



查询BL-HD0G033F-TRB供应商

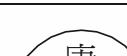
捷多邦，专业PCB打样工厂，24小时加急出货

BRIGHT LED ELECTRONICS CORP.

DATA SHEET

● DEVICE NUMBER : BL-HD0G033F-TRB

佰鴻工業股份有限公司
BRIGHT LED ELECTRONICS CORP.
台北縣板橋市和平路 19 號 3 樓
3F., No. 19, Ho Ping Road, Pan Chiao City,
Taipei, Taiwan, R. O. C.
Tel: 886-2-29591090
Fax: 886-2-29547006/29558809
www.brtled.com

APPROVED	DRAWER
 唐 2007.05.14 小 峰	 謝 2007.05.14 如 丹

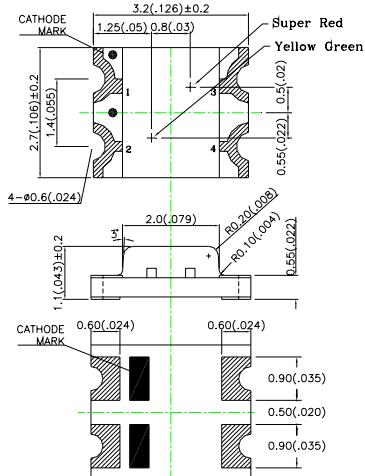
● Features:

1. Emitted Color : Super Red and Yellow Green
2. Lens Appearance : Water Clear
3. Bi-color type.
4. 3.2x2.7x1.1mm(1210) standard package
5. Suitable for all SMT assembly methods.
6. Compatible with infrared and vapor phase reflow solder process.
7. Compatible with automatic placement equipment.
8. This product doesn't contain restriction Substance, comply ROHS standard.

● Applications:

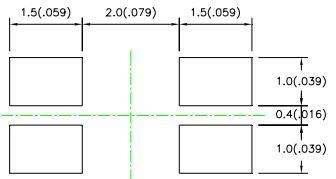
1. Automotive: Dashboards, stop lamps, turn signals.
2. Backlighting: LCDs, Key pads advertising.
3. Status indicators: Consumer & industrial electronics.
4. General use.

● Package Dimensions:



Super Red
1 —— □ —— 3
2 —— □ —— 4
Yellow Green

For reflow soldering



NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.10\text{mm}$ (0.004") unless otherwise specified.
3. Specifications are subject to change without notice.

● Absolute Maximum Ratings(Ta=25°C)

