

Part No:

YLL-FFR3FI113G-S

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

Features:

- * High intensity Polygonal LED lamp
- * $\Phi 5\text{MM}$ round shape
- * UV resistant epoxy

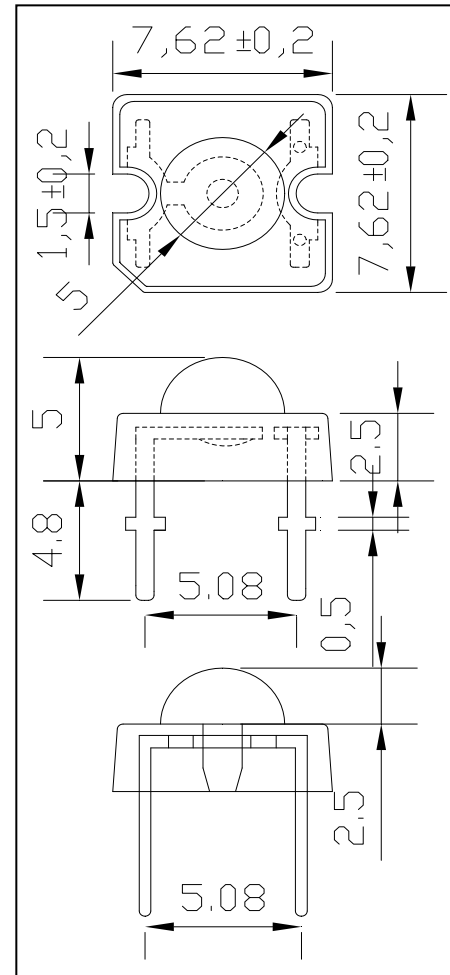
Applications:

- * LED Lighting
- * Automotive Lighting application

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Max | Unit |
|------------------------------------|----------|-----------------|------|
| Power Dissipation | Ps | 100 | mW |
| Peak Forward Current | I_{FF} | 60 | mA |
| Continuous Forward Current | I_F | 20 | mA |
| Reverse Voltage | Vs | 5 | V |
| Operating Temperature Range | Topr | -30°C to +80°C | |
| Storage Temperature Range | Tstg | -40°C to +100°C | |
| Lead Soldering Temperatur Δ | Tsol | 260 | °C |

Package Dimensions



Unit : mm

Tolerance are ± 0.2 , unless note otherwise

* Duty ratio max 1/10 Pulse Width max. 0.1ms;

Δ At the position of 4mm from the bottom of the package within 5 seconds.

| Part No. | Material | Lens | Emitting color | Forward voltage(V) | | Luminous Intensity(mcd) | | Dominant Wavelength(nm) | | Viewing Angle (2θ _{1/2}) |
|------------------|----------|-------------|----------------|--------------------|-----|-------------------------|------|-------------------------|-----|------------------------------------|
| | | | | Min | Max | Min | Max | Min | Max | |
| YLL-FFR3FI113G-S | AlGaInP | Water Clear | Red | 1.8 | 2.4 | 1200 | 1400 | 620 | 630 | 90 |

BIN Table: (Test at 20 mA)

| VF (v) | |
|--------|---------|
| Code | Range |
| 1 | 1.8-2.0 |
| 2 | 2.0-2.2 |
| 3 | 2.2-2.4 |

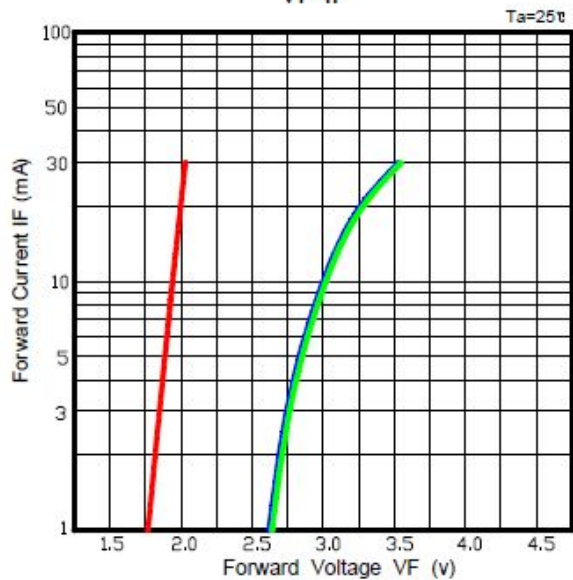
| IV (mcd) | |
|----------|-----------|
| Code | Range |
| 1 | 1200-1400 |

