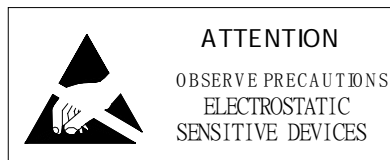


SPECIFICATION FOR ZHONGZHOU LED PIRANHA

Model No : ZL-Z24BWC13
Spec No : ZZ-GY-S0119A

Descriptions:

- 7.6*7.6mm Piranha Type
- Emitting Color: White
- Lens: Water Clear
- Stopper



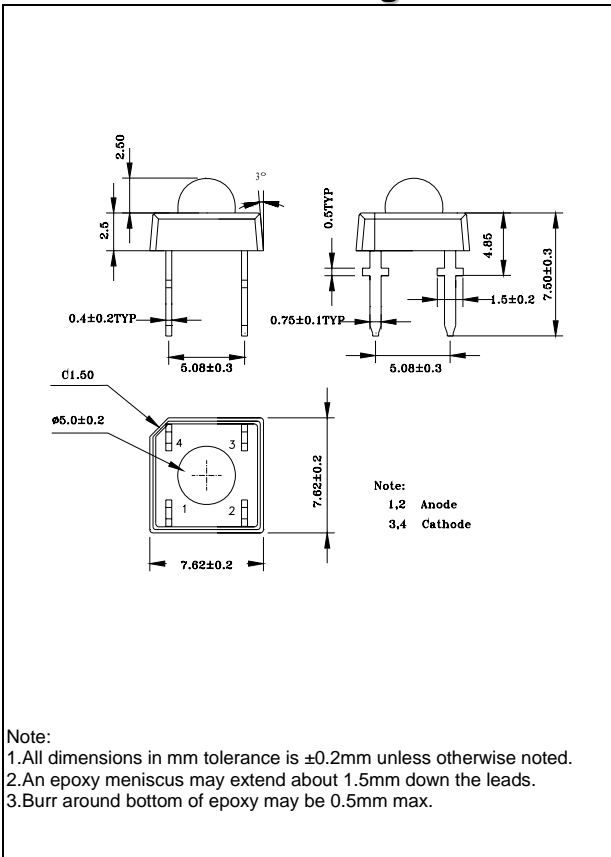
CUSTOMER APPROVED SIGNATURES	SALES APPROVED	APPROVED BY	CHECKED BY	PREPARED BY

Address: 2th Floor(W),Baoting Industrial Prk,No.5

Tel. No:

Fax No: _____

■ Dimension Drawing



■ Applications:

- Toys
- Automotive Exterior Lighting
- Commercial Outdoor Advertising
- Traffic Signal Heads

■ Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Items	Symbol	Absolute maximum Rating	Unit
Forward Current(DC)	I_F	25	mA
Peak Forward Current*	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	120	mW
Operation Temperature	T_{opr}	-20 ~ +55	$^\circ\text{C}$
Storage Temperature	T_{stg}	-30 ~ +80	$^\circ\text{C}$
Lead Soldering Temperature	T_{sol}	Max.260 $^\circ\text{C}$ for 3 sec Max. (3mm from the base of the epoxy bulb)	

*pulse width ≤ 0.1 msec duty $\leq 1/10$

■ Typical Electrical & Optical Characteristics ($T_a = 25^\circ\text{C}$)

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	2.8	---	4.0	V
Reverse Current	I_R	$V_R = 5\text{V}$	---	---	50	μA
Chromatic Coordinates	(x,y)	$I_F = 20\text{mA}$	---	(0.31,0.32)	---	---
Luminous Intensity	I_V	$I_F = 20\text{mA}$	1000	---	2200	mcd

■ Ranks Combination ($I_F = 20\text{mA}$)

Rank	0N	0P	0Q	---		
Luminous Intensity (mcd)	1000-1300	1300-1700	1700-2200	---		
Rank	0F	0G	0H	0J	0K	0L
Forward Voltage(V)	2.8-3.0	3.0-3.2	3.2-3.4	3.4-3.6	3.6-3.8	3.8-4.0

Important Notes:

- 1) All ranks will be included per delivery.
- 2) Tolerance of measurement of luminous intensity is $\pm 15\%$.
- 3) Tolerance of measurement of chromatic coordinates is ± 0.02 .
- 4) Tolerance of measurement of forward voltage is ± 0.05 V.
- 5) Pb content < 1000 PPM.

