

# 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

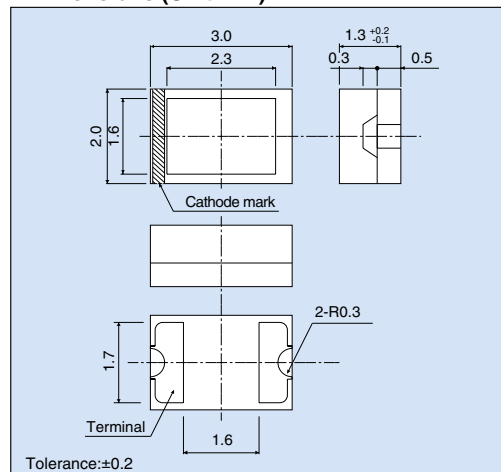
note) "\*" will be taken out for emitting color B/E series.

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

Part No.	Emitting color	Power dissipation Pd (mW)	Forward current IF (mA)	Peak forward current I <sub>FP</sub> * (mA)	Reverse voltage VR (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

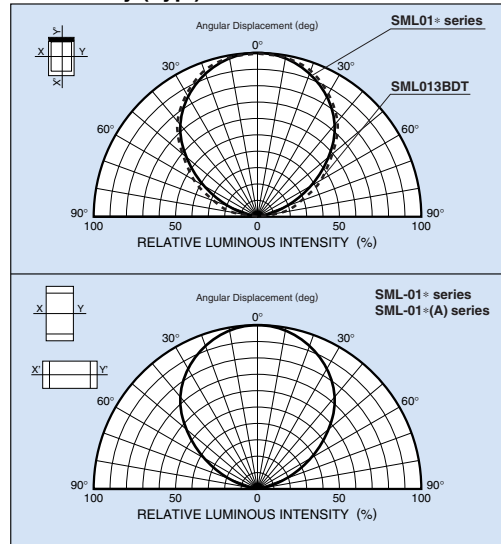
### Electrical Optical Characteristics (Ta=25°C)

Part No.	Resin Color	Forward voltage 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. (mcd)	Typ. (mcd)	IF (mA)
SML012BC4T	Transparent Colorless	3.2	20	100	5	468	26	20	22	36	20
SML012BCT		3.3							36	100	
SML013BDT		3.2							90	250	
SML012EC4T	Transparent Colorless	3.2	20	10	5	523	36	20	56	140	20
SML012ECT		3.3				518	35		140	360	
SML-012PT (A)	Transparent Colorless	2.1	20	10	5	565	-	20	9.0	18	20
SML-011YT		2.2				63	63				
SML-012YT	Transparent Colorless	2.0	20	10	5	590	15	20	36	100	20
SML-012WT (A)						-	140		280		
SML-011DT	Transparent Colorless	2.0	20	10	5	611	17	20	22	63	20
SML-012DT						-	36		100		
SML-011UT	Transparent Colorless	2.0	20	10	5	630	18	20	22	63	20
SML-012UT						-	36		100		
SML-012VT (A)	Transparent Colorless	2.0	20	10	5	639	-	20	35.5	71	20
SML-013UT						20*1	-		90	220	

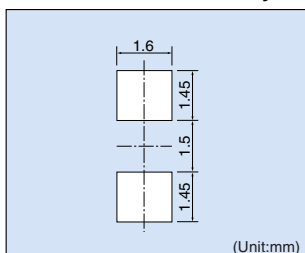
\*1:Pulse width : 30ms

\*2: Dominant λD light wavelength

### Directivity (Typ.)

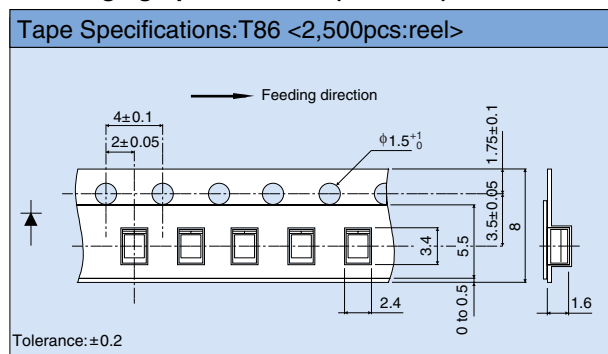


### Recommended Pad Layout



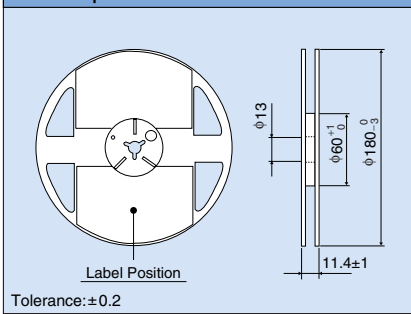
The recommended thickness of the screen mask for soldering is between 100 and 150µm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

