

Chip LEDs with Reflector 1208<3.0×2.0 t=1.3mm> High Brightness Type

SML013WB*** Series

| | |
|------------------|---|
| Emitting Color | White |
| Material | InGaN on SiC |
| Package Size(mm) |  |
| | 3020(1208) 3.0×2.0(t=1.3) |
| Part No. | SML013BBDW |

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

Absolute Maximum Ratings (Ta=25°C)

| Part No. | Emitting color | Power dissipation P _D (mW) | Forward current I _F (mA) | Peak forward current I _{FP} * (mA) | Reverse voltage V _R (V) | Operating temperature T _{opr} (°C) | Storage temperature T _{stg} (°C) |
|------------|----------------|---------------------------------------|-------------------------------------|---|------------------------------------|---|---|
| SML013BBDW | White | 78 | 20 | 100 | 5 | -30 to +85 | -40 to +100 |

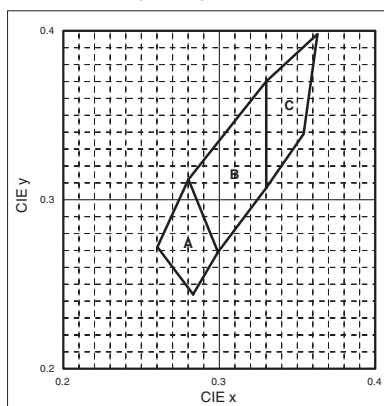
*:Duty ≤ 1/10, 1kHz

Electrical Optical Characteristics (Ta=25°C)

| Part No. | Resin | Forward voltage V _F | | Reverse current I _R | | Chromaticity coordinates | | | Brightness I _v | | |
|------------|-------------------|--------------------------------|-----------------------------------|--------------------------------|--------------------|--------------------------|------|-----------------------------------|---------------------------|------------|-----------------------------------|
| | | Typ. (V) | I _F ⁻¹ (mA) | Max. (μA) | V _R (V) | x | y | I _F ⁻¹ (mA) | Min. (mcd) | Typ. (mcd) | I _F ⁻¹ (mA) |
| SML013BBDW | Phosphor included | 3.2 | 20 | 100 | 5 | 0.30 | 0.30 | 20 | 360 | 900 | 20 |

*1:Pulse width : 30ms

Chromaticity Diagram

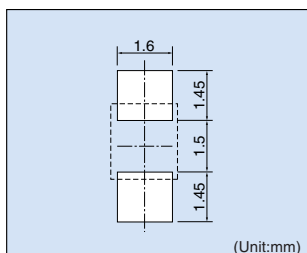


Chromaticity Coordinates (Ta=25°C, I_F=20mA)

| A | | B | | C | |
|-------|-------|-------|-------|-------|-------|
| x | y | x | y | x | y |
| 0.283 | 0.244 | 0.280 | 0.312 | 0.330 | 0.307 |
| 0.299 | 0.269 | 0.330 | 0.370 | 0.354 | 0.339 |
| 0.280 | 0.312 | 0.330 | 0.307 | 0.363 | 0.398 |
| 0.260 | 0.272 | 0.299 | 0.269 | 0.330 | 0.370 |

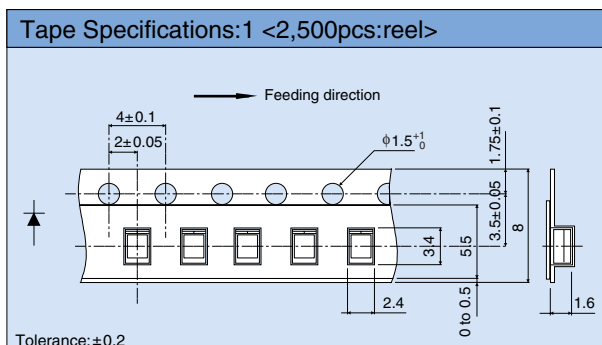
Measurement tolerance:±0.01

Recommended Pad Layout



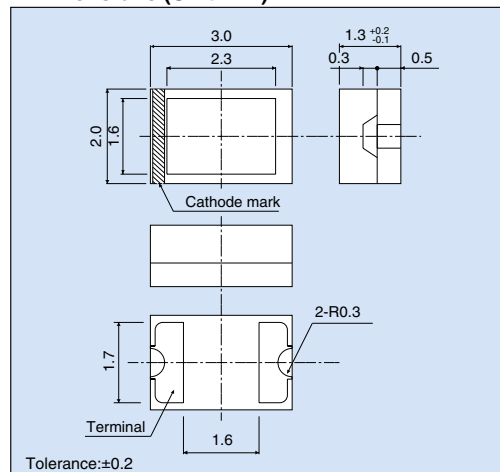
The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

