SHENZHEN BOND OPTOELECTRONICS CO.,LTD

SPECIFICATION FOR APPROVAL

Customer：_____

Description： SMD LED

Model： BDS-0805SYC

No.： SD0007

Date： 2006-03-24

Enclosure is the specification

SHENZHEN BOND OPTOELECTRONICS CO.,LTD			
Production Dept.	Quality Dept.	Engineering Dept.	Marketing Dept.

APPROVED SIGNATURES			

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BDS-0805SYC SUPER BRIGHT YELLOW

Features

1)2.0mmx1.25mm SMT LED, 0.7mm THICKNESS.

2)LOW POWER CONSUMPTION.

3)WIDE VIEWING ANGLE.

4)IDEAL FOR BACKLIGHT AND INDICATOR.

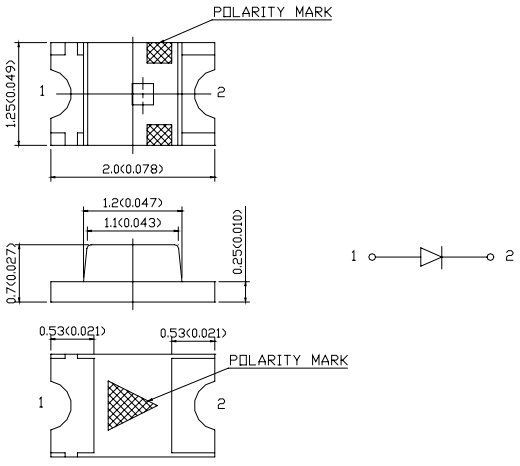
5)VARIOUS COLORS AND LENS TYPES AVAILABLE.

6)PACKAGE: 3000PCS/REEL.

Description

The Super Bright Yellow source color devices are made with InGaAlP Light Emitting Diode.

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.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @20mA		Viewing Angle
			Min.	Typ.	2θ1/2
BDS-0805SYC	Super Bright Yellow <InGaAlP>	Water Clear	60	80	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 T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ peak	Peak Wavelength	Super Bright Yellow	588		nm	I_F=20mA
λD	Dominate Wavelength	Super Bright Yellow	585		nm	I_F=20mA
Δλ 1/2	Spectral Line Half-width	Super Bright Yellow	28		nm	I_F=20mA
C	Capacitance	Super Bright Yellow	25		P_F	V_F=0V;f=1MHz
V_F	Forward	Super Bright Yellow	1.95	2.1	V	I_F=20mA
I_R	Reverse Current	Super Bright Yellow		10	uA	V_R=5V

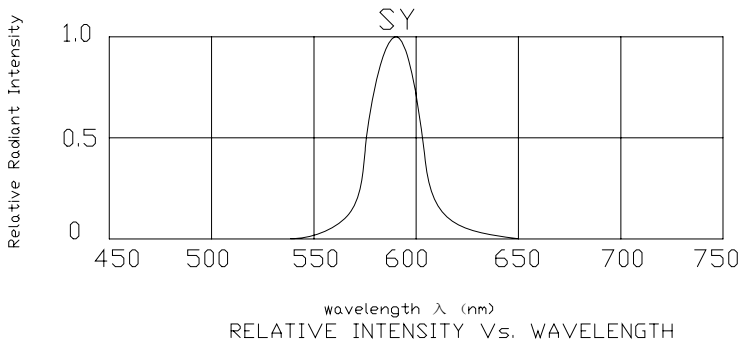
Absolute Maximum Ratings at T_A=25°C

Parameter	Super Bright Yellow	Units
Power dissipation	125	mW
DC Forward Current	30	mA
Peak Forward Current (1)	150	mA
Reverse Voltage	5	V
Operating/Storage Temperature	-40°C To +85°C	

Note:

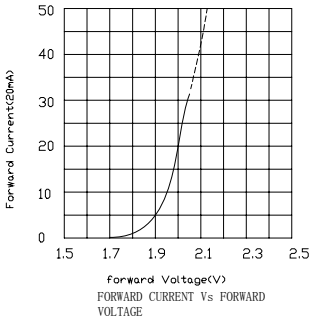
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Relative Intensity Vs Wavelength Chart

