

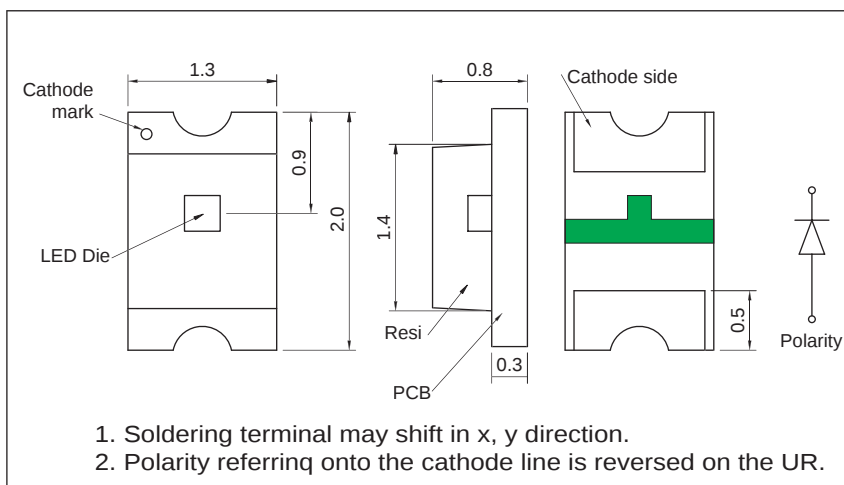
## Characters

- Chip LED (2.0x1.3x0.8)
- Super compact type

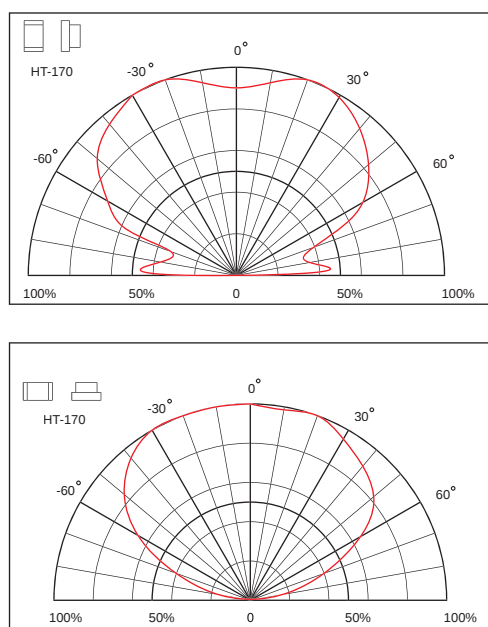


## Package Outline Dimensions

(Unit:mm Tolerance:+/-0.1)

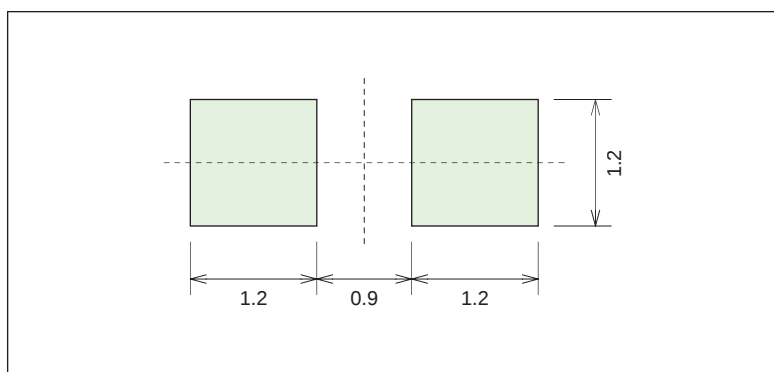


## Directive Characteristics



## Recommended Soldering Pattern

Unit: mm



## Absolute Maximum Ratings

(Ta=25 °C)

| Item                                     | Symbol            | Value     |       |        |         |     |       | Unit |
|------------------------------------------|-------------------|-----------|-------|--------|---------|-----|-------|------|
|                                          |                   | GaP       | GaAsP | AlGaAs | AlInGaP | GaN | InGaN |      |
| Power Dissipation                        | P <sub>D</sub>    | 65        | 65    | 66     | 72      | 68  | 80    | mW   |
| DC Forward Current                       | I <sub>F</sub>    | 25        | 25    | 30     | 30      | 15  | 20    | mA   |
| Pulsed Forward Current                   | I <sub>FP</sub> * | 100       | 100   | 100    | 100     | 35  | 80    | mA   |
| Reverse Voltage (I <sub>R</sub> =100uA ) | V <sub>R</sub>    | 5         |       |        |         |     |       | V    |
| Operating Temperature                    | T <sub>OP</sub>   | -30 to 80 |       |        |         |     |       | °C   |
| Storage Temperature                      | T <sub>ST</sub>   | -40 to 85 |       |        |         |     |       | °C   |

