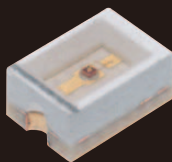


SML-01 Series



3020 (1208)
 3.0 × 2.0mm (t=1.3mm)

Features

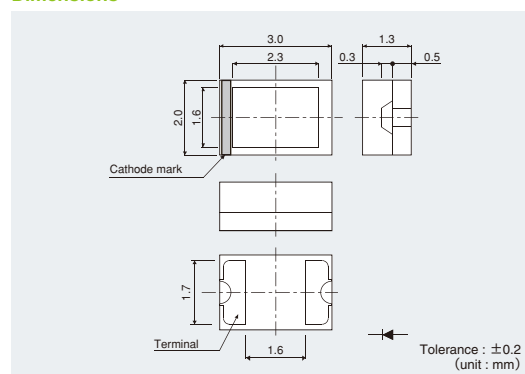
- Reflector type (3.0 × 2.0mm, t=1.3mm)
- Reflector improved the concentration of viewing angle and luminous intensity to the front direction

Color Type	V	U	D	Y	W
	M	P	E	B	WB

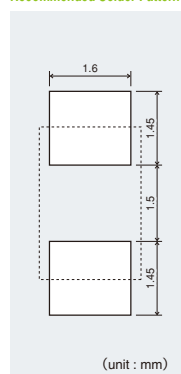
Specifications

Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation Pd (mW)	Forward Current IF (mA)	Peak Forward Current I _{FP} (mA)	Reverse Voltage VR (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage VF (V)	Reverse Current IR (μA)	Dominant Wavelength λD (nm)	Typ. Min.*2	Max.*2	Luminous Intensity Iv (mcd)	Typ. Min.*2	Max.*2	Luminous Intensity Iv (mcd)	Typ. Min.*2
SML-012VT(A)		Red	75	30			-40 to +100		2.0		626		636	35.5	71			
SML-012V8T			54	20			-40 to +85		2.2		625		635	25	63			
SML-013UT			75	30			-30 to +85		2.0		619	624	629	90	220			
SML-012U8T			54	20			-40 to +85		2.2					40	100			
SML-012UT	AlGaInP on GaAs	Orange	75	30			-40 to +100		2.0		615	620	625	36	100			
SML-011UT														22	63			
SML-012D8T			54	20			-40 to +85		2.2					63	160			
SML-012DT					100*1						602	605	608	36	100			
SML-011DT		Yellow	75	30			-40 to +100		2.0	10				22	63			
SML-012WT(A)														140	280			
SML-012Y8T			54	20			-40 to +85		2.2					40	100			
SML-013YT						5	-40 to +100	-40 to +100	2.1	20	5	587	590	593	100	250	20	
SML-012YT		Yellowish Green	75	30			-40 to +100		2.0					36	100			
SML-011YT														22	63			
SML-012M8T			54	20			-40 to +85		2.2		569	572	575	16	40			
SML-012P8T											557		563	2.5	6.3			
SML-012PT(A)		Green	62	25	60*1		-40 to +100		2.1		558		564	9	18			
SML012ECT			84						3.3		520	525	535	140	360			
SML012EC4T									3.2					56	140			
SML013BDT			78				-30 to +85		3.3	100	465	470	475	36	100			
SML012BCT	InGaN	Blue		20	100*1									22	36			
SML012BC4T			84						3.2									
SML013WBDW		White									(x, y) (0.30, 0.30)			360	900			

