

VISIBLE LIGHT PRODUCTS SPECIFICATION

HTLB2-44HY

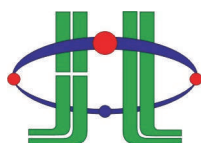


| Drawn by | Checked by | Approved by |
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| | | |
| | | |



DATE:2010/5/19

REV:E



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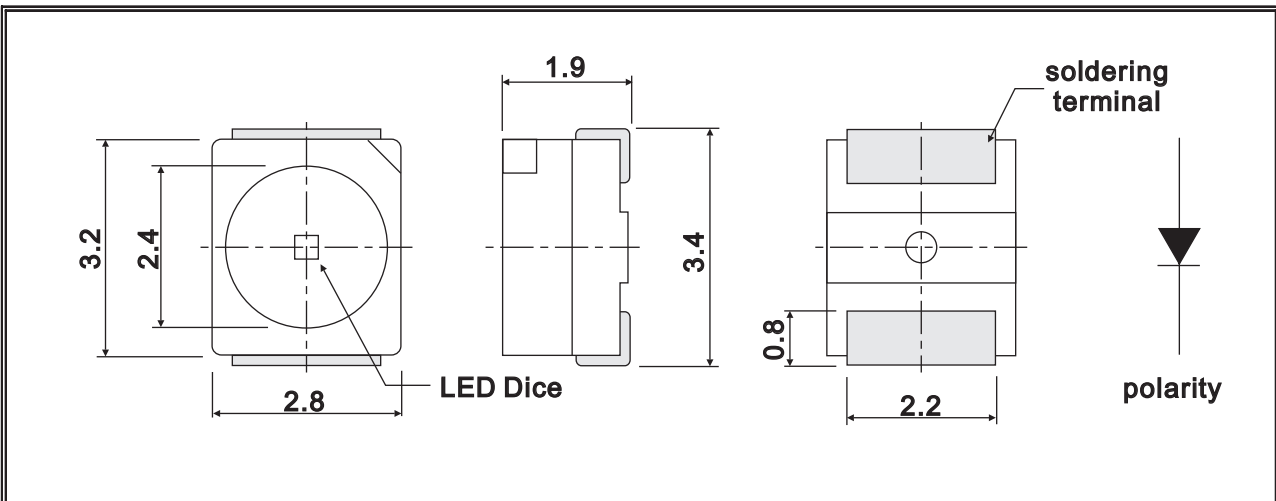
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DEVICES

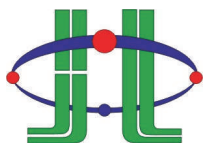
| Part Number | Lens | | Source | |
|-------------|-------------|--------------|-------------|--------------|
| | Color | Diffusion | Dice Source | Color |
| HTLB2-44HY | Water clear | Non-Diffused | AllnGaP/GaP | Super Yellow |

PACKAGE DIMENSIONS



NOTE:

- 1.All dimensions are in millimeter.
- 2.specifications are subject to change without notice.
- 3.Tolerance is 0.3mm unless otherwise noted.



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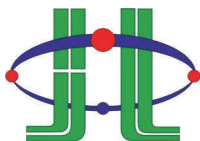
ABSOLUTE MAXIMUM RATINGS

TA=25°C

| PARAMETER | SYMBOL | MAX. RATING | UNIT |
|---|--------|-------------|------|
| Power Dissipation | Pd | 100 | mW |
| Continuous Forward Current | IF | 25 | mA |
| Peak Forward Current *1 | IFM | 50 | mA |
| Reverse Voltage | VR | 5 | V |
| LED Junction Temperature | Tj | 100 | °C |
| Operating Temperature | Topr | -40 ~ +85 | °C |
| Storage Temperature | Tstg | -40 ~ +85 | °C |
| Reflow Soldering (preheat 150-180°C 60-120sec, soldering temp 260°C 5sec) | | | |

*1.Duty Ratio=0.1%,Pulse Width=10us.

*2.Iron soldering in 350°C within 5 seconds will not cause damage to the dice. But be aware of the high temperature will not only make the epoxy soften but also cause the lead moving and the gold wire broken and even open. So before returning to the normal temperature PLEASE AVOID any serious pressure on the top of epoxy and lead.