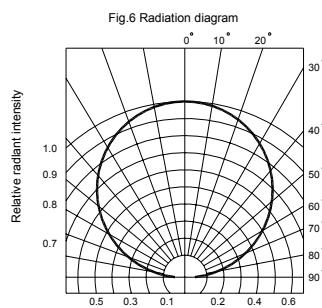
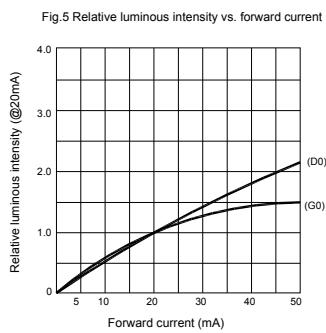
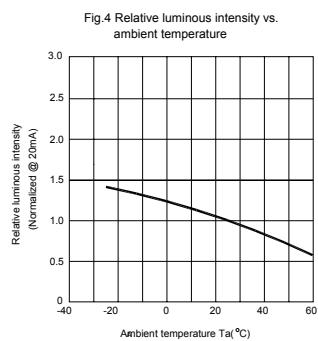
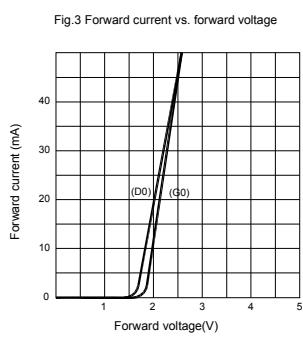
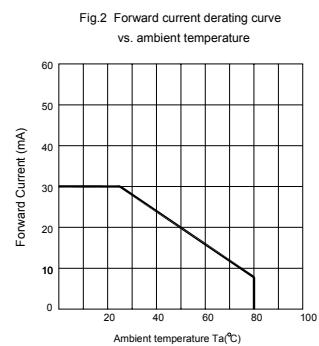
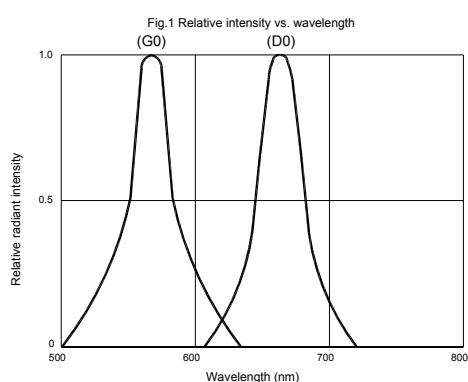
Parameter	Symbol	Super Red	Yellow Green	Unit
Power Dissipation	Pd	60	80	mW
Forward Current	I _F	30	30	mA
Peak Forward Current *1	I _{FP}	100	100	mA
Reverse Voltage	V _R		5	V
Operating Temperature	T _{opr}		-25°C~80°C	-
Storage Temperature	T _{stg}		-30°C~85°C	-
Soldering Temperature	T _{sol}		See Page 6	-

*1 Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

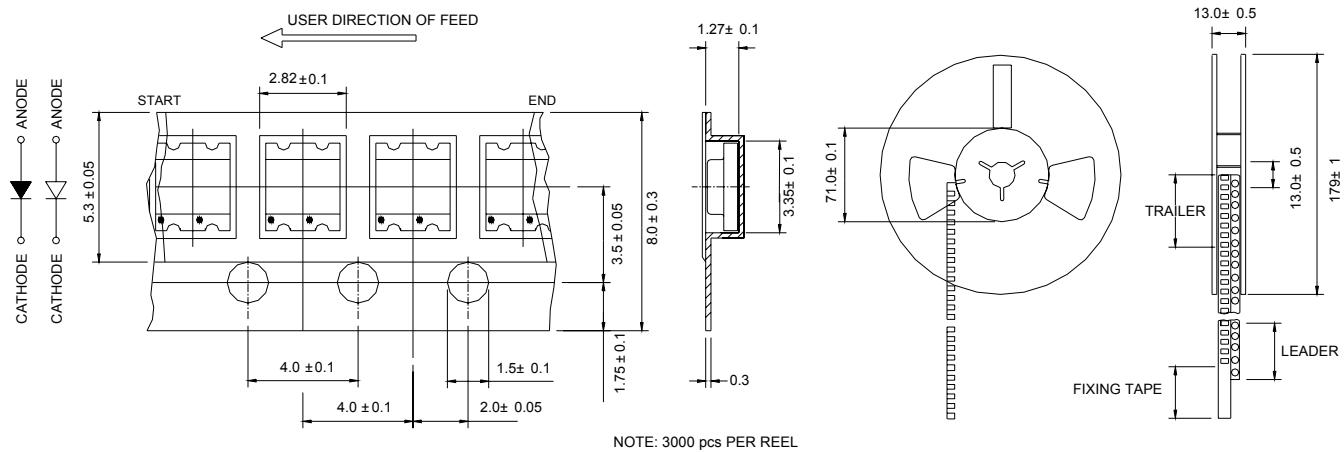
● Electrical and optical characteristics($T_a=25^\circ C$)

