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| Wen Li | Fang Yang | Jiang Yang | Fang Wang |

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### 3 Characteristic

|                                 |         |         |      |      |      |     |
|---------------------------------|---------|---------|------|------|------|-----|
|                                 |         |         |      |      |      |     |
|                                 |         |         |      |      |      |     |
|                                 |         |         |      |      |      |     |
| Forward current                 | If      | 30      |      |      |      | mA  |
| Reverse voltage                 | Vr      | 5       |      |      |      | V   |
| Power dissipation               | Pd      | 110     |      |      |      | mW  |
| Operating temperature range     | Top     | -25 +80 |      |      |      | C   |
| Storage temperature range       | Tg      | -30 +80 |      |      |      | C   |
| Peak pulsed current 1/8 d f=1KH | Ifp     | 125     |      |      |      | mA  |
|                                 |         |         |      |      |      |     |
|                                 |         |         |      |      |      |     |
|                                 |         |         |      |      |      |     |
| Wavelength at peak emission     | If=20mA | peak    | 620  | 630  | 635  | nm  |
| Spectral half bandwidth         | If=20mA |         |      | 10   |      |     |
| Forward voltage                 | If=20mA | Vf      | 1.8  | 2.0  | 2.4  | V   |
| Luminous intensity              | If=20mA | I       | 1300 | 1650 | 2000 | mcd |



|                         |         |         |        |     |    |     |
|-------------------------|---------|---------|--------|-----|----|-----|
| Viewing angle at 50% IV | If=10mA |         | --     | 120 | -- | Deg |
| Reverse current         | Vr=5V   | Ir      | --     | --  | 5  | A   |
| Useful life             | -       | IF=20mA | 100000 |     |    | H   |

Typical Electrical/Optical Characteristic Curve  
(Ta=25 Unless Otherwise Noted)

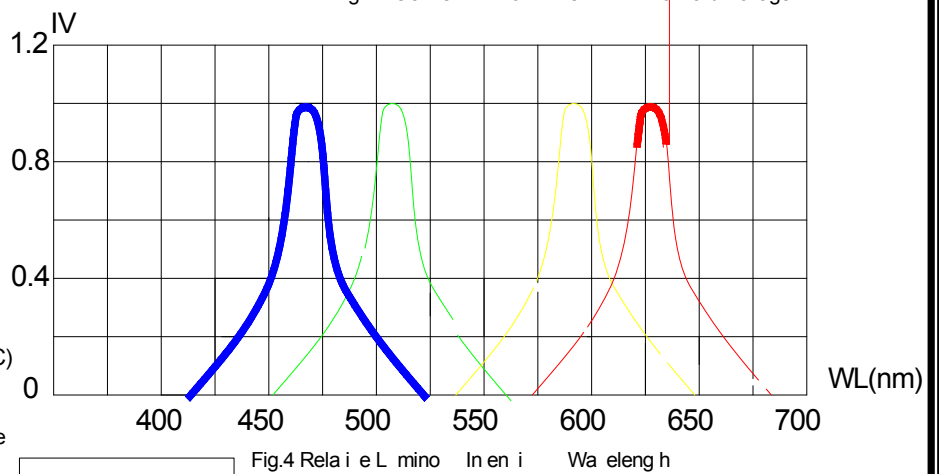
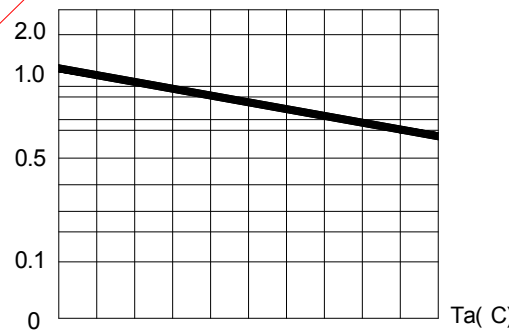
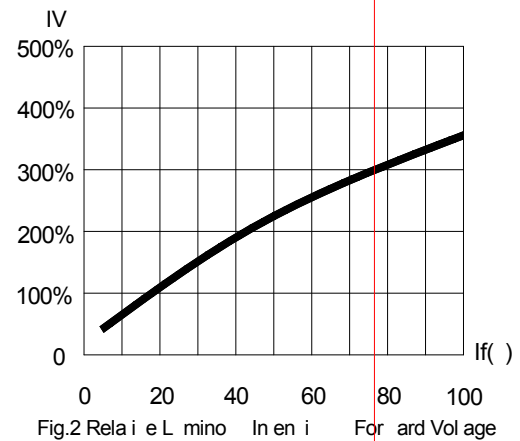
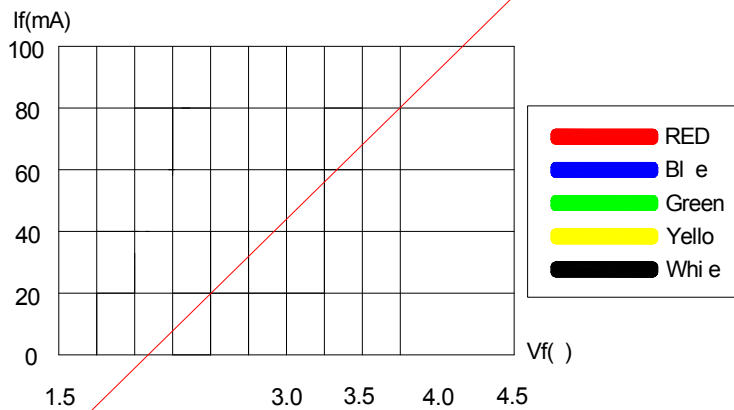