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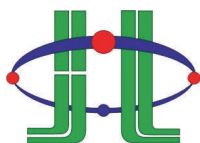
ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

| PARAMETER | SYMBOL | TEST CONDITION | MIN | TYP | MAX | UNIT |
|------------------------------|---------|----------------|-----|-----|-----|------|
| View Angle of Half Power | 2θ1/2 | IF=20mA | | 100 | | deg |
| Forward Voltage | VF | | | 2.1 | 2.5 | V |
| Reverse Current | IR | VR=5V | | | 10 | μA |
| Luminous Intensity *2 | IV | IF=20mA | 450 | 850 | | mcd |
| Peak Emission Wavelength | λp | | | 592 | | nm |
| Dominate Wave Length *3 | λd(HUE) | | | 590 | | nm |
| Spectrum Width Of Half Valve | Δλ | | | 25 | | nm |

*2.Tolerance: 15% HUEY-JANN measuring equipment : EXELTRON 2001. 2.S370 made by U.D.T.

*3.The dominate wavelength , λ d, is derived from the CIE Chromaticity Diagram and represents the color of the device.



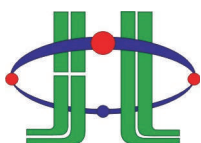
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RELIABILITY TEST

| Classification | Test Item | Test Conditions | Refer to Temperature-profile |
|------------------|---|--|------------------------------|
| Reflow Soldering | Lead Solder | Pre-heat=120~150°C Pre-heat time=120sec Max Peak temperature=240°C Max Soldering time=10sec Max | |
| | Lead free Solder | Pre-heat=180~200°C Pre-heat time=120sec Max Peak temperature=260°C Max Soldering time=10sec Max | |
| Hand Soldering | Temperature=350°C Max Soldering time=3sec Max(one time only) | | |

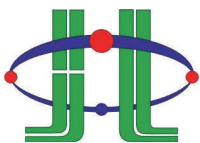
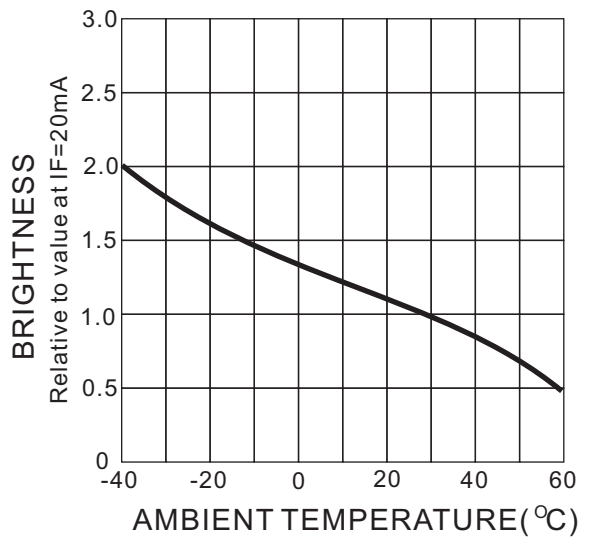
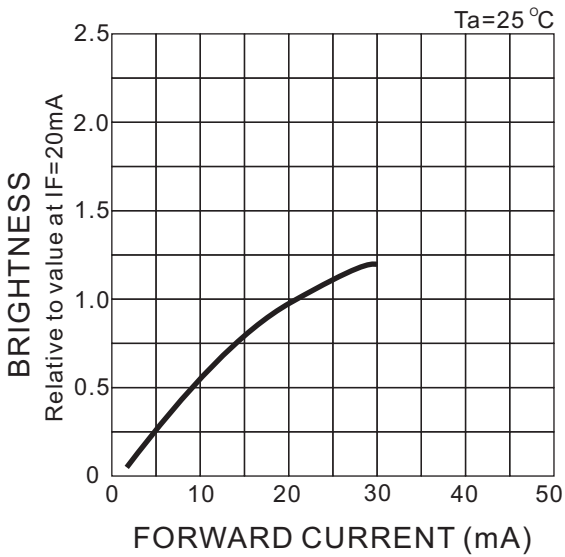
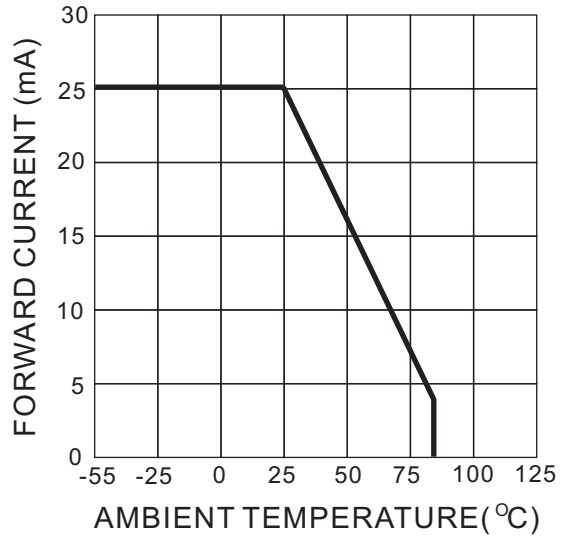
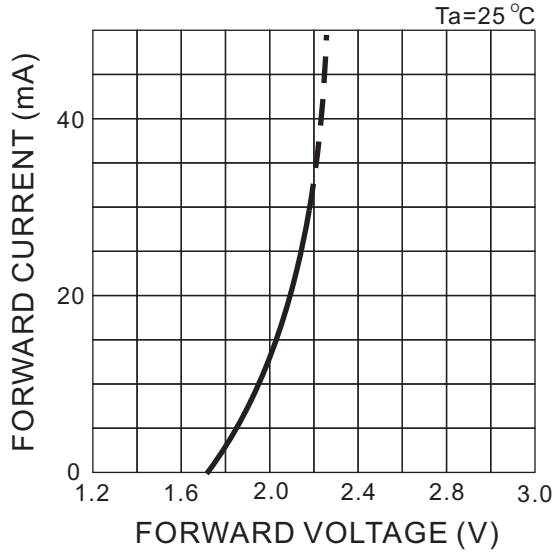


