

0603<1.6×0.8 t=0.55mm> High Brightness Type

SML-51□ Series

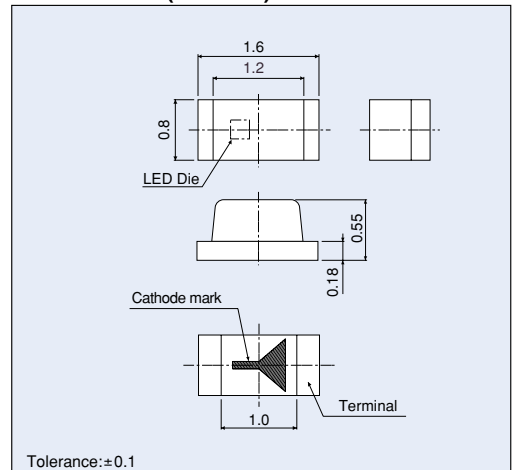
| Emitting Color | Green(Yellowish Green) | Yellow | | Orange | | | Red | | | |
|----------------------------|------------------------|-----------|-----------|-----------|-----------|-----------|--------------|-----------|-----------|--------------|
| Material | AlGaInP on GaAs | | | | | | | | | |
| Package Size(mm) | | | | | | | | | | |
| 1608(0603) 1.6×0.8(t=0.55) | New | | | | | | | | | |
| Part No. | SML-512PW(A) | SML-512MW | SML-511WW | SML-512WW | SML-511DW | SML-512DW | SML-512CW(A) | SML-511UW | SML-512UW | SML-512VW(A) |

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) |
|--------------|-------------------------|---------------------------------------|-------------------------------------|---|------------------------------------|---|---|
| SML-512MW | Green (Yellowish Green) | 65 | 25 | 100*2 | 5 | -30 to +85 | -40 to +85 |
| SML-511WW | Yellow | 62 | 30 | 60*1 | 4 | -30 to +85 | -40 to +85 |
| SML-512WW | | 75 | 30 | 100*2 | 5 | -40 to +100 | -40 to +100 |
| SML-511DW | Orange | 62 | 25 | 60*1 | 4 | -30 to +85 | -40 to +85 |
| SML-512DW | | 75 | 30 | 100*2 | 5 | -40 to +100 | -40 to +100 |
| SML-512CW(A) | Red | 62 | 25 | 60*1 | 4 | -30 to +85 | -40 to +85 |
| SML-511UW | | 75 | 30 | 100*2 | 5 | -40 to +100 | -40 to +100 |
| SML-512UW | | 62 | 25 | 60*1 | 4 | -30 to +85 | -40 to +85 |
| SML-512VW(A) | 75 | 30 | 100*2 | 5 | -40 to +100 | -40 to +100 | |
| SML-512PW(A) | Green (Yellowish Green) | 65 | 25 | | | | |

*1:Duty ≤ 1/5, pulse width ≤ 1ms.
*2:Duty 1/10, 1kHz

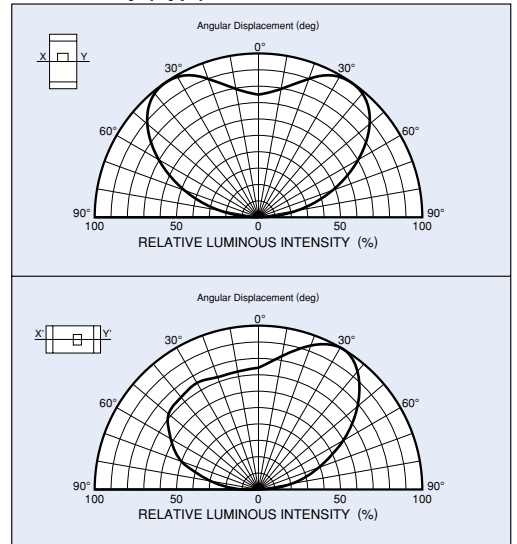
Dimensions (Unit:mm)



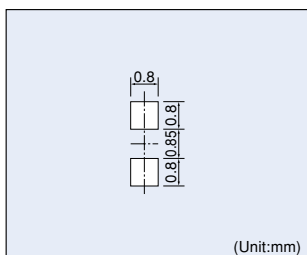
Electrical Optical Characteristics (Ta=25°C)

| Part No. | Resin Color | Forward voltage V _F | | Reverse current I _R | | Light wavelength | | Brightness I _v | | |
|--------------|-------------|--------------------------------|---------------------|--------------------------------|--------------------|--------------------------|-------------------|---------------------------|------------|---------------------|
| | | Typ. (V) | I _F (mA) | Max. (μA) | V _R (V) | Peak λ _p (nm) | Half-wave Δλ (nm) | Min. (mcd) | Typ. (mcd) | I _F (mA) |
| SML-512MW | Milky White | 2.1 | 20 | 100 | 5 | 570 | 18 | 14 | 40 | 20 |
| SML-511WW | | 100 | | 4 | 590 | 15 | 22 | 63 | | |
| SML-512WW | | 10 | | 5 | 14 | 40 | | | | |
| SML-511DW | | 100 | | 4 | 36 | 100 | | | | |
| SML-512DW | | 10 | | 5 | 71 | 112 | | | | |
| SML-512CW(A) | | 100 | | 4 | 14 | 40 | | | | |
| SML-511UW | | 10 | | 5 | 22 | 63 | | | | |
| SML-512UW | | 100 | | 4 | 35.5 | 56 | | | | |
| SML-512VW(A) | | 10 | | 5 | 5.6 | 14 | | | | |
| SML-512PW(A) | | 2.1 | | 100 | 5 | 563 | 15 | | | |

Directivity (Typ.)

