

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



## SML-01 \* Series

Emitting Color	Blue	Green	Yellow	Orange	Red										
Material	InGaN on SiC			AlGaInP on GaAs											
Package Size(mm)															
3020(1208) 3.0×2.0(t=1.3)															
Part No.	SML012BC4T	SML012BCT	SML013BDT	SML012EC4T	SML012ECT	SML012PT (A)	SML-011YT	SML-012YT	SML-012WT (A)	SML-011DT	SML-012DT	SML-011UT	SML-012UT	SML-012VT (A)	SML-013UT

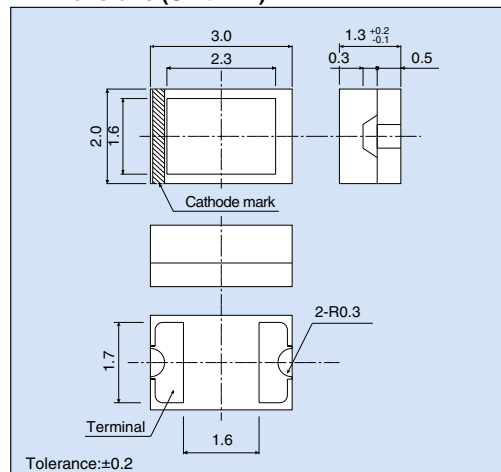
note) "\*" will be taken out for emitting color B/E series.

### 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)
SML012BC4T	Blue	84	20	100		-30 to +85	
SML012BCT		78					
SML013BDT		78					
SML012EC4T	Green	84	25	60			
SML012ECT		62					
SML-012PT (A)	Yellow				5		-40 to +100
SML-011YT	Orange	75	30	100		-40 to +100	
SML-012YT							
SML-012WT (A)	Red					-30 to +85	
SML-011DT							
SML-012DT							
SML-011UT							
SML-012UT							
SML-012VT (A)							
SML-013UT							

\*:Duty ≤1/10,1kHz.

### Dimensions (Unit:mm)



Tolerance:±0.2

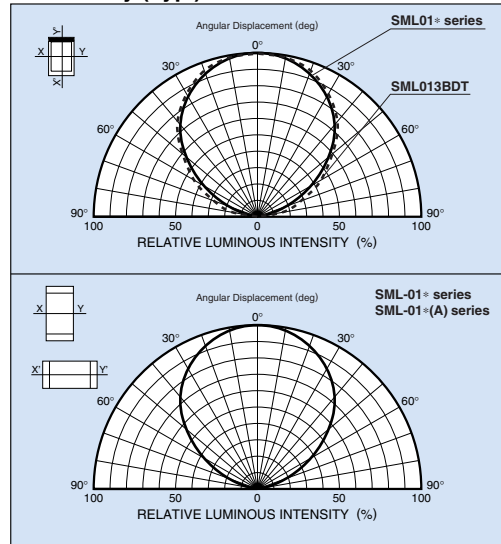
### Electrical Optical Characteristics (Ta=25°C)

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)	I <sub>F</sub> (mA)	
SML012BC4T		3.2	20	100	5	468	26	20	22	36	20	
SML012BCT		3.3							36	100		
SML013BDT		3.2							90	250		
SML012EC4T		3.2	20	5		523	36	20	56	140		
SML012ECT		3.3							140	360		
SML-012PT (A)	Transparent Colorless	2.1	20	5		518	35	20	9.0	18	20	
SML-011YT									22	63		
SML-012YT									36	100		
SML-012WT (A)		2.0	20	10		590	15	20	140	280		
SML-011DT										22		63
SML-012DT										36		100
SML-011UT		2.0	20	10		611	17	20	22	63		
SML-012UT										36		100
SML-012VT (A)										22		63
SML-013UT						630	18		36	100		
						639	-		35.5	71		
						620*2	-	20*1	90	220	20*1	

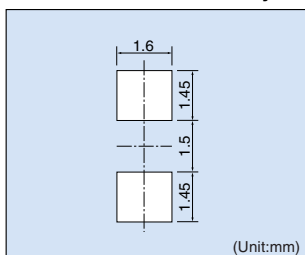
\*1:Pulse width : 30ms

\*2: Dominant λD light wavelength

### Directivity (Typ.)

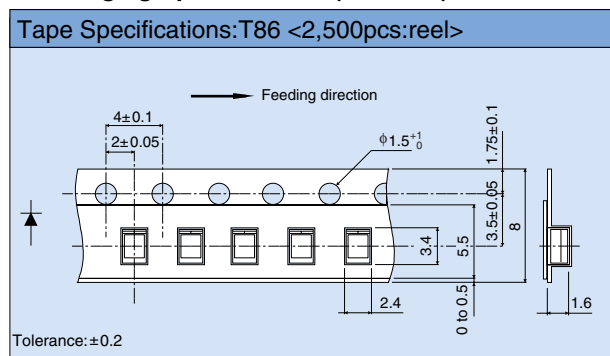


### Recommended Pad Layout



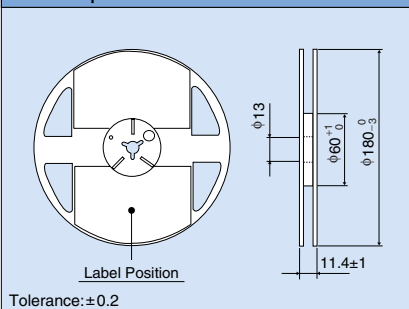
The recommended thickness of the screen mask for soldering is between 100 and 150μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