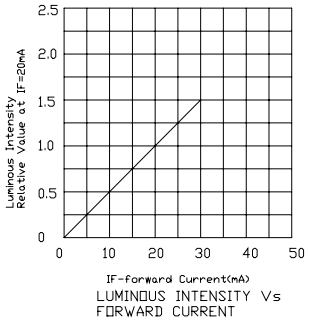


RELATIVE INTENSITY Vs. WAVELENGTH

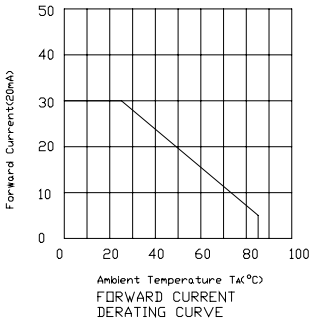
Super Bright Yellow BDS-0805SYC



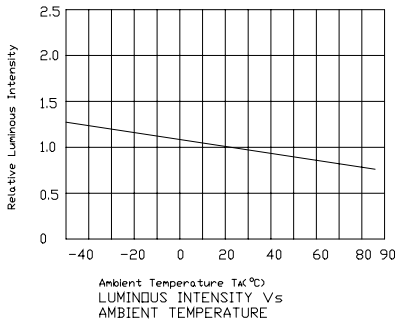
FORWARD CURRENT Vs FORWARD VOLTAGE



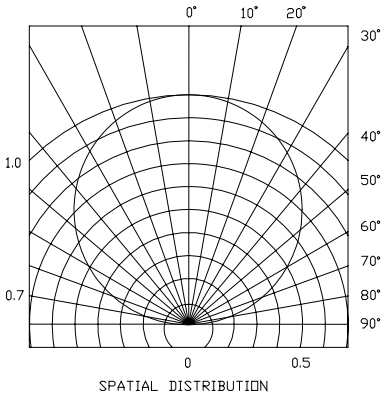
LUMINOUS INTENSITY Vs FORWARD CURRENT



FORWARD CURRENT DERATING CURVE



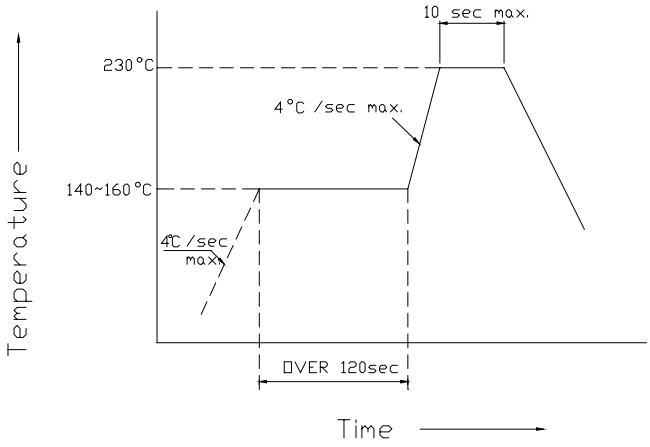
LUMINOUS INTENSITY Vs AMBIENT TEMPERATURE



