

High Brightness Type Chip LEDs with reflector

SML-01 * Series

Package Size (mm)	Blue		Green		Yellow		Orange		Red		
	GaN on SiC	InGaN on SiC				AlGaInP on GaAs					
	428nm	468nm	525nm		590nm		611nm		630nm		
3216 (1206) 3.0×2.0 t=1.3											
	SML010BAT	SML011BBT	SML012BCT	SML011EBT	SML012ECT	SML-011YT	SML-012YT	SML-011DT	SML-012DT	SML-011UT	SML-012UT

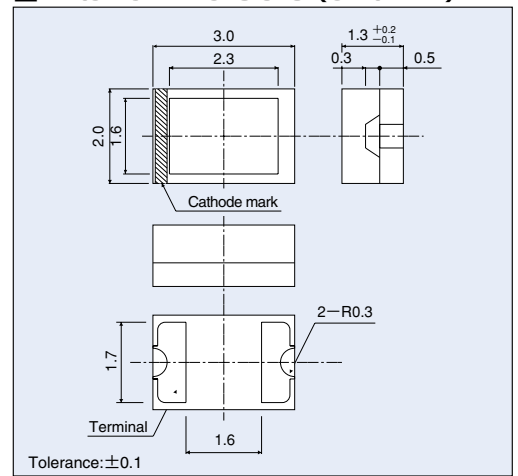
Note) "*" will be taken out for emitting color B/E series.

Absolute Maximum Ratings (Ta=25°C)

Part No.	Emitting color	Power dissipation Pd (mW)	Forward current IF (mA)	Peak forward current * I _{FP} (mA)	Reverse voltage VR (V)	Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
SML010BAT	Blue	94	20	70	5	-30 to +85	-40 to +100
SML011BBT		84		100			
SML012BCT		84		100			
SML011EBT	Green	84	20	100	5	-30 to +85	-40 to +100
SML012ECT							
SML-011YT	Yellow	84	20	100	5	-30 to +85	-40 to +100
SML-012YT							
SML-011DT	Orange	75	30	100	5	-40 to +100	-40 to +100
SML-012DT							
SML-011UT	Red	75	30	100	5	-40 to +100	-40 to +100
SML-012UT							

* I_{FP} measured under duty ≤1/10, 1kHz.

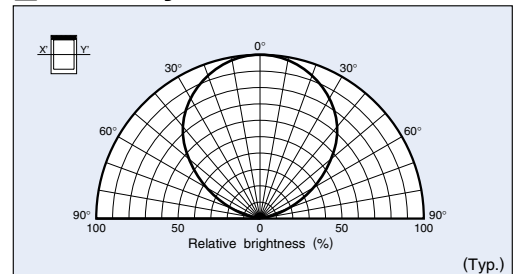
External Dimensions (Unit : mm)



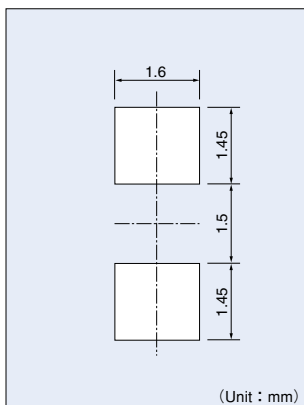
Electrical Optical Characteristics (Ta=25°C)

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.	Typ.	IF
									(mcd)	(mcd)	(mA)
SML010BAT	Transparent Clear	3.8	20	100	5	428	65	20	3.6	9	20
SML011BBT						22	36		22	36	
SML012BCT		3.5	20	100	5	468	26	36	100	36	100
SML011EBT						523	36	56	140	56	140
SML012ECT		3.8	20	100	5	518	35	140	360	140	360
SML-011YT						590	15	36	100	36	100
SML-012YT		2.0	10	100	5	611	17	22	63	22	63
SML-011DT						36	140	36	140		
SML-012DT		2.0	10	100	5	630	18	22	63	22	63
SML-011UT						36	100	36	100		
SML-012UT											

Directivity

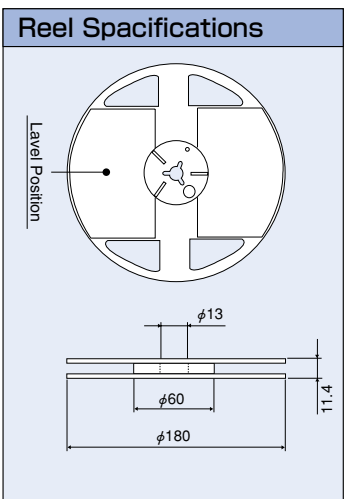
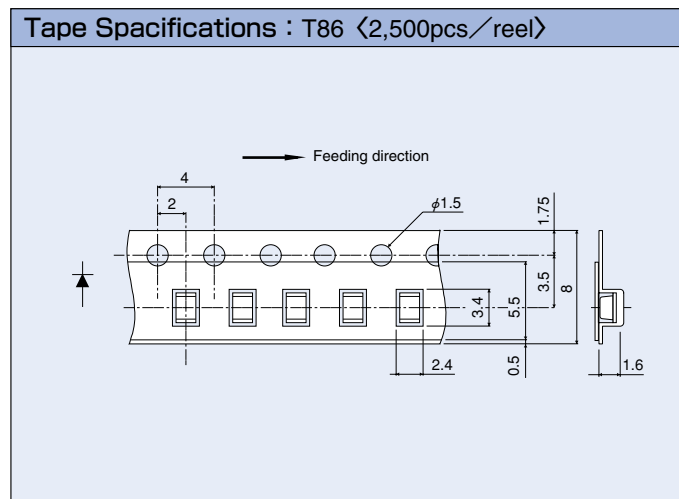


