

High Brightness Type Chip LEDs with reflector

SML-01 * Series

| Package Size (mm) | Blue | | Green | | Yellow | | Orange | | Red | |
|------------------------------------|------------|--------------|-----------|-----------|-----------|-----------------|-----------|-----------|-----------|-----------|
| | GaN on SiC | InGaN on SiC | | | | AlGaInP on GaAs | | | | |
| | 428nm | 468nm | 525nm | | 590nm | | 611nm | | 630nm | |
| 3216 (1206) 3.0×2.0 t=1.3 | | | | | | | | | | |
| | SML010BAT | SML011BBT | SML012BCT | SML011EBT | SML012ECT | SML-011YT | SML-012YT | SML-011DT | SML-012DT | SML-011UT |

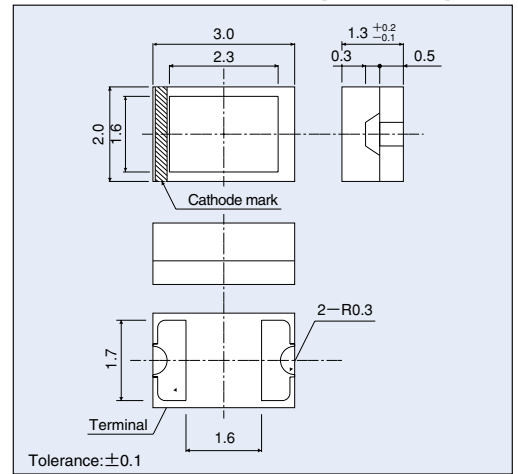
Note) "*" will be taken out for emitting color B/E series.

Absolute Maximum Ratings (Ta=25°C)

| Part No. | Emitting color | Power dissipation Pd (mW) | Forward current IF (mA) | Peak forward current * I _{FP} (mA) | Reverse voltage VR (V) | Operating temperature T _{opr} (°C) | Storage temperature T _{stg} (°C) |
|-----------|----------------|---------------------------|-------------------------|---|------------------------|---|---|
| SML010BAT | Blue | 94 | 20 | 70 | 5 | -30 to +85 | -40 to +100 |
| SML011BBT | | 84 | | 100 | | | |
| SML012BCT | | 84 | | 100 | | | |
| SML011EBT | Green | 84 | 20 | 100 | 5 | -30 to +85 | -40 to +100 |
| SML012ECT | | | | | | | |
| SML-011YT | Yellow | 84 | 20 | 100 | 5 | -30 to +85 | -40 to +100 |
| SML-012YT | | | | | | | |
| SML-011DT | Orange | 75 | 30 | 100 | 5 | -40 to +100 | -40 to +100 |
| SML-012DT | | | | | | | |
| SML-011UT | Red | 75 | 30 | 100 | 5 | -40 to +100 | -40 to +100 |
| SML-012UT | | | | | | | |

* I_{FP} measured under duty ≤1/10, 1kHz.

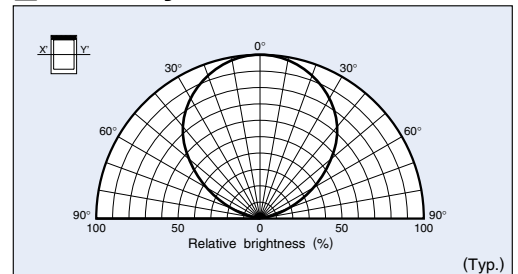
External Dimensions (Unit : mm)



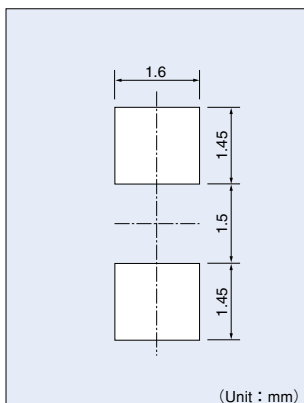
Electrical Optical Characteristics (Ta=25°C)