\*Condition for I<sub>FP</sub> is pulse of 1/10 duty and 0.1msec width

## Electrical-Optical Characteristics

(Ta=25°C)

| Code for parts | Lighting Color      | Material | Forward Voltage (V) |     | Wavelength (nm) typ |                |    | Luminous Intensity (mcd)* |     | I <sub>F</sub> (mA) |
|----------------|---------------------|----------|---------------------|-----|---------------------|----------------|----|---------------------------|-----|---------------------|
|                |                     |          | typ                 | max | λ <sub>D</sub>      | λ <sub>P</sub> | Δλ | min                       | typ |                     |
| HT-170YG       | Yellow Green        | GaP      | 2.2                 | 2.6 | 573                 | 568            | 30 | 6.3                       | 14  | 20                  |
| HT-170Y        | Yellow              | GaAsP    | 2.1                 | 2.6 | 590                 | 589            | 35 | 2.5                       | 6   | 20                  |
| HT-170D        | Amber               | GaAsP    | 2.1                 | 2.6 | 608                 | 610            | 35 | 2.5                       | 9   | 20                  |
| HT-170SD       | Super Bright Orange | GaAsP    | 2.1                 | 2.6 | 629                 | 642            | 35 | 4                         | 10  | 20                  |
| HT-170UR       | Super Bright Red    | AlGaAs   | 1.8                 | 2.2 | 643                 | 660            | 20 | 6.3                       | 16  | 20                  |

| Code for parts | Lighting Color            | Material | Forward Voltage (V) |     | Wavelength (nm) typ |                |    | Luminous Intensity (mcd)* |     | I <sub>F</sub> (mA) |
|----------------|---------------------------|----------|---------------------|-----|---------------------|----------------|----|---------------------------|-----|---------------------|
|                |                           |          | typ                 | max | λ <sub>D</sub>      | λ <sub>P</sub> | Δλ | min                       | typ |                     |
| HT-170UYG      | Ultra Bright Yellow Green | AlInGaP  | 2.0                 | 2.4 | 573                 | 574            | 20 | 25                        | 40  | 20                  |
| HT-170UY       | Ultra Bright Yellow       | AlInGaP  | 1.9                 | 2.4 | 591                 | 593            | 15 | 25                        | 60  | 20                  |
| HT-170UD       | Ultra Bright Amber        | AlInGaP  | 1.9                 | 2.4 | 605                 | 609            | 17 | 25                        | 60  | 20                  |
| HT-170USD      | Ultra Bright Orange       | AlInGaP  | 1.9                 | 2.4 | 622                 | 636            | 17 | 25                        | 60  | 20                  |
| HT-170URO      | Ultra Bright Red          | AlInGaP  | 1.9                 | 2.4 | 632                 | 645            | 22 | 25                        | 40  | 20                  |

|                |                |          | I <sub>F</sub> =20mA |     |                     |                |    |                           |     | I <sub>F</sub> =5mA |      |                     |                |    |                           |     |
|----------------|----------------|----------|----------------------|-----|---------------------|----------------|----|---------------------------|-----|---------------------|------|---------------------|----------------|----|---------------------------|-----|
| Code for parts | Lighting Color | Material | Forward Voltage (V)  |     | Wavelength (nm) typ |                |    | Luminous Intensity (mcd)* |     | Forward Voltage (V) |      | Wavelength (nm) typ |                |    | Luminous Intensity (mcd)* |     |
|                |                |          | typ                  | max | λ <sub>D</sub>      | λ <sub>P</sub> | Δλ | min                       | typ | typ                 | max  | λ <sub>D</sub>      | λ <sub>P</sub> | Δλ | min                       | typ |
| HT-170CBS      | Blue           | GaN      | 4.2                  | 4.5 | 466                 | 428            | 65 | 2.5                       | 8   | -                   | -    | -                   | -              | -  | -                         | -   |
| HT-170CB       | Blue           | InGaN    | 3.6                  | 4.0 | 470                 | 468            | 26 | 25                        | 40  | 2.9                 | 3.35 | 472                 | 470            | 26 | 10                        | 16  |
| HT-170CG       | Green          | InGaN    | 3.6                  | 4.0 | 527                 | 518            | 35 | 63                        | 130 | 2.9                 | 3.35 | 529                 | 520            | 35 | 25                        | 40  |
| HT-170CW       | White          | InGaN    | 3.6                  | 4.0 | X=0.29<br>Y=0.31    | 468            | -  | 100                       | 250 | 2.9                 | 3.35 | X=0.29<br>Y=0.32    | 470            | -  | 40                        | 80  |
| HT-170NB       | Blue           | InGaN    | 3.3                  | 3.9 | 470                 | 468            | 40 | 25                        | 40  | 2.8                 | 3.15 | 472                 | 470            | 40 | 10                        | 16  |
| HT-170NG       | Green          | InGaN    | 3.3                  | 3.9 | 527                 | 520            | 40 | 63                        | 130 | 2.8                 | 3.15 | 529                 | 522            | 40 | 25                        | 40  |
| HT-170NW       | White          | InGaN    | 3.3                  | 3.9 | X=0.29<br>Y=0.31    | 468            | -  | 100                       | 220 | 2.8                 | 3.15 | X=0.29<br>Y=0.32    | 470            | -  | 40                        | 70  |

\*Per NIST standards