| Wd (nm) | |
|---------|---------|
| Code | Range |
| R1 | 620-625 |
| R2 | 625-630 |

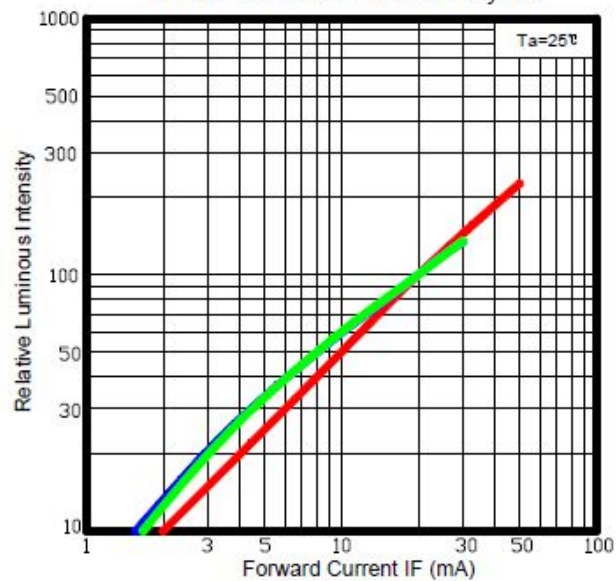
* Luminous Intensity Measure tolerance are 15%

1. Static Electricity and surge damages the LEDs. It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs. All devices、Equipment and machinery must be properly grounded.
2. When inspecting own final products on which LEDs were mounted, It is easy to find static-damaged LEDs by light emission test at lower current (below 1mA is recommended) .
3. Damaged LEDs will show some unusual characteristics such as leak current remarkably increases, starting forward voltage becomes lower, or the LEDs get unlighted at the low current.