■ Typical Electrical/ Optical Characteristics Curves

(Ta=25°C Unless Otherwise Noted)

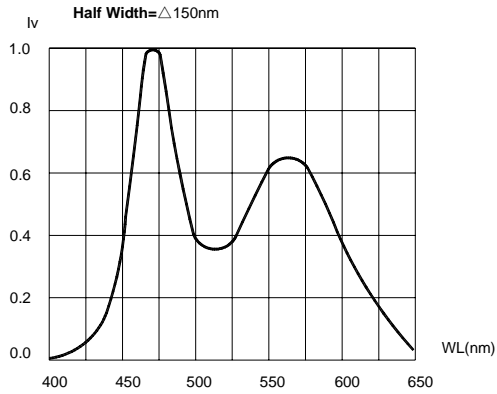


Fig.1 Relative Luminous Intensity vs. Wavelength

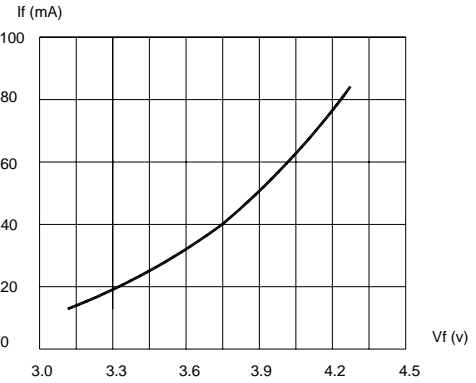


Fig.2 Forward Current vs. Forward Voltage

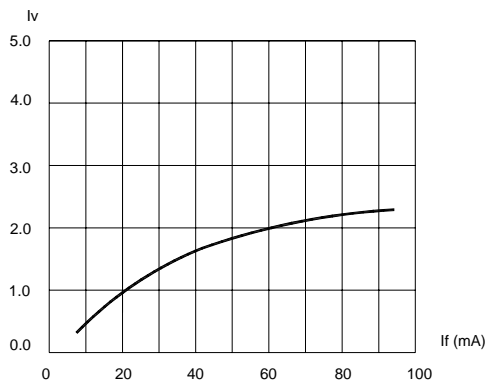


Fig.3 Relative Luminous Intensity vs. Forward Current

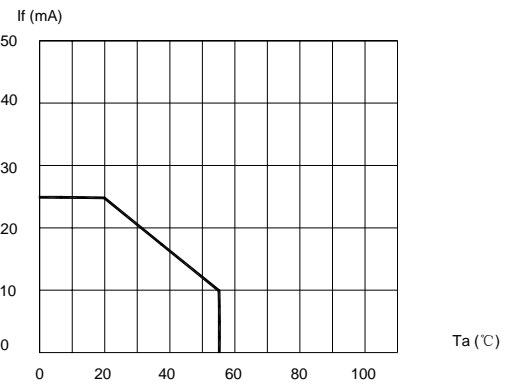


Fig.4 Maximum Forward Current vs. Ambient Temperature

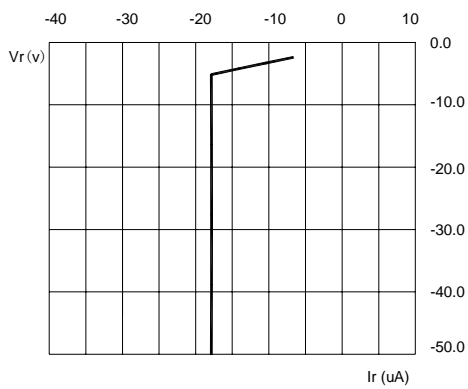


Fig.5 Reverse Current vs. Reverse Voltage

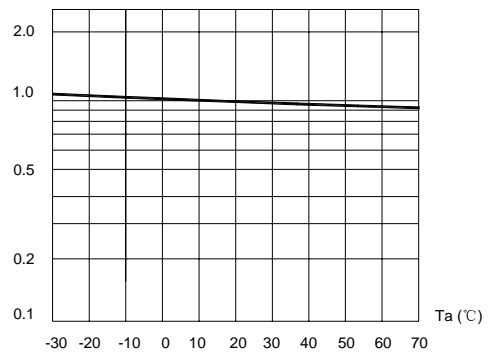
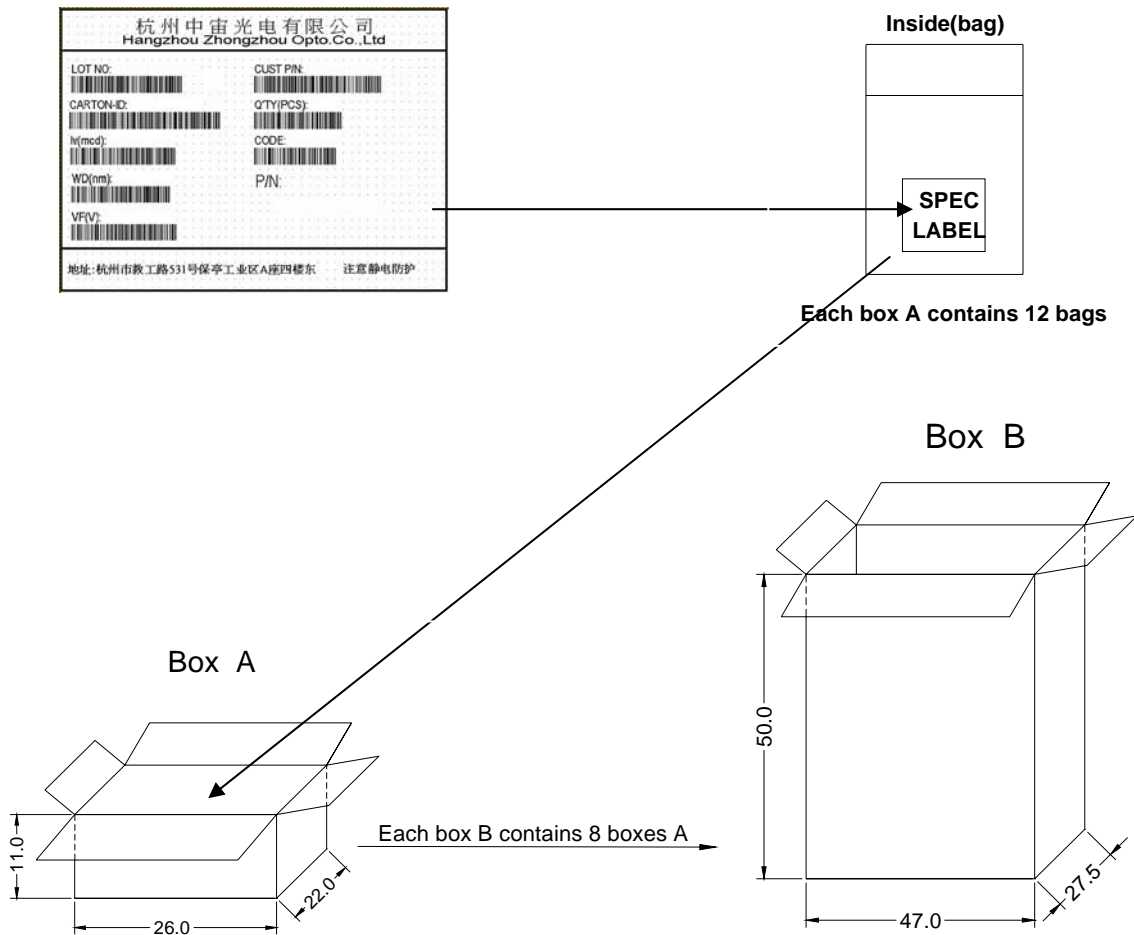


Fig.6 Relative Luminous Intensity vs. Ambient Temperature

■ Package Specification:



NOTE:

- 1) The LED shall be used under allowed conditions. ZhongzhouOpto.cannot take any responsibility for any troubles that are caused by using the LEDs at conditions exceeding our specifications.
- 2) The LED must be used as soon as tore open, otherwise the plank will be oxygenated.
- 3)The Blue 、 Green 、 White products shall be care of the static electricity.
- 4)3.0mm From Body For 3 Seconds below 260°C .

Please avoid the soldered LEDs from clashing or librating before the lens' temperature cool down.

- 5) The circuit shall be designed according to certain current or relative operating voltage.
- 6) These LEDs are designed and manufactured for standard applications such as electric home appliances, communication equipment, office equipment, electronic instrumentation and so on. It is recommended to consult with ZhongzhouOpto. in advance if user's application requires any particular quality or reliability that concerns human life. Examples would be medical equipment, aerospace applications, traffic signals, safety system equipment and so on.
- 7) We reserve the right to make technical changes without prior notice.
- 8) All the content interpretation reserved to zhongzhouOpto.