0.8"(20mm) Big LED Lamps

LTJ-811 HR/811G/811Y

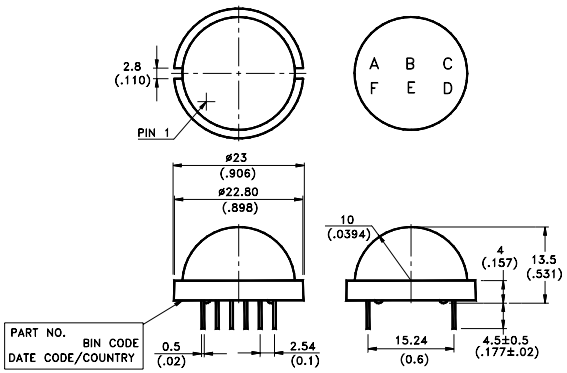
Features

- 0.8 inch (20.0mm) diameter big lamp.
- Choices of three bright colors-green/yellow/high efficiency red.
- Wide viewing angle.
- Graphic stacking allowable.
- High luminous intensity.
- Low power requirement.
- Solid state reliability.
- Categorized for luminous intensity.
- Excellent ON-OFF contrast.
- Suitable for multiplex operation.
- Easy mounting on P.C. board or sockets.

Description

The LTJ-811 series big lamp are sphere light sources designed for a variety of application where a large, bright source of light is required. The green series devices utilize LED chips which are made from GaP on a transparent GaP substrate. The yellow and high efficiency red series devices utilize LED chips which are made from GaAsP on a transparent GaP substrate. The green devices have green diffused lens color. The yellow devices have yellow diffused lens color. The high efficiency red devices have red diffused lens color.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
   Tolerance are: ±0.25mm (.010") unless otherwise noted.

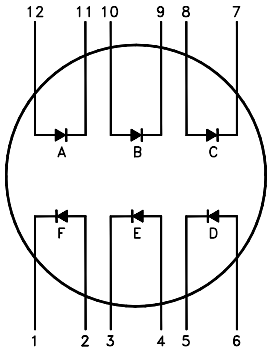
Devices

Part No. LTJ-			Description
Green	Yellow	Hi. Eff. Red	
811G	811Y	811HR	Universal, Sphere Lens

Pin Connection

Pin No.	Connection
1.	Cathode F
2.	Anode F
3.	Cathode E
4.	Anode E
5.	Cathode D
6.	Anode D
7.	Cathode C
8.	Anode C
9.	Cathode B
10.	Anode B
11.	Cathode A
12.	Anode A

Internal Circuit Diagram



Absolute Maximum Rating at Ta=25℃

Parameter	Green	Yellow	Hi. -Eff. Red	Unit
Power Dissipation Per Chip	75	60	75	mW
Peak Forward Current Per Chip (1/10 Duty Cycle, 0.1ms Pulse Width)	100	80	100	mA
Continuous Forward Current Per Chip Derating Linear from 25℃ Per Chip	25 0.33	20 0.27	25 0.33	mA mA/℃
Reverse Voltage Per Chip	5	5	5	V
Operating Temperature Range	-35℃ to +85℃			
Stroage Temperature Range	-35℃ to +85℃			
Solder Temperature 1/16 Inch Below Seating Plane for 3 Seconds at 260℃				

Electrical/Optical Characteristics at Ta=25℃

LTJ-811Y

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity Per Lamp	I_V	10	25		μcd	I_F=60mA
Peak Emission Wavelength Per Lamp	λ P		585		nm	I_F=120mA
Spectral Line Half-Width Per Lamp	$\Delta\lambda$		35		nm	I_F=120mA
Dominant Wavelength	λ d		588		nm	I_F=20mA
Forward Voltage, any Chip	V_F		2.1	2.6	V	I_F=20mA
Reverse Current, any Chip	I_R			100	μA	V_R=5V