Parameter	Symbol	Condition	Color	Min.	Typ.	Max.	Unit
Forward Voltage	V_f	$I_f=20mA$	Super Red Yellow Green	-	2.0 2.2	2.6 2.6	V
Luminous Intensity	I_v	$I_f=20mA$	Super Red Yellow Green	8.2 2.4	15 10	-	mcd
Reverse Current	I_R	$V_R=5V$	Super Red Yellow Green	-	-	100	μA
Peak Wave Length	λ_p	$I_f=20mA$	Super Red Yellow Green	-	660 568	-	nm
Dominant Wave Length	λ_d	$I_f=20mA$	Super Red Yellow Green	636 566	-	646 576	nm
Spectral Line Half-width	$\Delta \lambda$	$I_f=20mA$	Super Red Yellow Green	-	20 30	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_f=20mA$	Super Red Yellow Green	-	120	-	deg

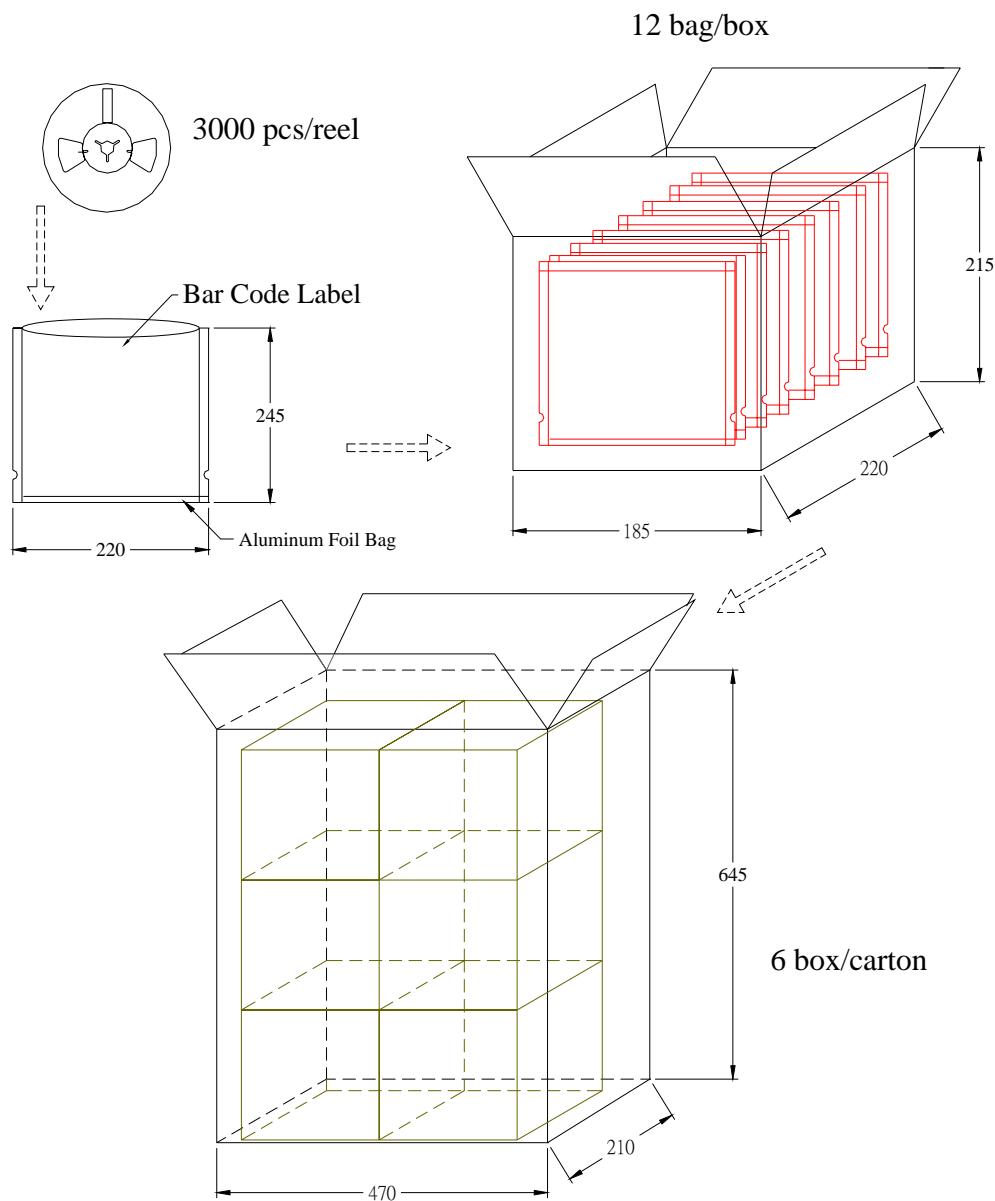
● Typical Electro-Optical Characteristics Curves