| Part No. | Resin Color | Forward voltage VF | | Reverse current IR | | Light wavelength | | | Brightness Iv | | | |
|-----------|-------------------|--------------------|---------|--------------------|--------|------------------|-------------------|---------|---------------|-------|------|----|
| | | Typ. (V) | IF (mA) | Max. (μA) | VR (V) | Peak λp (nm) | Half-wave Δλ (nm) | IF (mA) | Min. | Typ. | IF | |
| | | | | | | | | | (mcd) | (mcd) | (mA) | |
| SML010BAT | Transparent Clear | 3.8 | 20 | 100 | 5 | 428 | 65 | 20 | 3.6 | 9 | 20 | |
| SML011BBT | | | | | | 22 | 36 | | 22 | 36 | | |
| SML012BCT | | | | | | 36 | 100 | | 36 | 100 | | |
| SML011EBT | | 3.8 | 20 | 100 | 5 | 523 | 36 | 20 | 56 | 140 | 20 | |
| SML012ECT | | | | | | 518 | 35 | | 140 | 360 | | |
| SML-011YT | | 2.0 | 10 | 10 | 10 | 590 | 15 | 10 | 22 | 63 | 10 | |
| SML-012YT | | | | | | 36 | 100 | | 36 | 100 | | |
| SML-011DT | | 2.0 | 10 | 10 | 10 | 611 | 17 | 10 | 22 | 63 | 10 | |
| SML-012DT | | | | | | 36 | 140 | | 36 | 140 | | |
| SML-011UT | | 2.0 | 10 | 10 | 10 | 10 | 630 | 18 | 10 | 22 | 63 | 10 |
| SML-012UT | | | | | | | 36 | 100 | | 36 | 100 | |

Directivity

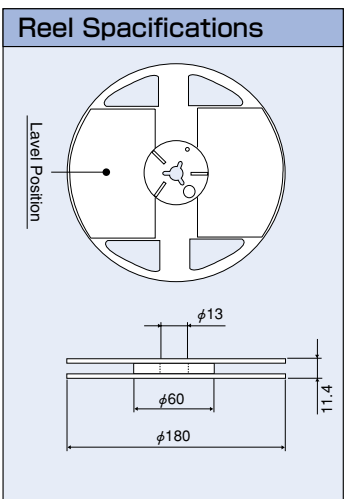
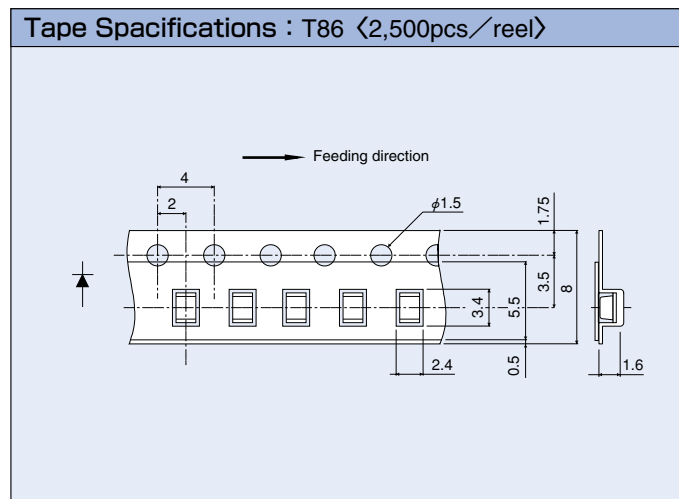


Recommended Pad Layout



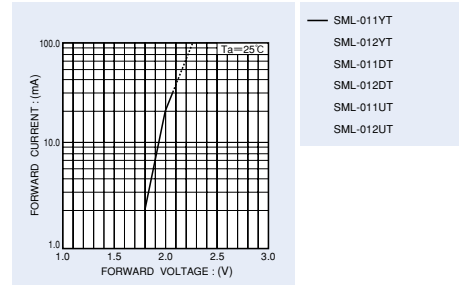
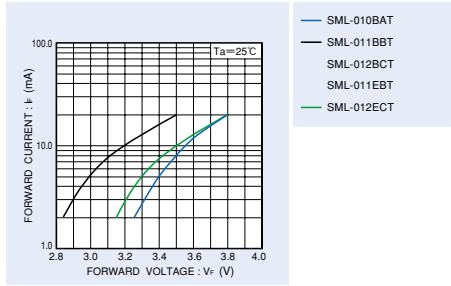
The recommended thickness of the screen mask for soldering is between 100 and 200 μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

