

深圳市鸿亿光电有限公司

电话：0755-29630366

传真：0755-29636819

產品規格書

PRODUCT SPECIFICATION

客戶名稱

Customer

客戶料號

Part No.

版本號

VersionNo.

A1

品名

Description

0603白灯/04

規格

Model

送樣日期

Date

承認蓋章後請寄回承認書一份

Please return to us one copy of "SPECIFICATION FOR APPROVAL"

With your approved signatures

客戶承認簽章	核准	制訂者
CUSTOMER APPROVED SIGNATURES	APPROVED	ISSUED

Technical Data Sheet

Model NO: 0603白灯/04

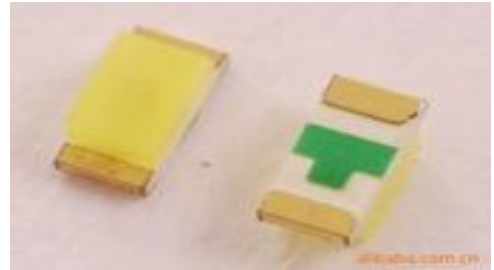
Package(1.6*0.8mm)LED

Feature:

- Low power consumption
- High performance
- P/b free

Applications:

- Indicators
- Backlighting for electronic devices
- General use



Dice material	Emitted color	Lens Color
InGaN	White	Color Diffused

Electrical/Optical Characteristics(Ta=25°C)

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Luminous Intensity	Iv	IF=20mA	300	400	600	mcd
Dominant Wavelength	λ_D	IF=20mA		X:0.30 Y:0.30		nm
Peak Emission Wavelength	λ_p	IF=20mA				nm
Viewing Angle	2 θ 1/2	IF=20mA		120		Deg
Forward Voltage	VF	IF=20mA	2.8	3.2	3.5	V
Reverse Current	IR	VR=5V			10	μ A

Note: Luminous intensity tolerance $\pm 15\%$

Forward voltage tolerance ± 0.1 v

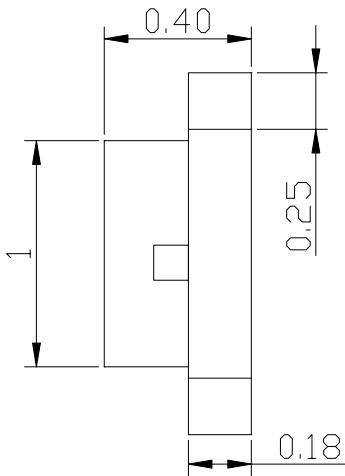
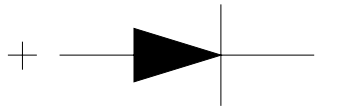
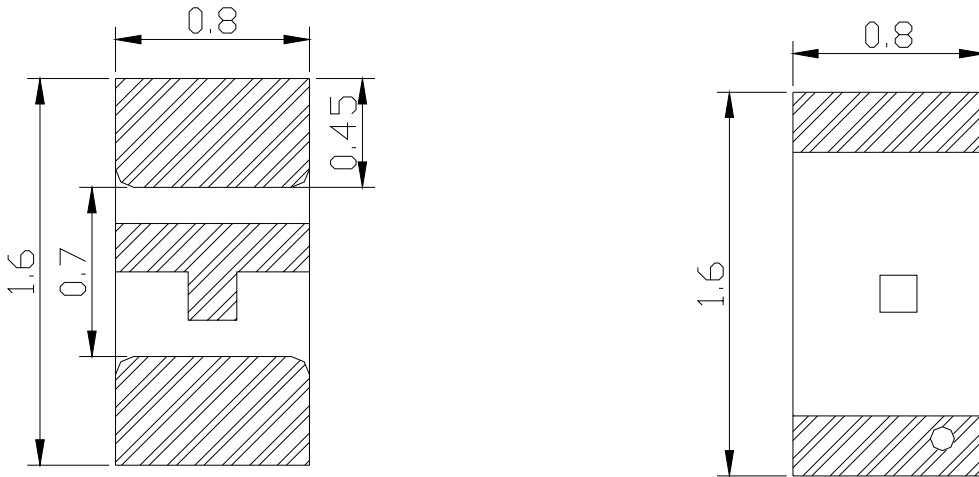
Wavelength tolerance ± 1 nm (WD)