● Tapping and packaging specifications(Units: mm)



● Package Method:(unit:mm)Vacuum





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● Bin Limits

Intensity Bin Limits (D0) (At 20mA)

BIN CODE	Min. (mcd)	Max. (mcd)
J	8.2	12.3
K	12.3	18.5
L	18.5	28.0
M	28.0	42.0

Tolerance for each Bin limit is $\pm 15\%$.

Intensity Bin Limits (G0) (At 20mA)

BIN CODE	Min. (mcd)	Max. (mcd)
F	2.4	3.7
G	3.7	5.5
H	5.5	8.2
J	8.2	12.3

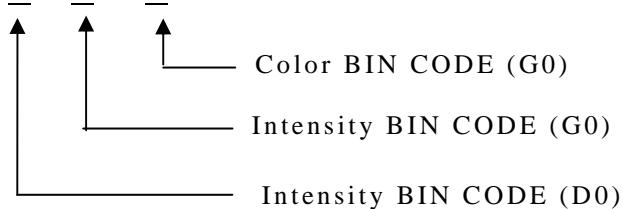
Tolerance for each Bin limit is $\pm 15\%$.

Color Bin Limits (G0) (At 20mA)

BIN CODE	Min. (nm)	Max. (nm)
4	566	568
5	568	570
6	570	572
7	572	574
8	574	576

Tolerance for each Bin limit is $\pm 1\text{nm}$.

● BIN : X - X X





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● Reliability Test

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS-C-7021 :B-1	Connect with a power If=20mA Ta=Under room temperature Test time=1,000hrs	0/20
	High Temperature Storage	MIL-STD-202:103B JIS-C-7021 :B-11	Ta=+65°C±5°C RH=90%-95% Test time=240hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS-C-7021 :B-10	High Ta=+85°C±5°C Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-35°C±5°C Test time=1,000hrs	0/20
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS-C-7021 :A-4	-35°C ~ +25°C ~ +85°C ~ +25°C 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	-35°C±5°C ~+85°C±5°C 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS-C-7021 :A-1	Preheating : 140°C-160°C, within 2 minutes. Operation heating : 260°C (Max.), within 10seconds. (Max.)	0/20

● Judgment criteria of failure for the reliability

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V _F (V)	I _F =20mA	Over Ux1.2
Reverse current	I _R (uA)	V _R =5V	Over Ux2
Luminous intensity	I _V (mcd)	I _F =20mA	Below SX0.5

Note: 1.U means the upper limit of specified characteristics. S means initial value.

- Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.

● Soldering :

