



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



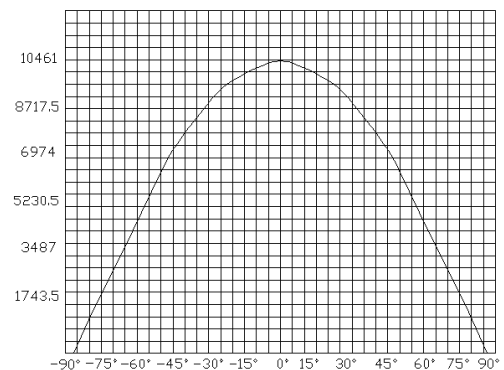
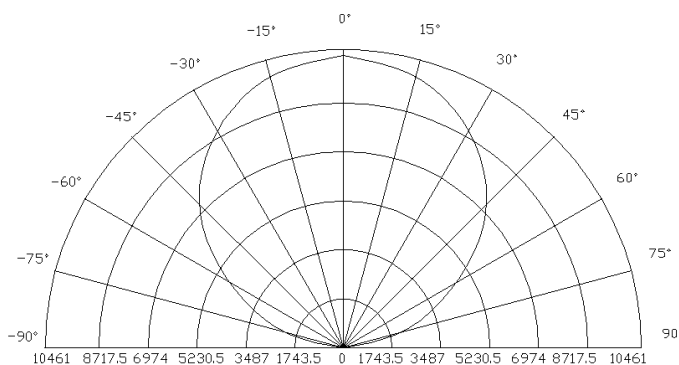
**Features**

- Long operating life
- Highest flux
- Available in White:2500K-25000K
- Lambertian radiation pattern
- More energy efficient than incandescent and most halogen lamps
- Low voltage DC operated
- Cool beam, safe to the touch
- Instant light (less than 100ns )
- Fully dimmable
- No UV
- Superior ESD protection
- Eutectic die bonding
- RoHS compliant

**Applications**

- Reading lights (car, bus, aircraft)
- LCD Backlights/light Guides
- Fiber optic alternative/ Decorative / Entertainment
- Mini-accent/Up lighters/Down lighters/ Orientation
- Indoor/Outdoor commercial and Residential Architectural
- Cove/Under shelf/Task
- Bollards/Security/Garden
- Portable (flashlight, bicycle)
- Edge-lit signs (Exit, point of sale)
- Automotive Exit (Stop-Tail-Turn,CHMSL, Mirror Side Repeat)
- Traffic signaling / Beacons / Rail Crossing and Wayside

**Radiation Pattern**



**High Power Emitter LED****P/N: NFL-EF5W1EAF(White)**Typical Optical/ Electrical Characteristics @T<sub>J</sub>=25°C

| Item                                | Symbol          | Condition | Min. | Typ. | Max.  | Unit |
|-------------------------------------|-----------------|-----------|------|------|-------|------|
| Forward Voltage                     | V <sub>F</sub>  | IF=350mA  | 3.0  | --   | 3.8   | V    |
| Reverse Current                     | I <sub>R</sub>  | VR=5v     | --   | --   | 50    | uA   |
| 50% Power Angle                     | 2θ1/2           | IF=350mA  | 110  | --   | 140   | deg  |
| Luminous Intensity                  | Φ <sub>V</sub>  | IF=350mA  | 76.6 | 87.4 | --    | lm   |
| Recommend Forward Current           | I <sub>F</sub>  | --        | --   | 350  | --    | mA   |
| Chromaticity                        | T <sub>C</sub>  | IF=350mA  | 5000 | --   | 10000 | k    |
| Thermal Resistance,Junction to Case | R <sub>JP</sub> | IF=350mA  | --   | 10   | --    | °C/w |

## The sample delivers goods data

| Item                    | Symbol         | Condition | Min. | Avg. | Max. | Unit |
|-------------------------|----------------|-----------|------|------|------|------|
| Luminous Intensity      | Φ <sub>V</sub> | IF=350mA  | 77   | --   | 82   | lm   |
| 50% Power Angle         | 2θ1/2          |           | --   | --   | --   | deg  |
| Forward Voltage         | V <sub>F</sub> |           | 3.4  | 3.6  | --   | v    |
| Chromaticity            | T <sub>C</sub> |           | 6300 | --   | 6500 | k    |
| White Color Region      |                |           | --   |      |      |      |
| ChromaticityCoordinates | X=--           |           | Y=-- |      |      |      |

## Notes:

- 1.Tolerance of measurement of forward voltage ± 0.1V
- 2.Tolerance of measurement of peak Wavelength±2.0nm.
- 3.Tolerance of measurement of luminous intensity ±15%.