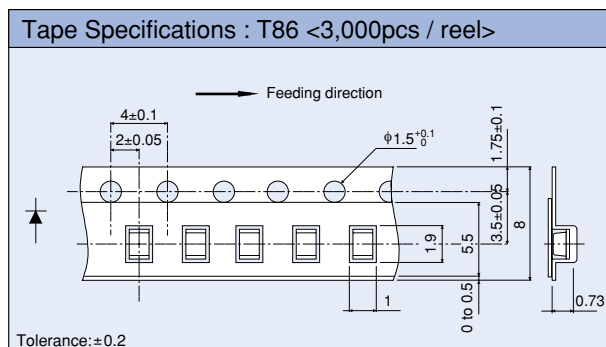


Recommended Pad Layout

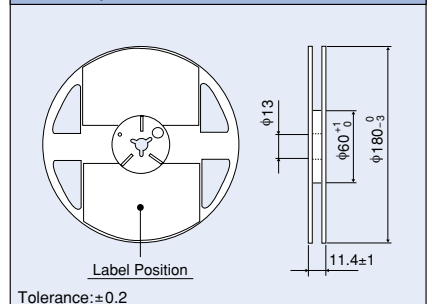


The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be the same as the recommended land pattern or smaller.

Packaging Specifications (Unit : mm)

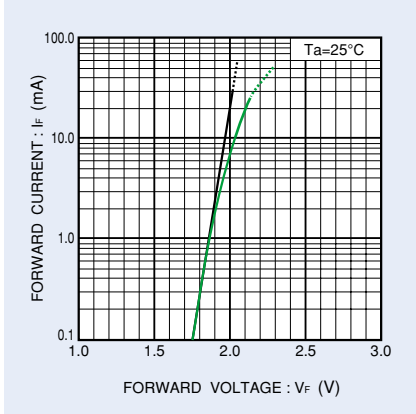


Reel Specifications



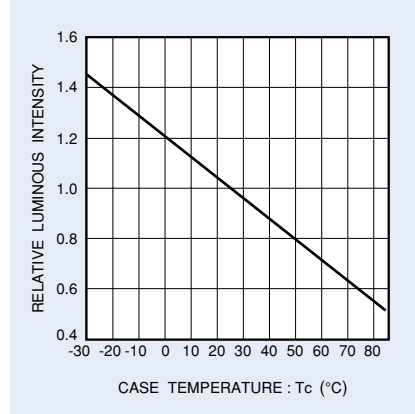
Electrical Characteristic Curves

Forward Current - Forward Voltage



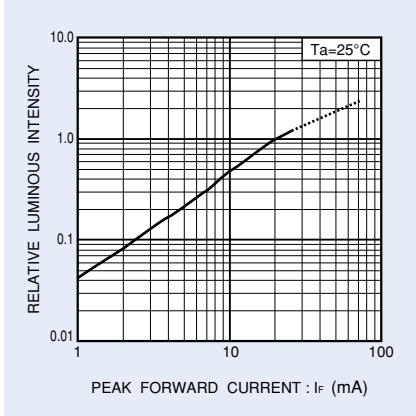
- SML-512MW
- (SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

Relative Luminous Intensity - Case Temperature



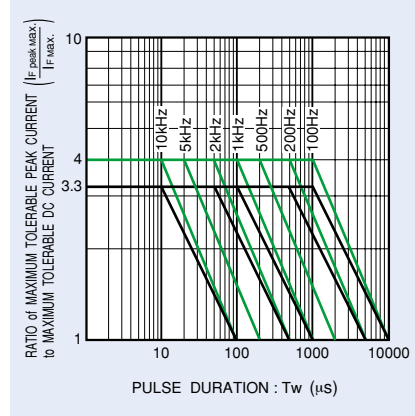
- (SML-512MW, SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

Relative Luminous Intensity - Forward Current



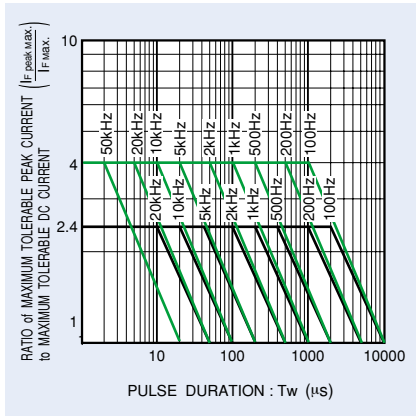
- (SML-512MW, SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

Ratio of Maximum Tolerable Peak Current - Pulse Duration



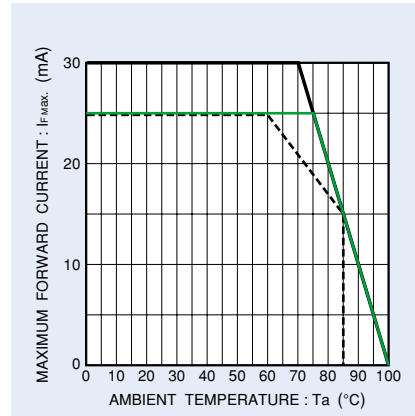
- SML-512MW
- (SML-512WW, SML-512DW, SML-512CW(A), SML-512UW, SML-512VW(A))

Ratio of Maximum Tolerable Peak Current - Pulse Duration



- SML-512PW(A)
- (SML-511WW, SML-511DW, SML-511UW)

Derating



- SML-512PW(A)
- (SML-512WW, SML-512DW, SML-512CW(A), SML-512UW, SML-512VW(A))
- (SML-512MW, SML-511WW, SML-511DW, SML-511UW)

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