

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

## SML-51□ Series

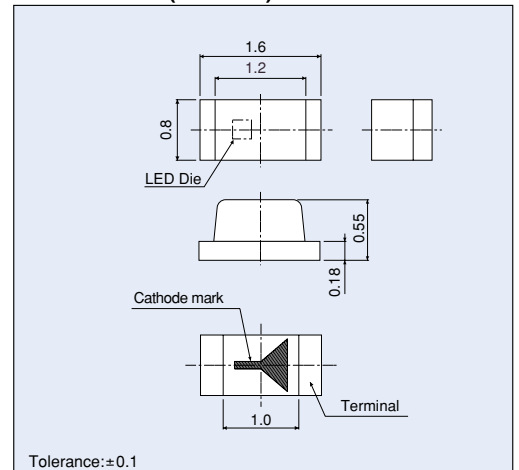
Emitting Color	Green(Yellowish Green)	Yellow		Orange			Red			
Material	AlGaInP on GaAs									
Package Size(mm)										
1608(0603) 1.6×0.8(t=0.55)	<b>New</b>									
Part No.	SML-512PW(A)	SML-512MW	SML-511WW	SML-512WW	SML-511DW	SML-512DW	SML-512CW(A)	SML-511UW	SML-512UW	SML-512VW(A)

### Absolute Maximum Ratings (Ta=25°C)

Part No.	Emitting color	Power dissipation P <sub>d</sub> (mW)	Forward current I <sub>F</sub> (mA)	Peak forward current I <sub>Fp</sub> (mA)	Reverse voltage V <sub>R</sub> (V)	Operating temperature T <sub>opr</sub> (°C)	Storage temperature T <sub>stg</sub> (°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)	Green (Yellowish Green)	65	25	100*2	5	-40 to +100	-40 to +100

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

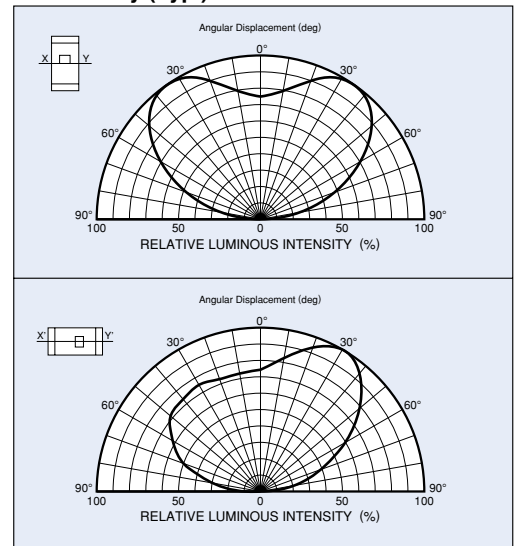
### Dimensions (Unit:mm)



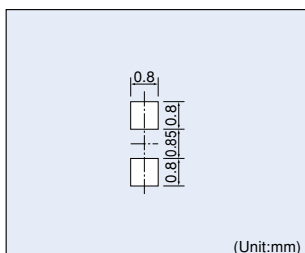
### Electrical Optical Characteristics (Ta=25°C)

Part No.	Resin Color	Forward voltage V <sub>F</sub>		Reverse current I <sub>R</sub>		Light wavelength		Brightness I <sub>v</sub>		
		Typ. (V)	I <sub>F</sub> (mA)	Max. (μA)	V <sub>R</sub> (V)	Peak λ <sub>p</sub> (nm)	Half-wave Δλ (nm)	I <sub>F</sub> (mA)	Min. (mcd)	Typ. (mcd)
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	5.6	14	

### Directivity (Typ.)

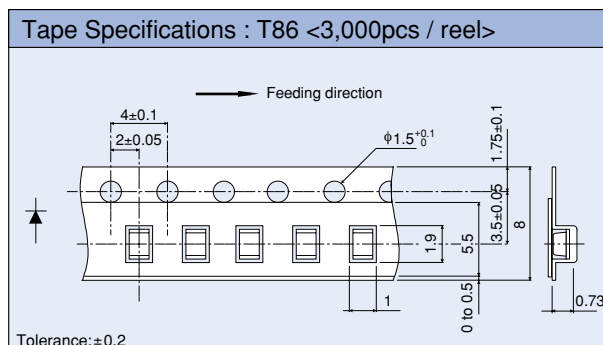


### Recommended Pad Layout

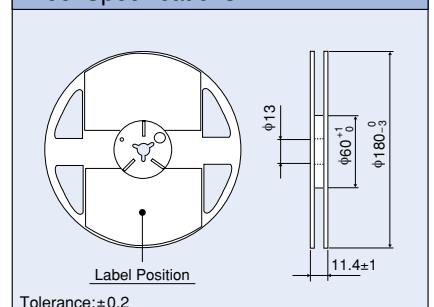


The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be the same as the recommended land pattern or smaller.