CIE (X.Y) tolerance ± 0.01 (CIE)

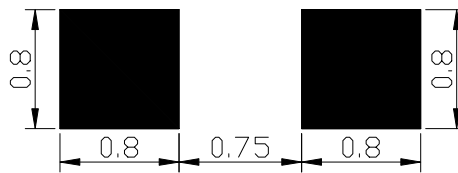
Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Maximum	Unit
Power Dissipation	Pd	64	mW
Peak Forward Current(1/10 Duty Cycle 0.1ms Pulse Width)	IF(Peak)	60	mA
Continuous Forward Current	IF	30	mA
Reverse Voltage	VR	5	V
Derating Linear From 25°C		0.3	mA/°C
Operating Temperature Range	Topr	-30 to +85	°C
Storage Temperature Range	Tstg	-40 to +100	°C

Package Outline Dimensions:



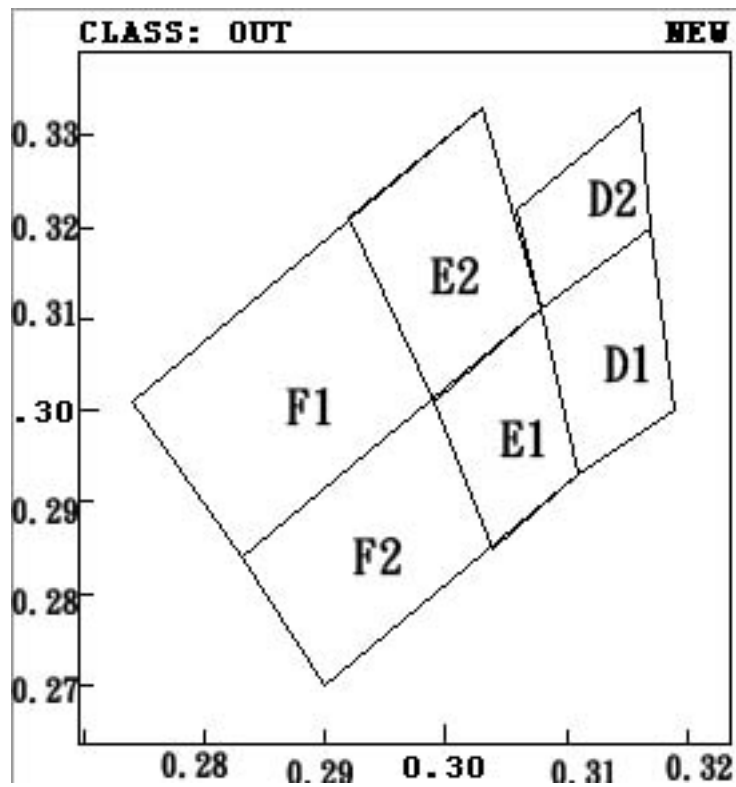
Paecommended Soldering Pattern



Note

1. All dimensions are in millimeters.
2. Tolerances unspecified are ± 0.1 mm.

Typical Electro-Optical Characteristics Curves



Bin Range of Chromaticity Coordinate

X1	Y1	X2	Y2	X3	Y3	X4	Y4	BIN
0.308	0.311	0.283	0.284	0.274	0.301	0.303	0.333	F1
0.308	0.311	0.311	0.293	0.29	0.27	0.283	0.284	F2
0.304	0.285	0.299	0.301	0.308	0.311	0.311	0.293	E1
0.308	0.311	0.299	0.301	0.292	0.321	0.303	0.333	E2
0.308	0.311	0.317	0.32	0.319	0.3	0.311	0.293	D1
0.308	0.311	0.306	0.322	0.316	0.333	0.317	0.32	D2