Fig.3 Relative Luminous Intensity vs Ambient Temperature

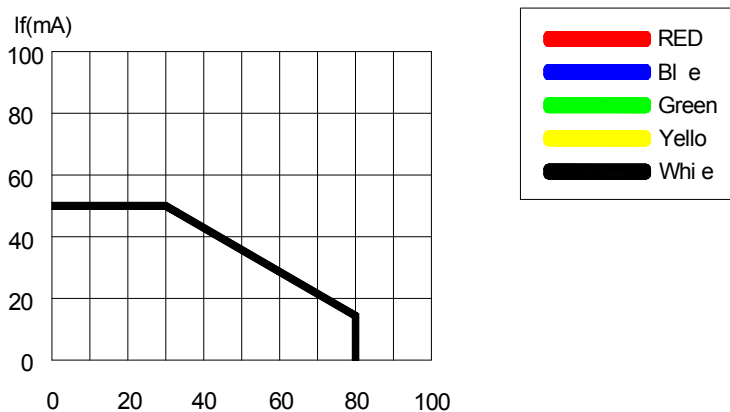
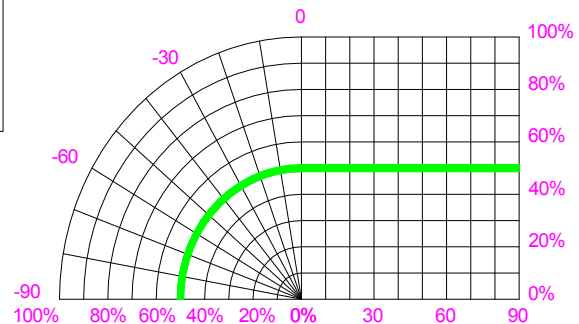


Fig.5 Maximum Forward Current vs Ambient Temperature

Direct Emission Characteristic





|   |                                                |                                              |          |        |     |
|---|------------------------------------------------|----------------------------------------------|----------|--------|-----|
|   |                                                |                                              |          |        |     |
| 1 | Tin-plated                                     | Temp 260 ± 5                                 | 5 sec.   | 76 PCS | 0/1 |
| 2 | Back & forth under high & low temp alternately | High temp. +85 30min to 5min to -55 30min    | 50 bo    | 76 PCS | 0/1 |
| 3 | Heating                                        | High temp. +100 30min To 10 sec to -10 30min | 50 bo    | 76 PCS | 0/1 |
| 4 | High storage temp.                             | Temperature 100                              | 1000 Hr. | 76 PCS | 0/1 |
| 5 | Low storage temp.                              | -55                                          | 1000 Hr. | 76 PCS | 0/1 |
| 6 | Life span                                      | VF=1.9V IF=20mA                              | 1000 Hr. | 76 PCS | 0/1 |
| 7 | Test under high temp. & high humidity          | 85 ± 5/85%RH                                 | 1000 Hr. | 76 PCS | 0/1 |

i Iron Soldering: The Iron (max 30W) end temperature less than 300 °C, soldering time 3 seconds, soldering position is minimum 2mm from body.

ii Dip Soldering: Max temperature is 260 °C, time 5s, the position is minimum 2mm from body.

i Bracket must be bent only if 2mm from colloid.

ii Bracket mold must be finished before or professionally.

iii Bracket mold must be finished before soldering.

i Bracket mold holder should be connected between the pin, the distance gap of lead and the circuit board.

i. It should be paid attention to the ordering of all the devices in case of wrong polarity. Devices can be overlooked or the heat components, working condition can replace the limit.

ii. It should not assemble LED when the lead are deformed.

iii. When decide to assemble in hole, accurately according to the size of hole and hole distance of the line base

i. Suggesting good heating position

i. It should avoid any kind of quake or force on LED, before the soldering temperature returns normal.

It should be careful. When clean the body with chemical. Some chemical may bring damage to the surface, and bring color fading, such as, Trichloroethylene, Acetone. Should use ethanol or isopropyl, dip for no more than 3 minutes under the normal temperature.

