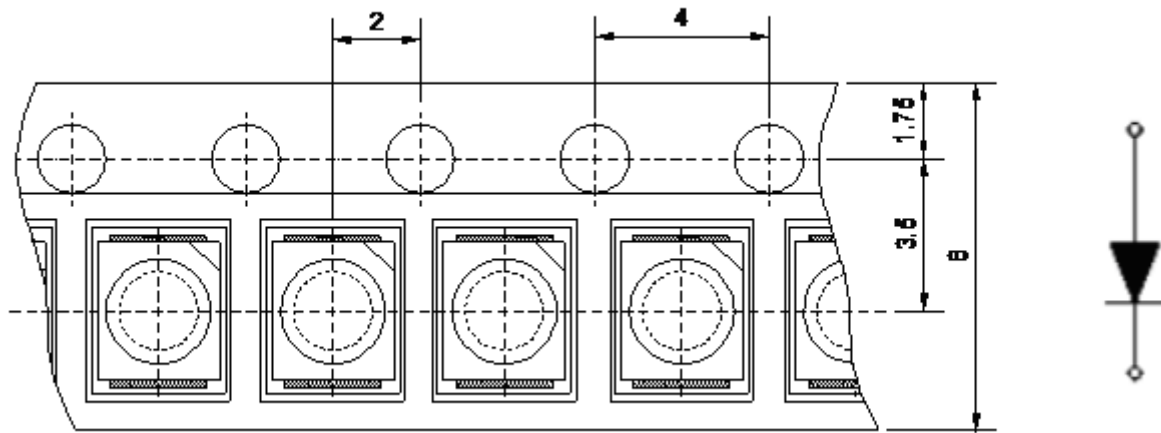
Test Items And Result

Test Item	Test Conditions	Test Duration	Sample Size	AC/RE
Room Temperature DC Operating Life Test	Ta=25℃ $\pm 5^\circ C$, IF=20mA	1000 hrs	22 pcs	0/1
Temperature Cycle Test	100℃ $\pm 5^\circ C$ 15min ↑ ↓ 5min -40℃ $\pm 5^\circ C$ 15min.	100cycles	22 pcs	0/1
High Temperature & High Humidity Test	85℃ $\pm 5^\circ C$ /85%RH	1000 hrs	22 pcs	0/1
High Temperature Storage	Ta=100℃ $\pm 5^\circ C$	1000hrs	22 pcs	0/1
Low Temperature Storage	Ta=-40℃ $\pm 5^\circ C$	1000hrs	22 pcs	0/1
Reflow	Temp:260℃max T=10 sec	2 time	22 pcs	0/1



Packaging Dimensions Specification

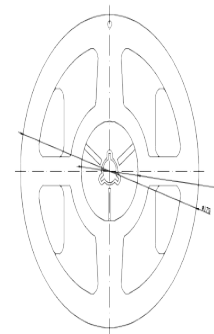
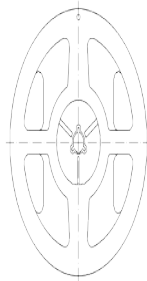
1. Carrier tape dimensions



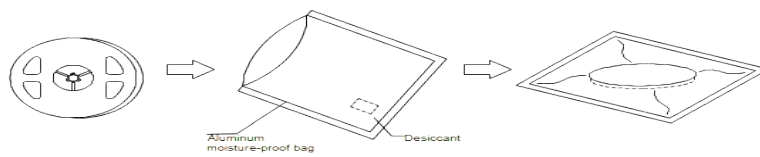
Notes:

- 1) All dimensions are in millimeters
- 2) Tolerance is ± 0.25 unless otherwise noted