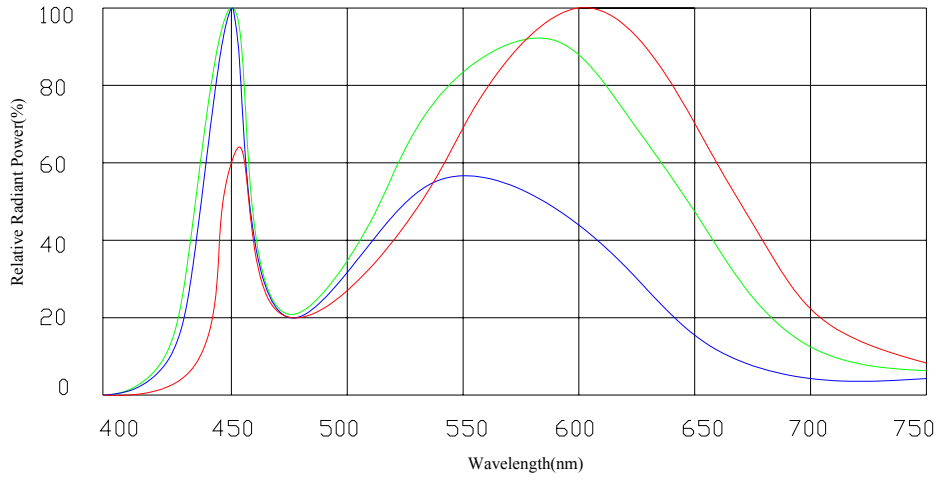
Bin Range of Luminous Intensity

Min	Max	Unit	BIN
300	350	mcd	A
350	400		B
400	450		C
450	500		D

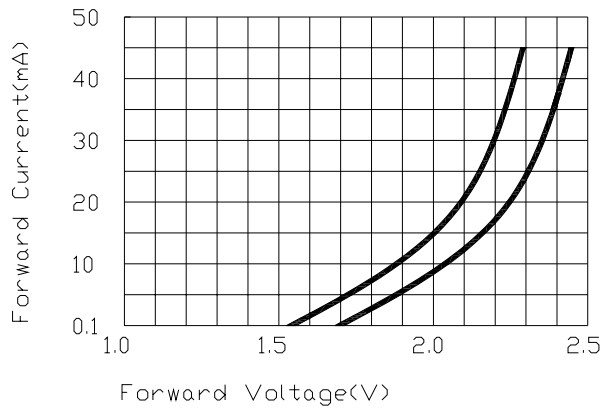
Bin Range of Forward Voltage

Min	Max	Unit	BIN
3.0	3.1	V	R
3.1	3.2		S
3.2	3.3		T
3.3	3.4		U

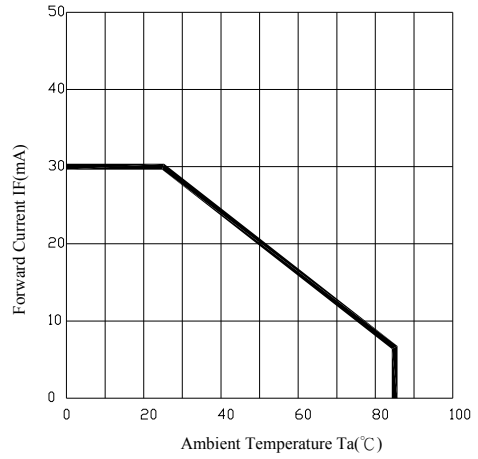
Typical Electro-Optical Characteristics Curves



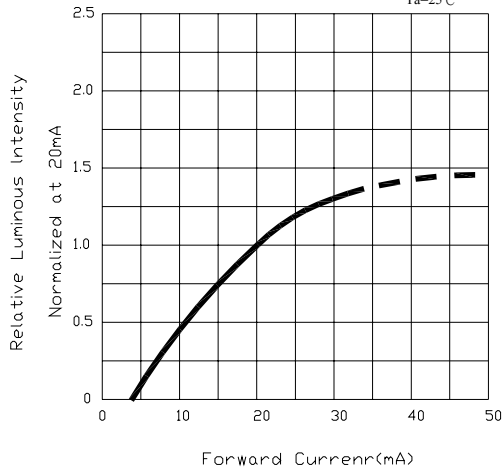
Forward Current Vs. Forward Voltage
 $T_a = 25^\circ\text{C}$