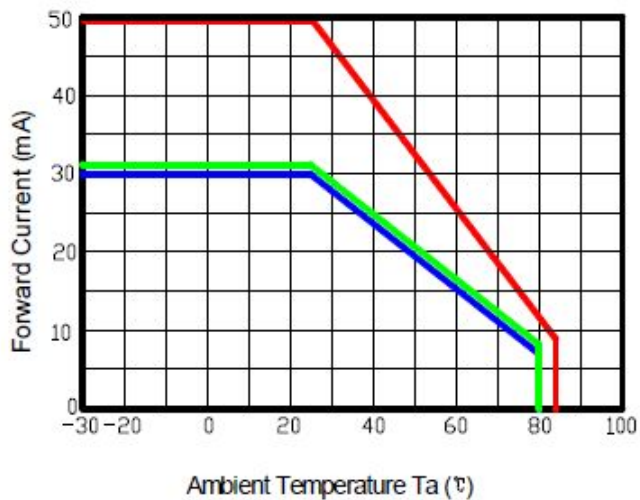
VF-IF



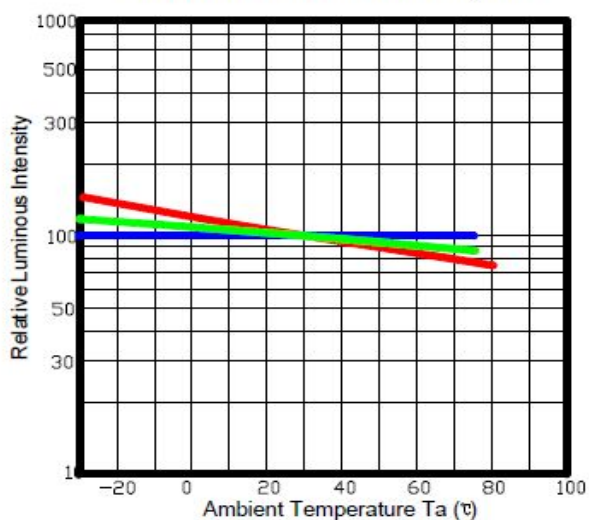
Relative Luminous Intensity-Ta



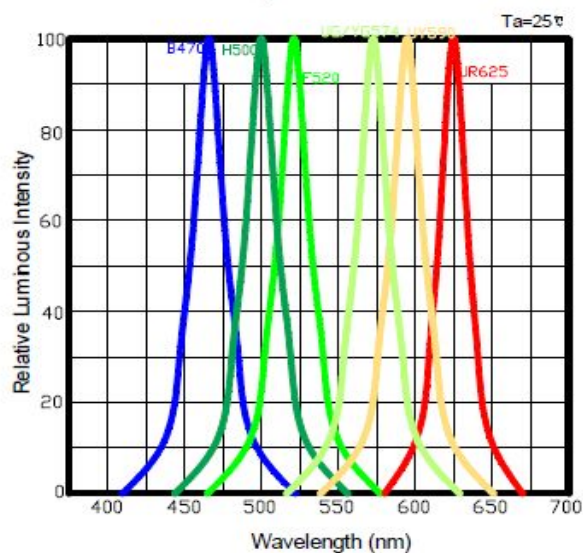
IF-Ta



Relative Luminous Intensity-Ta



Wavelength Characteristics



| Classification | Test Item | Test Conditions | Sample Size | Num of Damaged | Reference Standard |
|--------------------|----------------------------------|---|-------------|----------------|--|
| Endurance Test | Operating Life | $I_F=30mA$ 1000Hrs | 22 | 0 | MIL-STD-750:1026 MIL-STD-202:107D JIS C 7021:B-4 |
| | High Temp. High Humidity Storage | $85\pm 5^\circ C$ 85-90% RH 1000Hrs | 100 | 0 | MIL-STD-202:103D JIS C 7021:B-11 |
| | Hi-Temp. Storage | $100\pm 5^\circ C$ 1000Hrs | 100 | 0 | MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:B-10 |
| | Low-Temp. Storage | $-55\pm 5^\circ C$ 1000Hrs | 100 | 0 | JIS C 7021:B-12 |
| Environmental Test | Temperature Cycling | $-40\pm 5^\circ C$ 30min Room Temp. 5min $100\pm 5^\circ C$ 30min 100 Cycles | 100 | 0 | MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A-4 |
| | Thermal Shock | $-30\pm 5^\circ C$ 5min $100\pm 5^\circ C$ 5min 100 Cycles | 100 | 0 | MIL-STD-750:1051 MIL-STD-202:107D JIS C 7021:A3 |
| | Solderability | $230\pm 5^\circ C$ Dwell Time $\leq 5sec$ | 22 | 0 | MIL-STD-202:208D MIL-STD-750:2026 MIL-STD-883:2003 JIS C 7021:A-2 |
| | Solder Resistance | $260\pm 5^\circ C$ $10\pm 1sec$ | 22 | 0 | MIL-STD-750:2031 MIL-STD-202:210A JIS C 7021:A-1 |

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Criteria for Judging The Damage:

| Item | Symbol | Test Conditions | Criteria for Judgment | |
|--------------------|--------|-----------------|-----------------------|-------------|
| | | | Min | Max |
| Forward Voltage | I_F | $I_F=20mA$ | - | U. S. L*1.1 |
| Reverse Current | I_R | $V_R=5V$ | - | U. S. L*2.0 |
| Luminous Intensity | I_v | $I_F=20mA$ | L. S. L*0.7 | - |

PS: U. S. L. :Upper Standard Level L. S. L. :Lower Standard Level