### Packaging Specifications (Unit : mm)

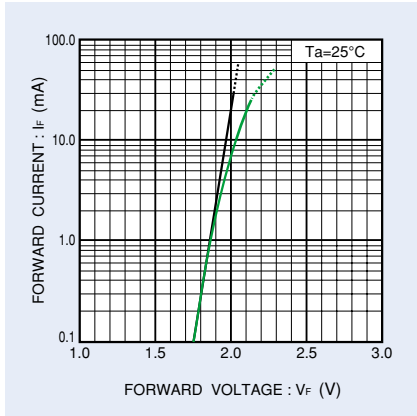


### Reel Specifications



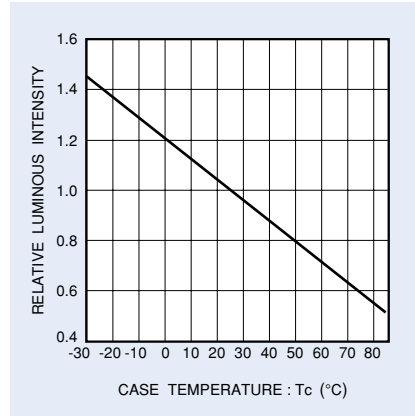
## Electrical Characteristic Curves

### Forward Current - Forward Voltage



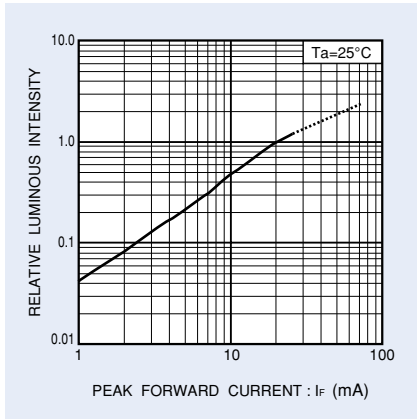
- SML-512MW
- (SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

### Relative Luminous Intensity - Case Temperature



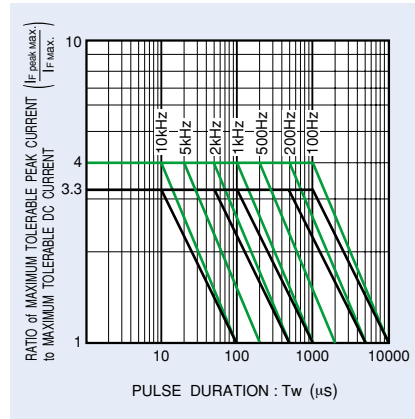
- (SML-512MW, SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

### Relative Luminous Intensity - Forward Current



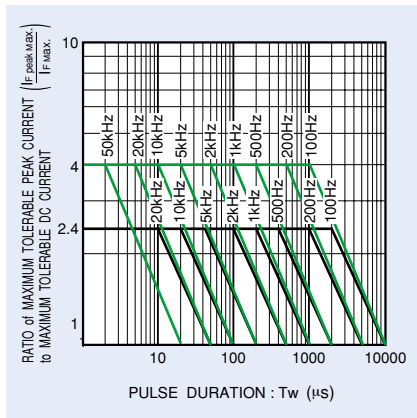
- (SML-512MW, SML-511WW, SML-512WW, SML-511DW, SML-512DW, SML-512CW(A), SML-511UW, SML-512UW, SML-512VW(A), SML-512PW(A))

### Ratio of Maximum Tolerable Peak Current - Pulse Duration



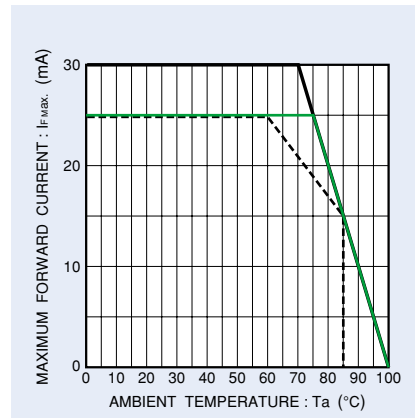
- SML-512MW
- (SML-512WW, SML-512DW, SML-512CW(A), SML-512UW, SML-512VW(A))

### 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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