## Absolute Maximum Rating

| Item                        | Symbol           | Absolute Maximum Rating  | Unit |
|-----------------------------|------------------|--------------------------|------|
| Forward Current             | I <sub>F</sub>   | 350                      | mA   |
| Peak Forward Current*       | I <sub>FP</sub>  | 500                      | mA   |
| Reverse Voltage             | V <sub>R</sub>   | 5                        | V    |
| Power Dissipation           | P <sub>D</sub>   | 1000                     | mW   |
| Electrostatic discharge     | E <sub>SD</sub>  | ±2000                    | V    |
| Operation Temperature       | T <sub>OPR</sub> | -40~+80                  | °C   |
| Storage Temperature         | T <sub>STG</sub> | -40~+100                 | °C   |
| Lead Soldering Temperature* | T <sub>SOL</sub> | Max. 260°C for 3sec Max. |      |

\*IFP Conditions: Pulse Width ≤10msec duty ≤1/10

\* All high power emitter LED products mounted on aluminum metal-core printed circuit board, can be lighted directly, but we do not recommend lighting the high power products for more than 5 seconds without a appropriate heat dissipation equipment.

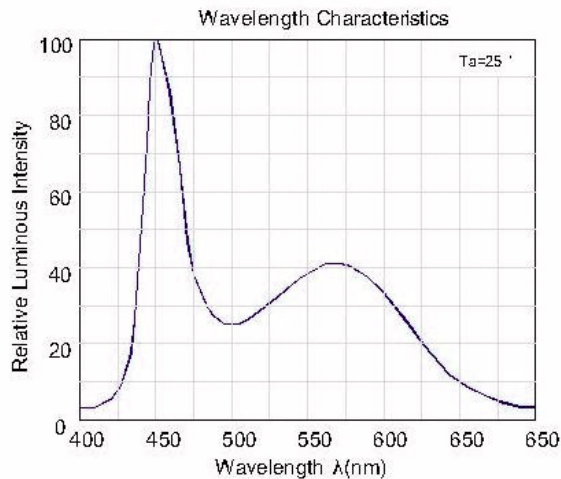
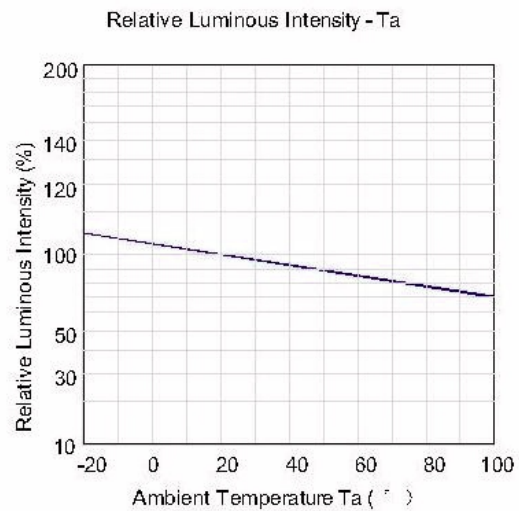
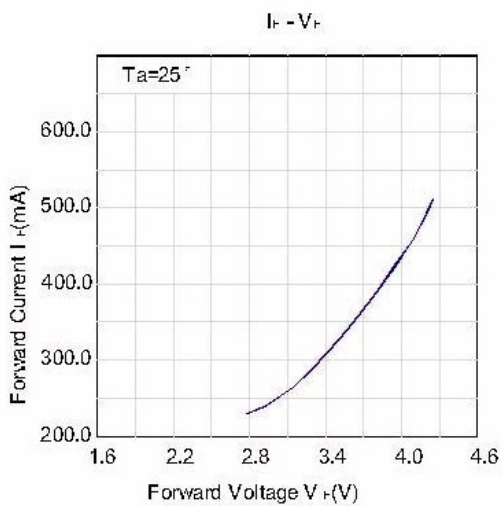
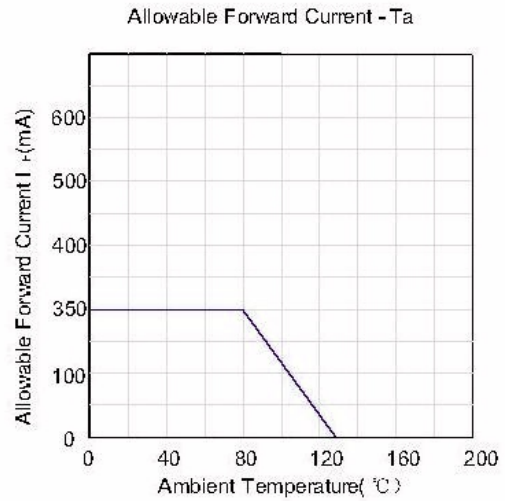
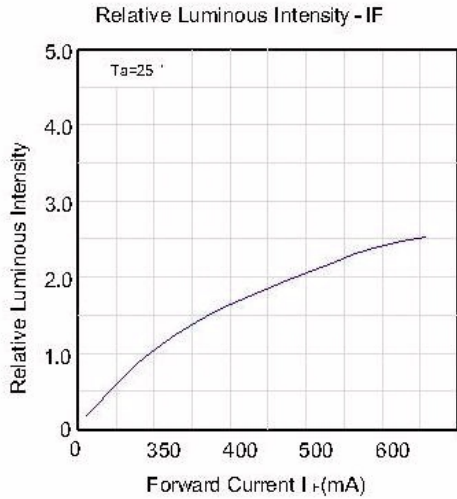
\* Re-flow,wave peak and soak-stannum soldering etc.is not suitable for this products.