Recommended Pad Layout



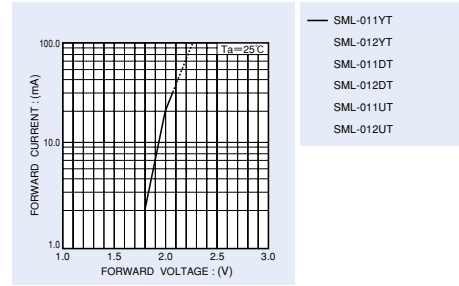
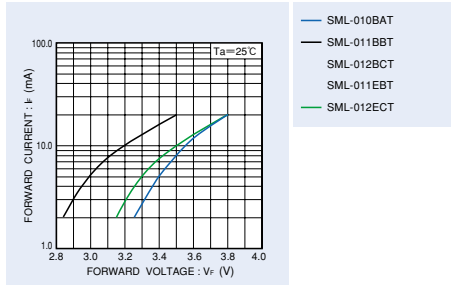
The recommended thickness of the screen mask for soldering is between 100 and 200 μm. The hole size of the screen mask should be same as the recommended land pattern or smaller.

Packaging Specifications (Unit : mm)

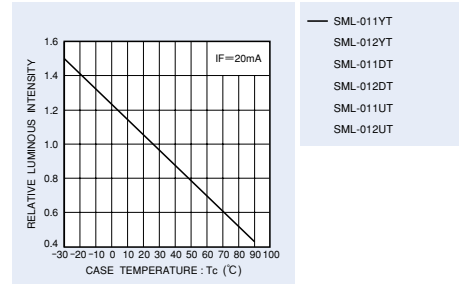
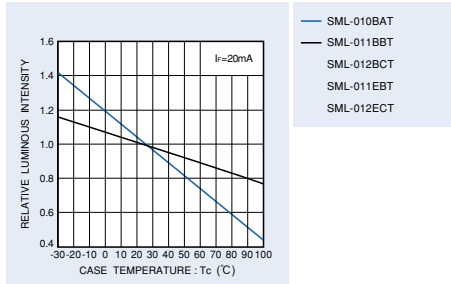


Electrical Characteristic Curves

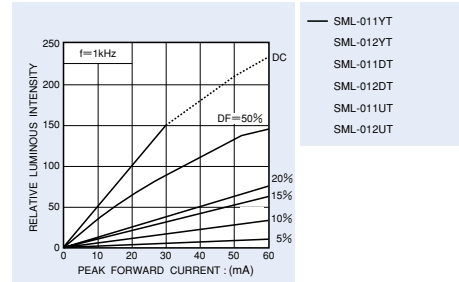
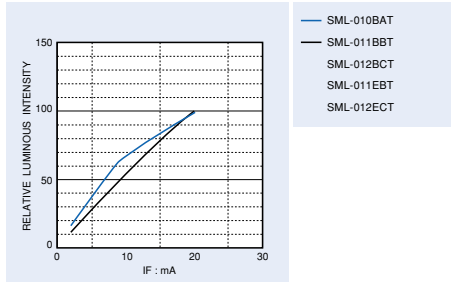
Forward Current - Forward Voltage



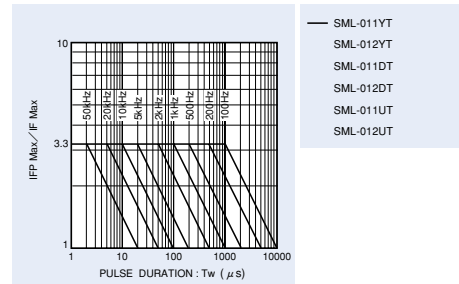
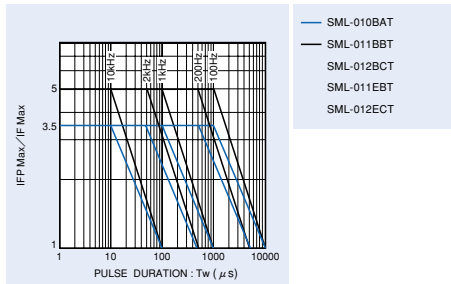
Relative Luminous Intensity - Case Temperature



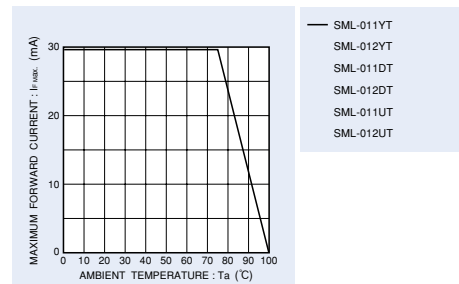
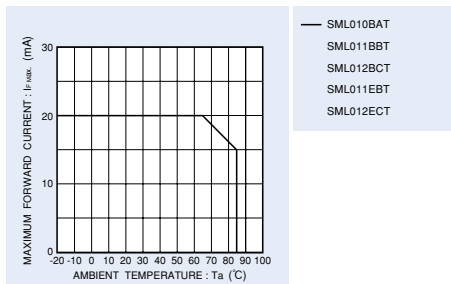
Relative Luminous Intensity - Forward Current



Ratio of Maximum Tolerable Peak Current - Pulse Duration



Derating



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