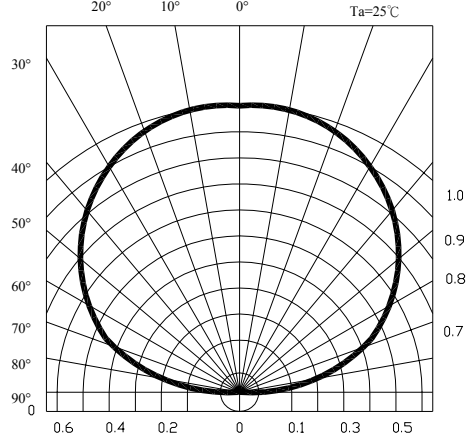
Forward Current Derating Curve



Luminous Intensity Vs. Forward Current
 $T_a = 25^\circ\text{C}$



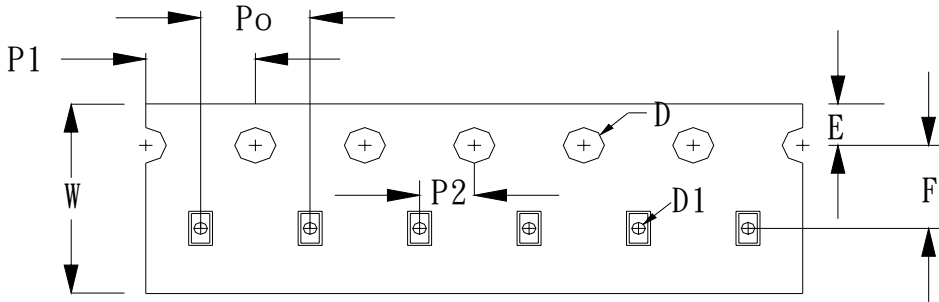
Radiation Diagram
 $T_a = 25^\circ\text{C}$



Carrier Tape Dimensions: Loaded quantity 4000PCS per reel

Packing Size													
Item	W	P1	E	F	D _o	D1	P _o	10P _o	P2	A _o	B _o	K _o	t
Spec.	8.00	4.00	1.75	3.50	1.50	0.5	4.00	40.00	2.00	0.90	1.75	0.70	0.23
Tolerance	±0.20	±0.10	±0.10	±0.05	^{+0.10} _{-0.00}	±0.05	±0.05	±0.20	±0.05	±0.10	±0.10	±0.10	±0.05

● Tape Specifications



Precautions For Use

- Over-Current-Proof
Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change. (Burn out will happen)
- Storage
 1. Do not open moisture proof bag before the products are ready to use.
 2. The LEDs should be used within a year. Before opening the package, the LEDs should be kept at 25°C or less and 30%RH or less.
 3. After opening the package, the LEDs should be kept at 30%RH or less.
 4. The LEDs should be used within 24 hours (1 day) after opening the package.
 5. If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage conditions, baking treatment should be performed using the following conditions. Baking treatment : 70±5°C for 72 hours.

Reliability Test Items And Conditions

No.	Items	Test Condition	Test Hours/Cycles	Sample Size
1	Solder Heat	TEMP : 240°C±5°C	5 sec/3cycles	48 pcs
2	Temperature Cycle	90°C ~ 25°C ~ -30°C ~ 25°C 30m 5m 30m 5m	300Cycles	48 pcs
3	Thermal Shock	100°C ~ -55°C 10m 10m	100Cycles	48 pcs
4	Operation Life	If=20mA	1000 Hrs	48 pcs
5	High Temperature Storage	Temp:90°C	1000Hrs	48 pcs
6	Low Temperature Storage	Temp:-30°C	1000Hrs	48 pcs
7	High Temperature/High Humidity	80°C / R.H80%	1000Hrs	48 pcs