Packaging Specifications (Unit:mm)

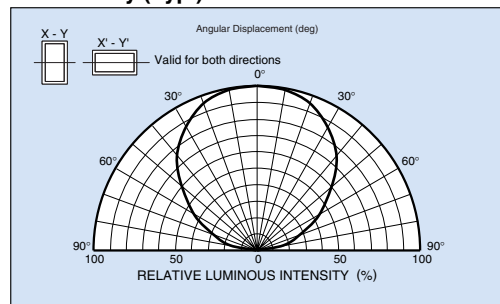


Tolerance:±0.2

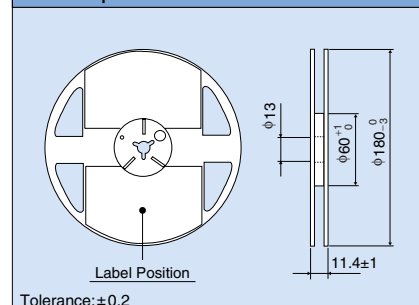
Dimensions (Unit:mm)



Directivity (Typ.)



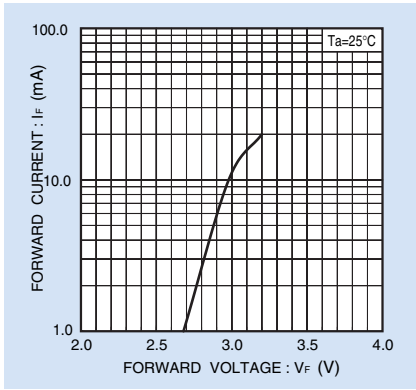
Reel Specifications



Tolerance:±0.2

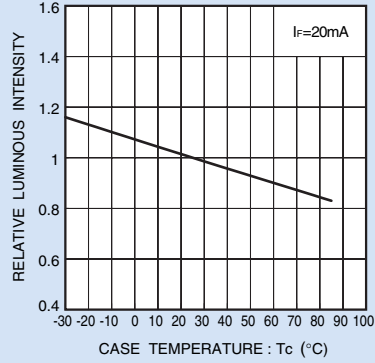
Electrical Characteristic Curves

Forward Current - Forward Voltage



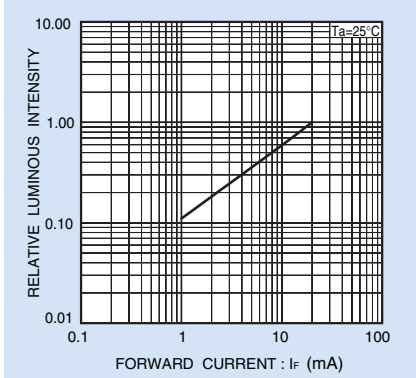
— SML013WBDW

Relative Luminous Intensity - Case Temperature



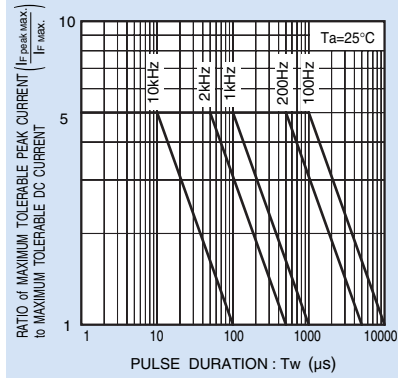
— SML013WBDW

Relative Luminous Intensity - Forward Current



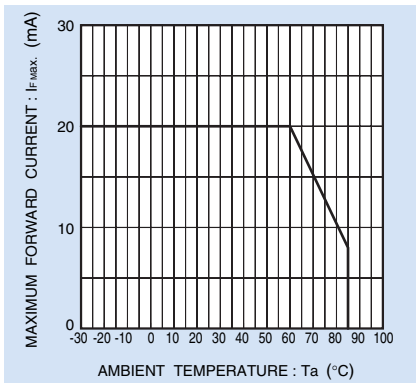
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Ratio of Maximum Tolerable Peak Current - Pulse Duration



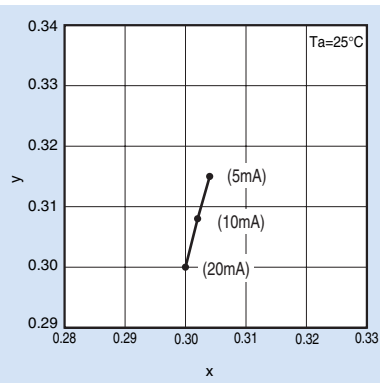
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Derating



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Forward Current - Chromaticity Diagram



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Notes

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