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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

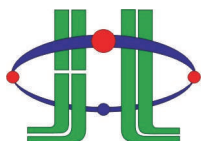
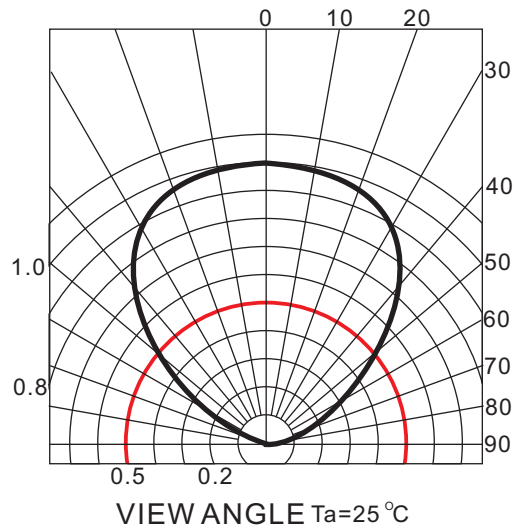
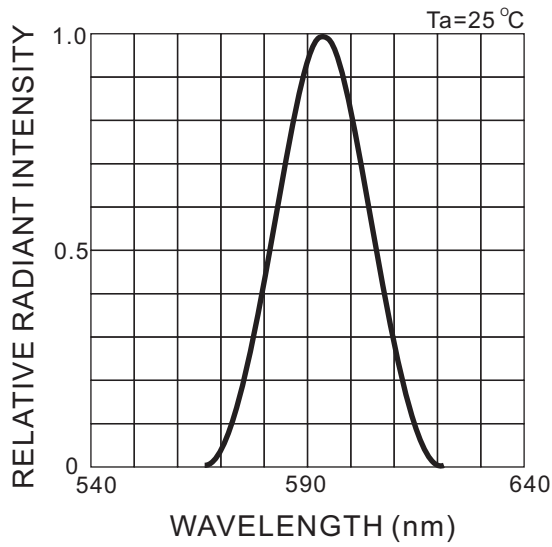


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LED VF Bin Selection

$I_F=20\text{mA}$

| BIN CODE | Forward Voltage | |
|----------|-----------------|---------|
| | Minimum | Maximum |
| e | 2.0 | 2.2 |
| f | 2.2 | 2.4 |
| g | 2.4 | 2.6 |
| | | |
| | | |

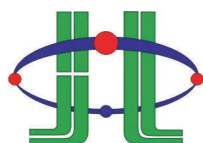
Voltage tolerance for each bin limit is $\pm 0.03\text{V}$

Brightness Bin Selection

$I_F=20\text{mA}$

| BIN CODE | Brightness in mcd | |
|----------|-------------------|---------|
| | Minimum | Maximum |
| N | 680 | 880 |
| P | 880 | 1150 |
| | | |
| | | |
| | | |

Brightness tolerance for each bin limit is $\pm 15\%$



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