### Packaging Specifications (Unit:mm)



Tolerance:±0.2

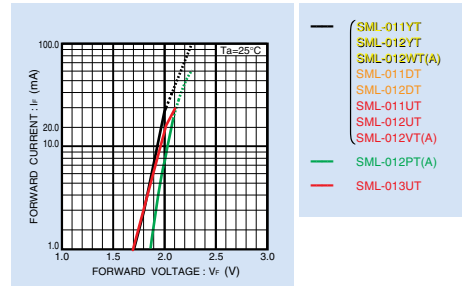
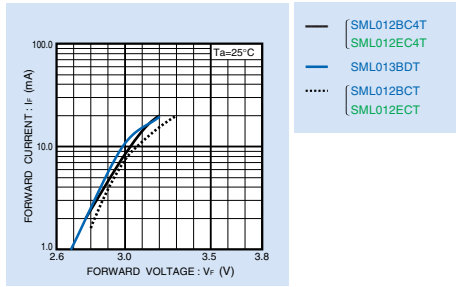
### Reel Specifications



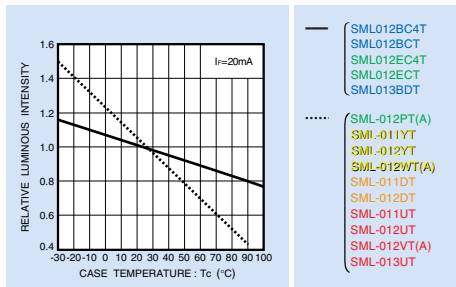
Tolerance:±0.2

## Electrical Characteristic Curves

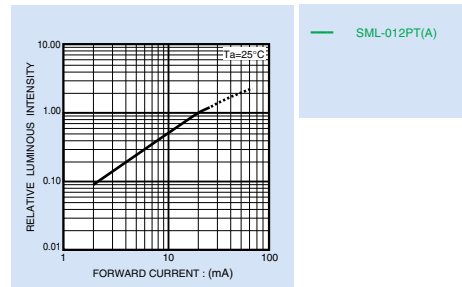
### Forward Current - Forward Voltage



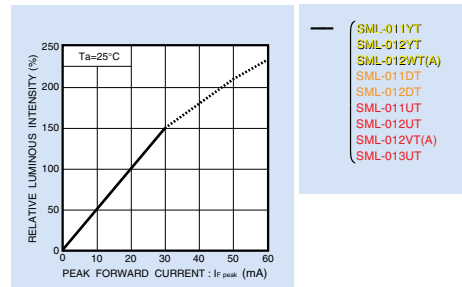
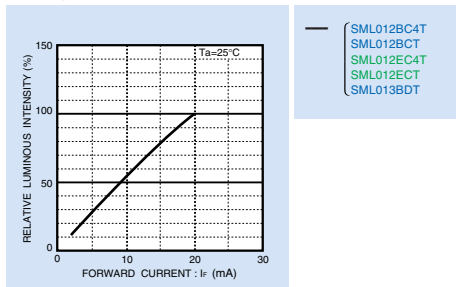
### Relative Luminous Intensity - Case Temperature



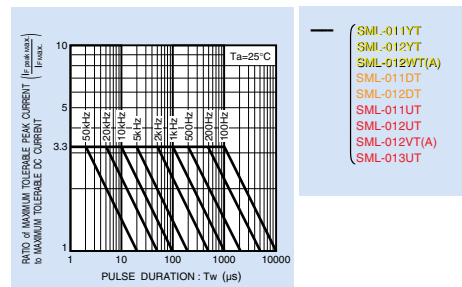
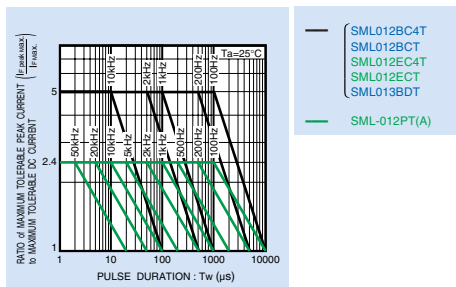
### Relative Luminous Intensity - Forward Current



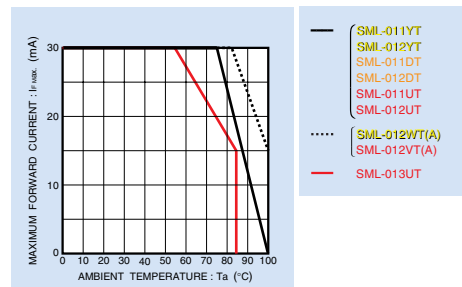
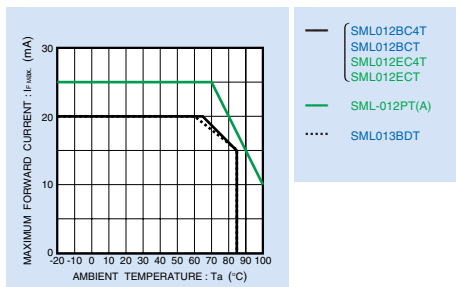
### Relative Luminous Intensity - Forward Current



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



### Derating



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