### Packaging Specifications (Unit:mm)



Tolerance:±0.2

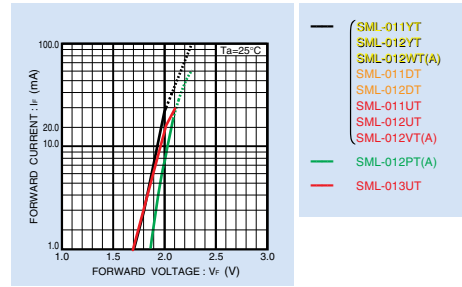
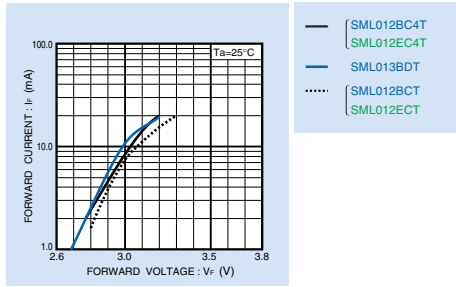
### Reel Specifications



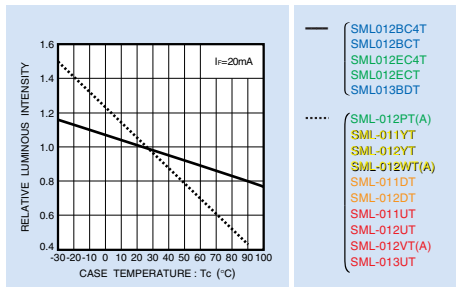
Tolerance:±0.2

## Electrical Characteristic Curves

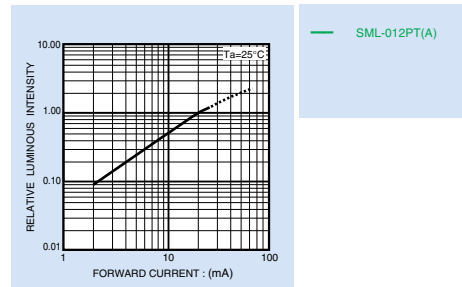
### Forward Current - Forward Voltage



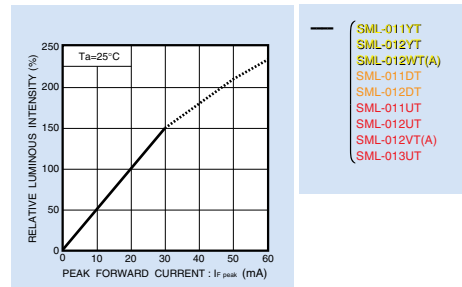
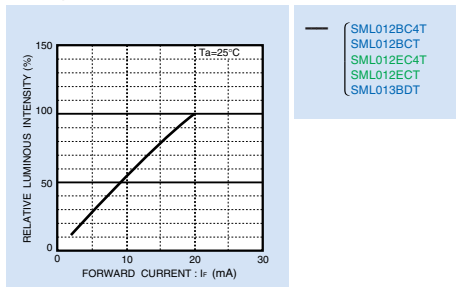
### Relative Luminous Intensity - Case Temperature



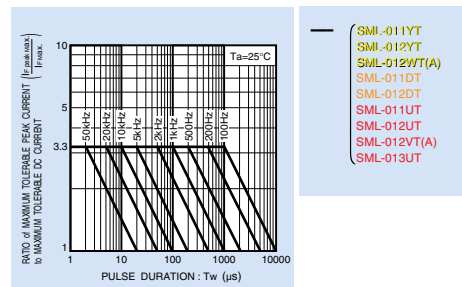
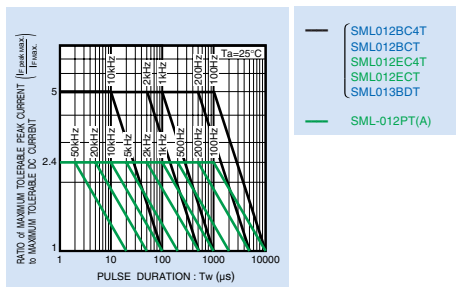
### Relative Luminous Intensity - Forward Current



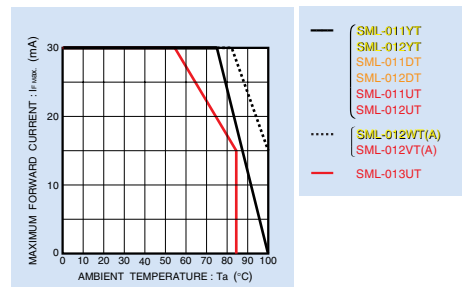
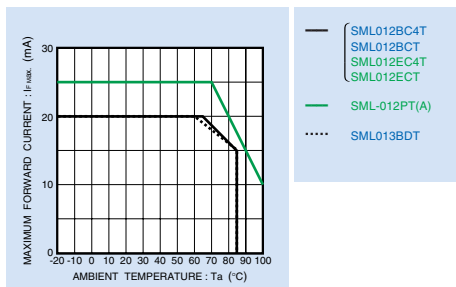
### Relative Luminous Intensity - Forward Current



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



### Derating



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