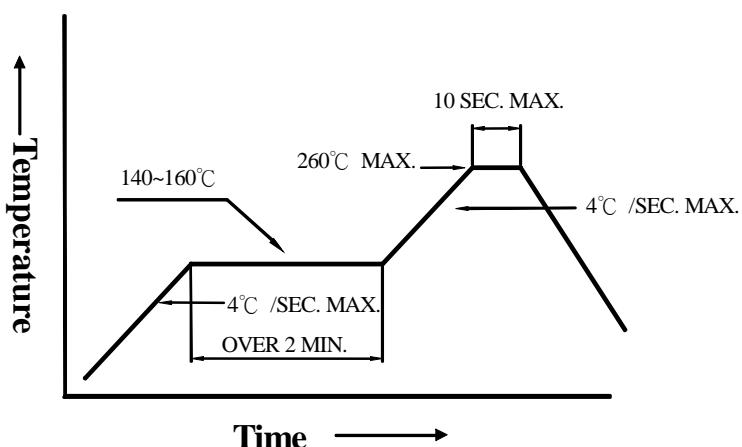
1. Manual Of Soldering

The temperature of the iron tip should not be higher than 300°C (572°F) and Soldering within 3 seconds per solder-land is to be observed.

2. Reflow Soldering

Preheating : $140^{\circ}\text{C} \sim 160^{\circ}\text{C} \pm 5^{\circ}\text{C}$, within 2 minutes.

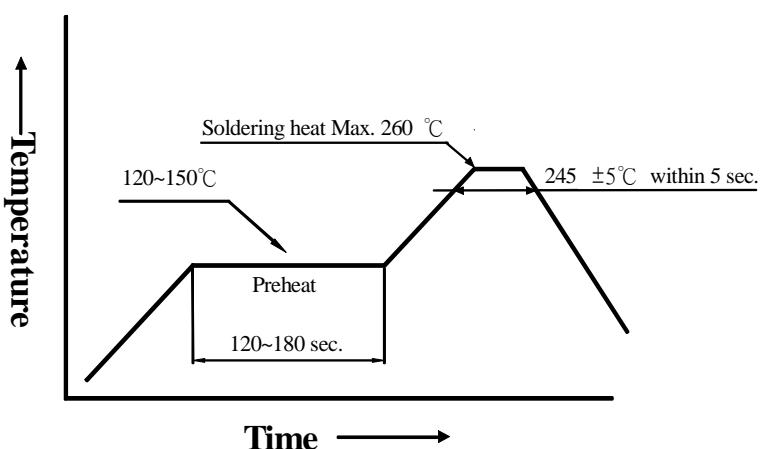
Operation heating : 260°C (Max.) within 10 seconds.(Max)
Gradual Cooling (Avoid quenching).



3. DIP soldering (Wave Soldering) :

Preheating : $120^{\circ}\text{C} \sim 150^{\circ}\text{C}$, within 120~180 sec.

Operation heating : $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ within 5 sec. 260°C (Max)
Gradual Cooling (Avoid quenching).



● Handling :

Care must be taken not to cause to the epoxy resin portion of BRIGHT LEDs while it is exposed to high temperature.

Care must be taken not rub the epoxy resin portion of BRIGHT LEDs with hard or sharp article such as the sand blast and the metal hook.



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● Notes for designing:

Care must be taken to provide the current limiting resistor in the circuit so as to drive the BRIGHT LEDs within the rated figures. Also, caution should be taken not to overload BRIGHT LEDs with instantaneous voltage at the turning ON and OFF of the circuit.

When using the pulse drive care must be taken to keep the average current within the rated figures. Also, the circuit should be designed so as be subjected to reverse voltage when turning off the BRIGHT LEDs.

● Storage:

In order to avoid the absorption of moisture, it is recommended to solder BRIGHT LEDs as soon as possible after unpacking the sealed envelope.

If the envelope is still packed, to store it in the environment as following:

- (1) Temperature : 5°C-30°C (41°F) Humidity : RH 60% Max.
- (2) After this bag is opened, devices that will be applied to infrared reflow, vapor-phase reflow, or equivalent soldering process must be:
 - a. Completed within 168 hours.
 - b. Stored at less than 30% RH.
- (3) Devices require baking before mounting, if:
 - (2) a or (2) b is not met.
- (4) If baking is required, devices must be baked under below conditions:
48 hours at 60°C ±3°C.

● Package and Label of Products:

- (1) Package: Products are packed in one bag of 3000 pcs (one taping reel) and a label is attached on each bag.
- (2) Label:

