

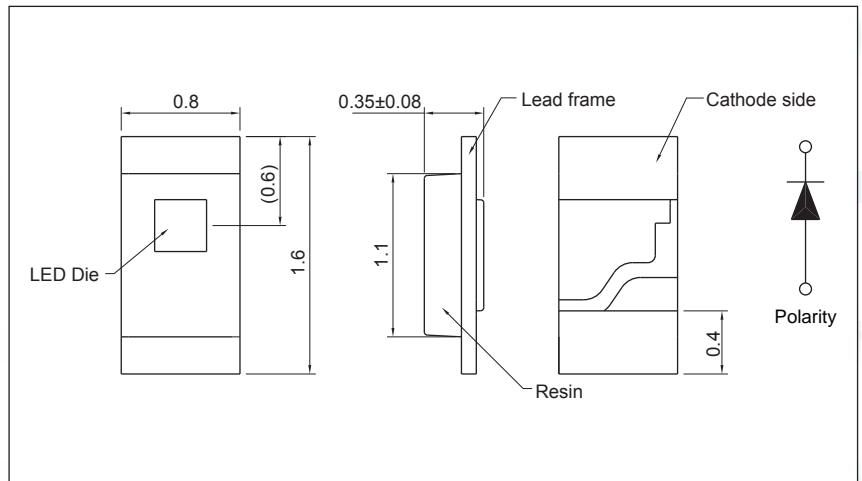
Features

- Chip LED (1.6x0.8x0.35)
- Super compact

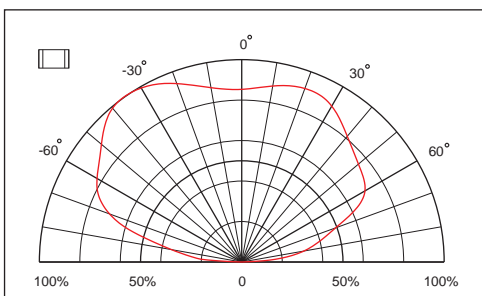
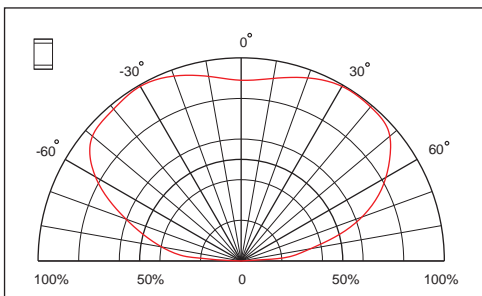


Package Outline Dimensions

(Unit: mm Tolerance: +/-0.1)

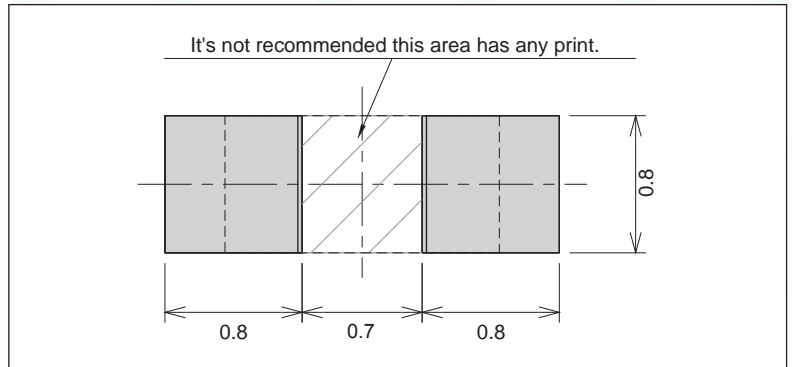


Directive Characteristics



Recommended Soldering Pattern

(Unit:mm)



Absolute Maximum Ratings

(Ta=25°C)

| Item | Symbol | AllnGaP | InGaN | Unit |
|------------------------|-------------------|-----------|-------|------|
| Power Dissipation | P _D | 72 | 117 | mW |
| DC Forward Current | I _F | 30 | 30 | mA |
| Pulsed Forward Current | I _{FP} * | 120 | 120 | mA |
| Reverse Voltage | V _R | 5 | | V |
| Operating Temperature | T _{OP} | -30 to 80 | | °C |
| Storage Temperature | T _{ST} | -40 to 85 | | °C |

* 0.1msec pulse, 10% duty cycle.

Electrical / Optical Characteristics

(Ta=25°C)

| Part Number | Emitting color | Material | Forward Voltage(V _F) [*] | | Wavelength (nm) typ. | | | Luminous Intensity (mcd) [*] | | I _F (mA) | Viewing Angle 2θ _½ |
|-------------|---------------------|----------|---|------|----------------------|-----|----|---------------------------------------|------|---------------------|-------------------------------|
| | | | typ. | max. | D | P | Δ | min. | typ. | | |
| HT-F196UD | Ultra Bright Amber | AllnGaP | 1.9 | 2.4 | 605 | 609 | 17 | 40 | 95 | 20 | 140 |
| HT-F196USD | Ultra Bright Orange | AllnGaP | 1.9 | 2.4 | 622 | 636 | 17 | 40 | 95 | 20 | 140 |
| HT-F196NB | Blue | InGaN | 3.3 | 3.9 | 470 | 468 | 40 | 40 | 55 | 20 | 140 |
| HT-F196NG | Green | InGaN | 3.3 | 3.9 | 527 | 520 | 40 | 100 | 150 | 20 | 140 |
| HT-F196TW | White | InGaN | 3.3 | 3.9 | x=0.29 y=0.31 | - | - | 180 | 250 | 20 | 140 |
| HT-F196NBA | Blue | InGaN | 3.1 | 3.3 | 470 | 468 | 40 | 20 | 25 | 10 | 140 |
| HT-F196NGA | Green | InGaN | 3.1 | 3.3 | 527 | 520 | 40 | 40 | 60 | 10 | 140 |
| HT-F196TWA | White | InGaN | 3.1 | 3.3 | x=0.29 y=0.32 | - | - | 80 | 100 | 10 | 140 |
| HT-F196NB5 | Blue | InGaN | 2.8 | 3.15 | 470 | 468 | 40 | 10 | 20 | 5 | 140 |
| HT-F196NG5 | Green | InGaN | 2.8 | 3.15 | 527 | 520 | 40 | 25 | 28 | 5 | 140 |
| HT-F196TW5 | White | InGaN | 2.8 | 3.15 | x=0.29 y=0.31 | - | - | 35 | 60 | 5 | 140 |
| HT-F196NBZ | Blue | InGaN | 2.7 | 2.95 | 470 | 468 | 40 | 7 | 9 | 2 | 140 |
| HT-F196NGZ | Green | InGaN | 2.7 | 2.95 | 527 | 520 | 40 | 18 | 22 | 2 | 140 |
| HT-F196TWZ | White | InGaN | 2.7 | 2.95 | x=0.29 y=0.32 | - | - | 18 | 28 | 2 | 140 |

*Per NIST standards