2. Reel dimensions



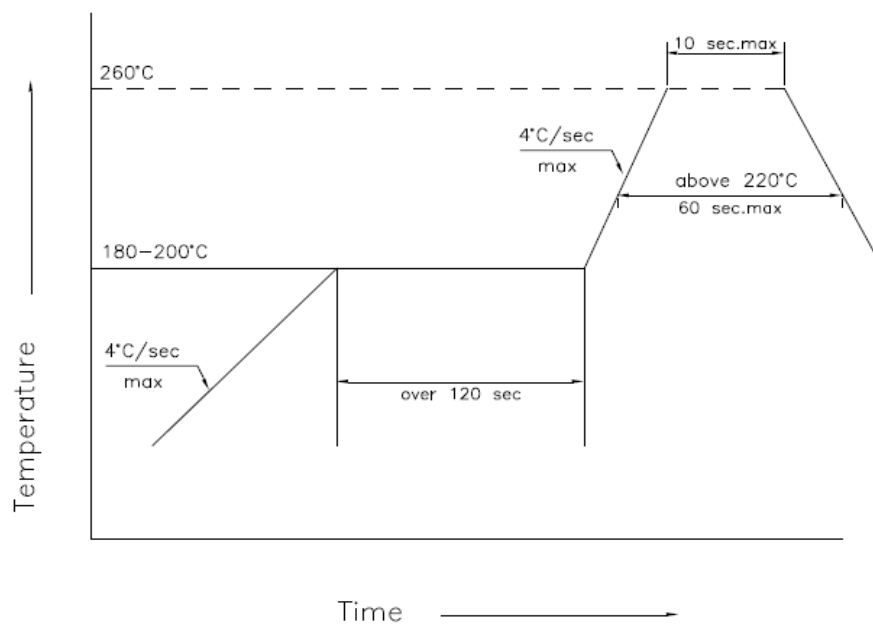
3. Moisture-Proof and anti-static electricity



■ Precautions

1. Requirements for application and reflow soldering:

Use the recommended curve in the under figure of Pb-free reflow soldering.



Notes for reflow soldering:

- 1) No more than twice for reflow soldering.
- 2) The colloid of this product is soft silica gel. To ensure the quality and reliability of the lamp bead, please do not apply pressure on the surface of the lamp bead colloid during SMT.
- 3) The SMT front nozzle should be selected with the appropriate lamp bead size. If the suction nozzle is too small, it will exert greater pressure on the lamp bead colloid during SMT, which will damage the interior of the lamp bead and easily cause the lamp bead to die.
- 4) Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground.
- 5) This product cannot be soldered by wave solder.

Handwork soldering

- 1) During the soldering, the electronic soldering iron must be kept under the temperature of 300°C and the soldering time must not be beyond 3 seconds. No touch between the electronic soldering iron and colloid.
- 2) Handwork soldering is only allowed once. We won't take responsibility for more than that.
- 3) Avoid using sharp objects to compress products Colloidal Part directly.
- 4) Please put on the antistatic hand loop during the use. The worktable should be with antistatic finish. The equipments must be contacted with ground.

2. Storage

As SMD LED is a highly sensitive component, the industry has strict requirements for the use of the product environment and conditions. In order to prevent the product from producing a popcorn effect during high temperature reflow welding (bad product), please pay attention to the following tasks:

1. After opening the package, observe whether the humidity card is invalid. (e.g. when the humidity cards are all brown, the lamp beads are not absorbable at all; when the 10% humidity card marking position becomes blue-green, the current humidity of the lamp beads is 10%); when the humidity card shows humidity greater than or equal to 20%, it is necessary to dehumidify the products and then weld them (baking dehumidification conditions: 60 / 12 The bag must be removed and the reel in the oven.
2. After packing the product, please weld and use it in 8H. More than 8H unwelded products need to be dehumidification (dehumidification conditions: 60 + 5 C /12H, dehumidification must be taken off the bag, and then the reel is put into the oven).
3. After opening the package, we have not used the product yet. Please place the moistureproof bead and humidity card in time and seal it. If your company can not effectively seal it, it can not meet the dehumidification condition. It is suggested that you send the lamp back to our department and return to your company after dehumidification. (I will inform you again after changing the terms of use).