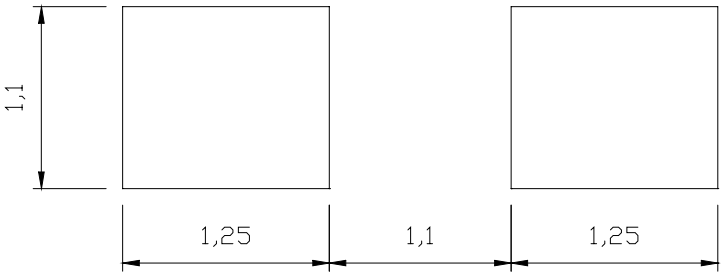
SPATIAL DISTRIBUTION

BDS-0805SYC
SMT Reflow Soldering Instructions

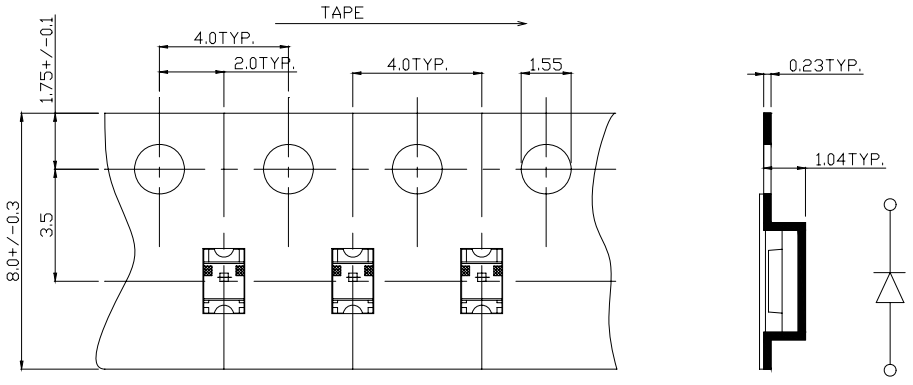
Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.



Recommended Soldering Pattern
<Units:mm>



Tape Specifications
<Units:mm>



RELIABILITY

(1) TEST ITEMS AND RESULTS

Test Item	Standard Test Method	Test Conditions	Note	Number of Damaged
Resitance to Soldering Heat (Reflow Soldering)	JEITA ED-4701 300 301	Tsld=260℃, 10sec. (Pre treatment 30℃,70%,168hrs)	2 times	0/50
Solderability (Reflow Soldering)	JEITA ED-4701 300 303	Tsld=215±5℃, 3sec. (Leader Solder)	1time over 95%	0/50
Thermal Shock	JEITA ED-4701 300 307	-40℃~100℃ 5min. 5min.	100cycles	0/50
Temperature Cycle	JEITA ED-4701 100 105	-40℃~25℃~100℃~25℃ 30min. 5min. 30min. 5min.	100cycles	0/50
Moisture Resistance Cycle	JEITA ED-4701 200 203	25℃~65℃~-10℃ 90%RH 24hrs./1cycle	10 cycles	0/50
High Temperature Storage	JEITA ED-4701 200 201	Ta=100℃	1000 hrs	0/50
Temperature Humidity Storage	JEITA ED-4701 100 103	Ta=60℃, 90%RH	1000 hrs	0/50
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40℃	1000 hrs	0/50
Steady State Operating Life		Ta=25℃, I_F=20mA	1000 hrs	0/50
Steady State Operating Life of High Temperature		Ta=85℃, I_F=5mA	1000 hrs	0/50
Steady State Operating Life of High Humidity Heat		60℃, 90%RH, I_F=15mA	500 hrs	0/50
Steady State Operating Life of Low Temperature		Ta=-30℃, I_F=20mA	1000 hrs	0/50
Drop		H=75cm	3 cycles	0/50
Substrate Bending	JEITA ED-4702	3mm, 5 ± 1 sec.	1 time	0/50
Stick	JEITA ED-4702	5N, 10 ± 1 sec.	1 time	0/50

(2) CRITERIA FOR JUDGING THE DAMAGE

Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	V_F	I_F=20mA	-	U.S.L.*)X1.1
Reverse Current	I_R	VR=5V	-	U.S.L.*)X2.0
Luminous Intensity	I_V	I_F=20mA	L.S.L.**)X0.7	-

*) U.S.L.: Upper Standard Level **) L.S.L.: Lower Standard Level

Intensity And Color Bin Limits

(1)Intensity Bin Limits (I_F=20mA)

SELECTION CODE FOR SUPER BRIGHT LEDS		
Group	Light intensity in mcd(20mA) Super Bright Yellow	
	Min.	Max.
F	18	44
G	36	60
H	50	90
M	70	130
N	110	220

Tolerance for each Bin limit is ±0.15.

(2)Color Bin Limits (I_F=20mA)

COLOR CODE FOR LEDS + DISPLAYS		
Group	Dom. WaveLength (nm)	
	Super Bright Yellow	
	min.	max.
1	581	584
2	584	586
3	586	588
4	588	590
5	590	592
6	592	594
7	594	597
8	597	600

Tolerance for each Bin limit is ±0.15.