LTJ-811HR

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity Per Lamp	I_V	10	25		μcd	I_F=60mA
Peak Emission Wavelength Per Lamp	λ P		635		nm	I_F=120mA
Spectral Line Half-Width Per Lamp	$\Delta\lambda$		40		nm	I_F=120mA
Dominant Wavelength	λ d		623		nm	I_F=20mA
Forward Voltage, any Chip	V_F		2.1	2.6	V	I_F=20mA
Reverse Current, any Chip	I_R			100	μA	V_R=5V

LTJ-811G

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity Per Lamp	I_V	11	25		μcd	I_F=60mA
Peak Emission Wavelength Per Lamp	λ P		565		nm	I_F=120mA
Spectral Line Half-Width Per Lamp	$\Delta\lambda$		30		nm	I_F=120mA
Dominant Wavelength	λ d		569		nm	I_F=20mA
Forward Voltage, any Chip	V_F		2.1	2.6	V	I_F=20mA
Reverse Current, any Chip	I_R			100	μA	V_R=5V

Typical Electrical/Optical Characteristic Curves (25℃ Ambient Temperature Unless Otherwise Noted)

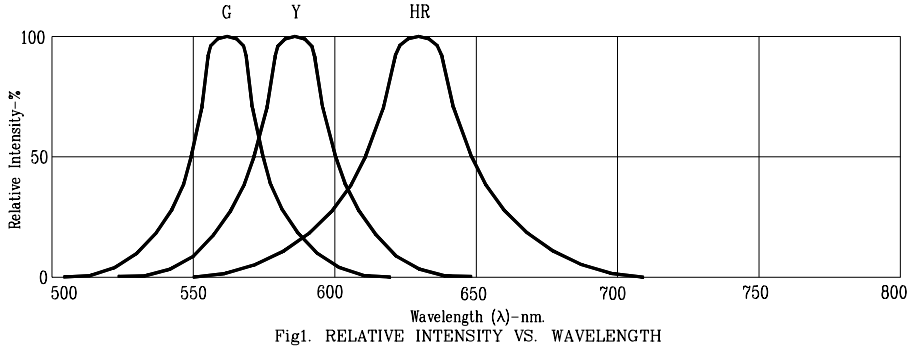


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

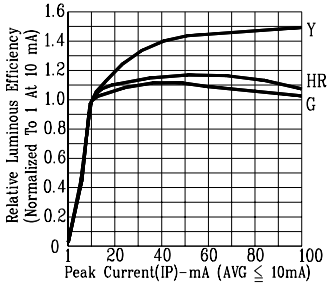


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

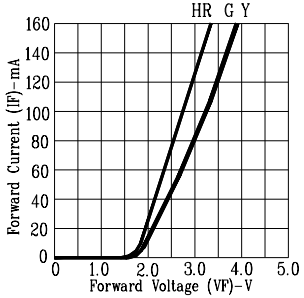


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

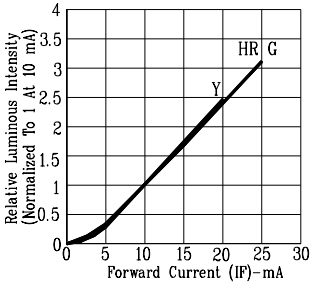


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

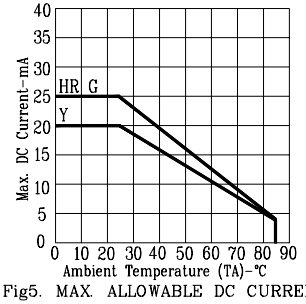


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

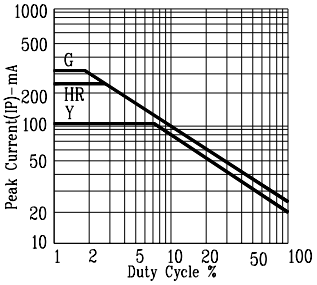


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: Y=YELLOW G=GREEN HR=HI.EFF.RED (REFRESH RATE 1KHz)