3. Static electricity

Static electricity or surge voltage damages the LEDs .Damaged LEDs will show some unusual characteristic such as the forward voltage comes lower, or the LEDs do not light at the low current. even not light.

All devices, equipment and machinery must be properly grounded. At the same time,it is recommended that wrist bands or anti-electrostatic gloves, anti-electrostatic containers be used when dealing with the LEDs .

4. Vulcanization

LED curing is due to sulfur being in bracket and the +1 price of silver in the chemical reaction generated Ag₂S in the process. It will lead to the capacity of reflecting of silver layer reducing, light color temperature drift and serious decline, seriously affecting the performance of the product. So we should take corresponding measures to avoiding vulcanization, Such as to avoid using Sulphur volatile substances and keeping away from high Sulphur content of the material.

5. Safety advice for human eyes

Viewing direct to the light emitting center of the LEDs, especially those of great luminous Intensity will cause great hazard to human eyes .Please be careful.

6. Design consideration

6.1 When designing the circuit, care must be taken that the current through the LEDs does not exceed the specified maximum value.

6.2 When designing the circuit, it must be noted that when the LED is working, the reverse voltage applied in the line must be lower than 5V.

6.3 LED is a non-linear component, the use of fixed voltage need to be connected in series with the appropriate resistance, to avoid small voltage changes caused by large current changes and lead to product failure.

to avoid large current changes caused by small voltage changes, which may lead to the failure of the product function.

6.4 LEDs used in parallel must be connected to each LED in series with the appropriate resistance, to avoid voltage differences between the LEDs lead to uneven current resulting in brightness differences.

Difference.

6.5 Precautions for heat dissipation:

The characteristics of the LED is easy to change because of its own heat and ambient temperature changes; the increase in temperature will reduce the luminous efficiency of the LED, affecting the light-emitting color, etc., so in the application design should be given full consideration to the product's heat dissipation problems.

6.6 High voltage alternating current series resistance drive reverse avalanche breakdown prevention

In the simple component design occasions often encountered utility 220VAC/120VAC direct series resistance drive LED, the actual per second will occur LED products reverse avalanche breakdown dozens of times, the LED products cause some damage. Although it seems to be in normal use, but the LED products will therefore reduce the life. Therefore, it is recommended that the design of such control circuit boards should be connected in series with at least 1N4007 diodes or reverse parallel diodes, or parallel voltage regulator to be protected; you can also choose to built-in Zener LED products.

6.7 The whole machine withstand voltage test high-voltage series prevention

For less components of the PCBA board, supporting the use of metal shell in the production process of electrical appliances, 1800VAC withstand voltage test, high voltage will have the opportunity to pass through the metal shell Phi Fong or the weak places of the wiring into the LED, resulting in LED breakdown failure. If these products are blue, emerald green or white LED products, it is recommended to choose LED products with Zener when designing.

6.8 Transient reverse voltage design avoidance

When the use of transistors involved in scanning or TM1628 and other specialized chips involved in scanning, the LED in the non-operational stage are in a high resistance state. In some circuits driven purely by the MCU port scanning, the unworked stage is realized by applying a reverse 5V voltage, LED chip from +3V to reach -5V

generated by the voltage difference of 8V, this frequent transient countervoltage impact may cause cumulative damage to the blue and white light chip. Programming if it is difficult to switch to high resistance, it is recommended to consider the scanning common terminal series 4148 diodes.

6.9 LEDs such as high temperature and high humidity environment is strictly prohibited to apply reverse voltage to avoid metal migration resulting in leakage / short circuit.

6.10 LED products mixed BIN use prevention

When using multiple identical LED products together, pay attention to confirm the BIN number and parameters on the packaging bag, and use one BIN number and parameter after the next BIN number and parameter have been used.

After one BIN number and parameters are used, then use the next BIN number to avoid mixed BIN use, resulting in color differences between products.