Packaging Specifications (Unit : mm)

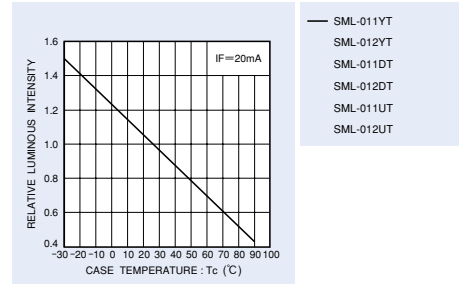
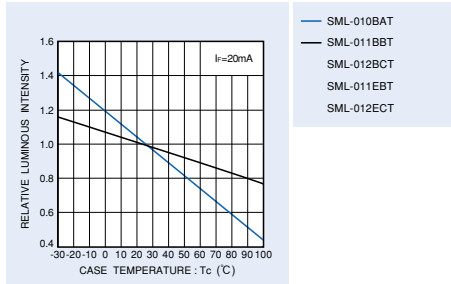


Electrical Characteristic Curves

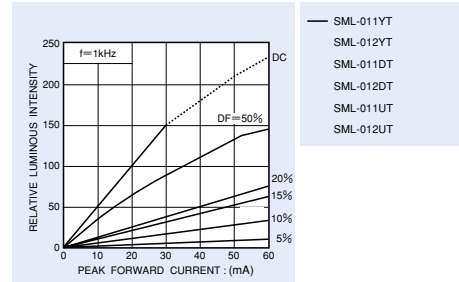
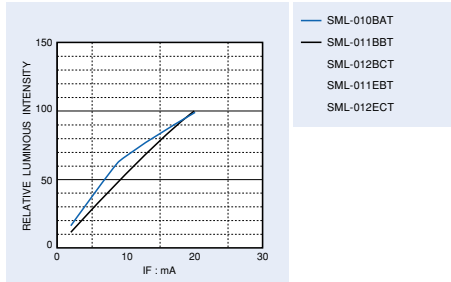
Forward Current - Forward Voltage



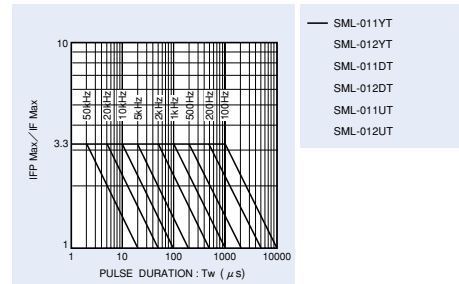
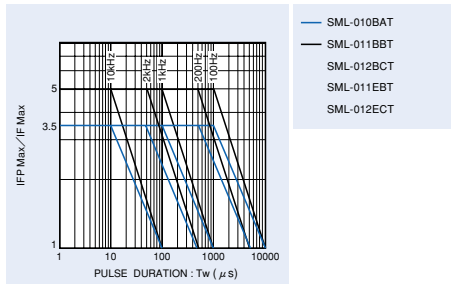
Relative Luminous Intensity - Case Temperature



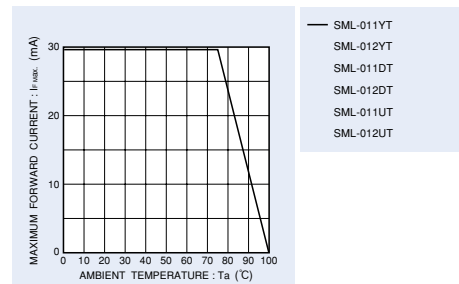
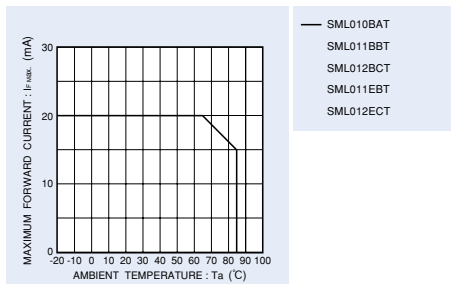
Relative Luminous Intensity - Forward Current



Ratio of Maximum Tolerable Peak Current - Pulse Duration



Derating



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