\* Suggest to solder it by professional high power LED soldering machine.

\* Can use invariable-temperature searing-iron with soldering condition: ≤ 260°C less than 3 seconds.



Typical Optical/Electrical Characteristics Curves  
( $T_J=25^{\circ}\text{C}$  Unless Otherwise Noted)

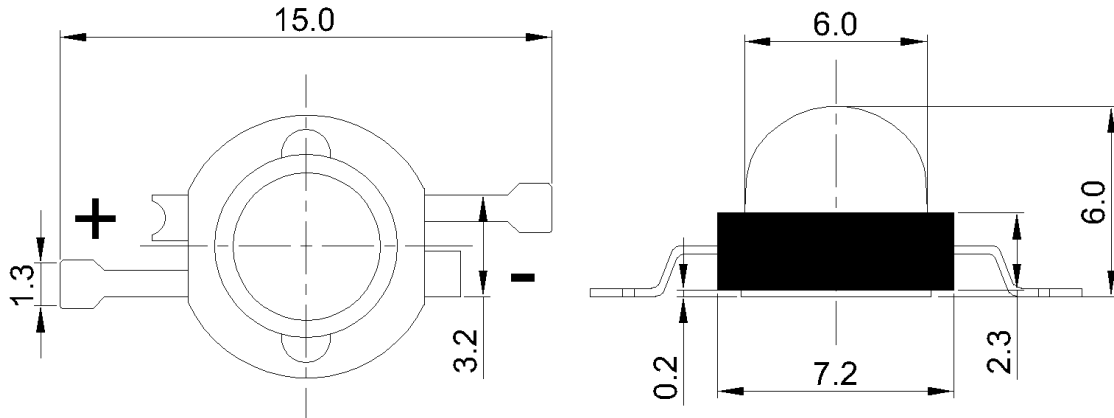




**High Power Emitter LED**

**P/N: NFL-EF5W1EAF(White)**

Package Dimensions



Notes:

1. All dimension units are millimeters.
2. All dimension tolerance is  $\pm 0.2\text{mm}$  unless otherwise noted.

Tape Specifications (Units :mm)