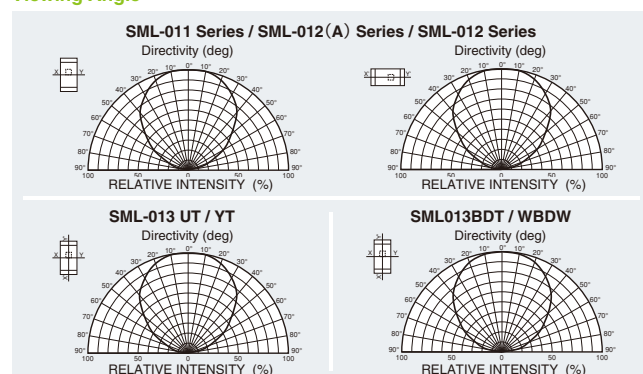
Dimensions



Recommended Solder Pattern

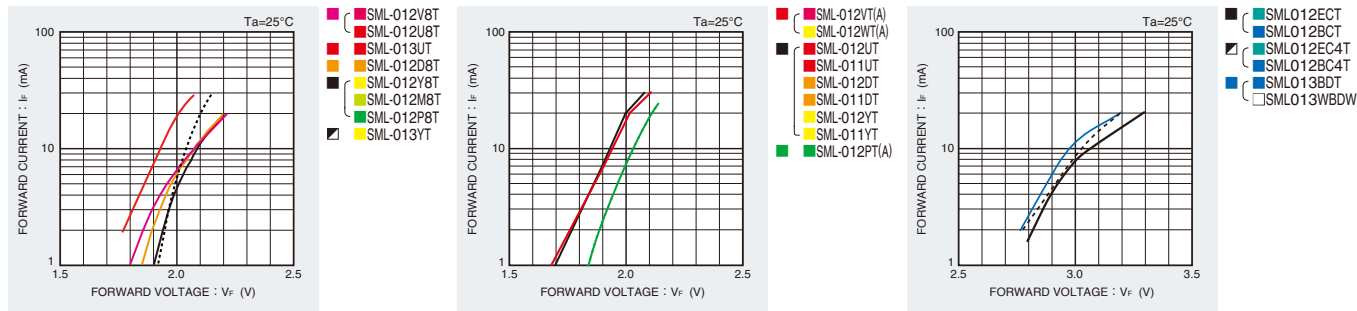


Viewing Angle

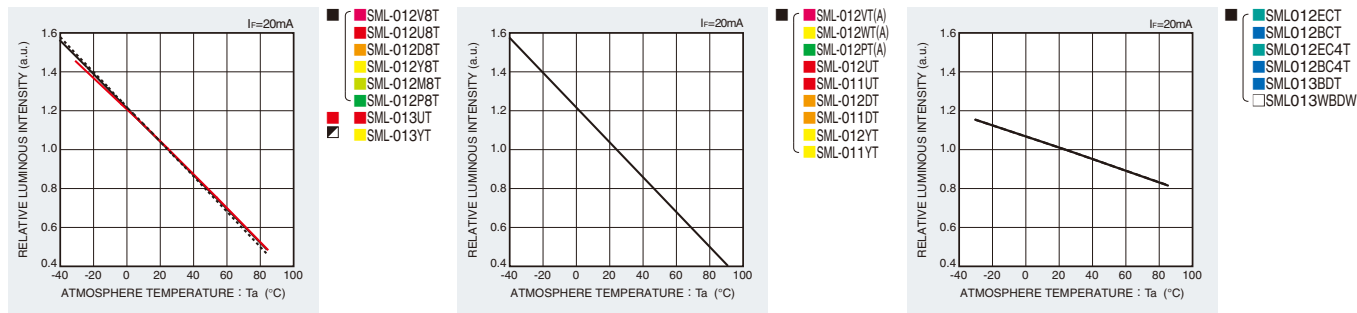


Electrical Characteristics Curves

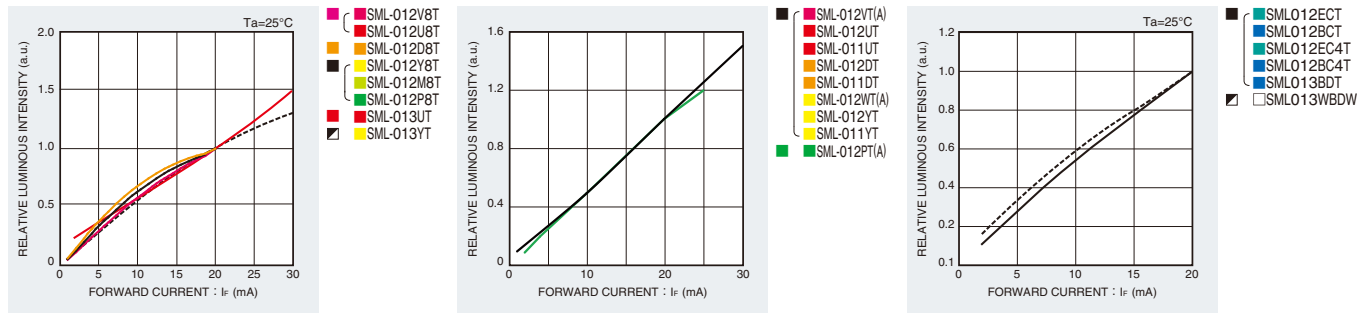
Forward Current-Forward Voltage



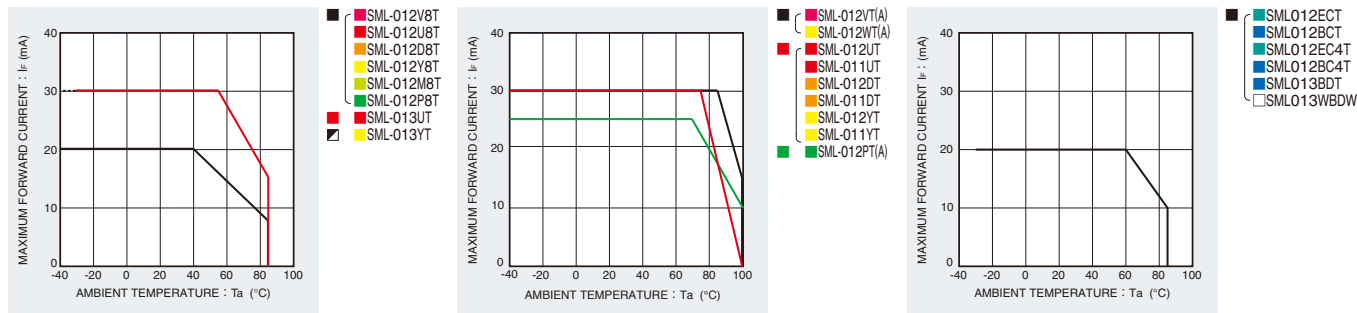
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



Rank Reference of Brightness

Red (V, U)

(Ta=25°C, If=20mA)

	Package size(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X		
	Height(mm)		2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600		
Chip LEDs with reflector	3020	1.3						SML-012V8T										
										SML-012U8T			SML-013UT					
										SML-012UT [®]								
										SML-011UT [®]								

※Brightness on specification sheet include tolerance of within ±10%.

Orange (D)

(Ta=25°C, If=20mA)

	Package size(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
		Height(mm)	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
Chip LEDs with reflector	3020	1.3							SML-011DT [®]							
									SML-012D8T							
									SML-012DT [®]							

※Brightness on specification sheet include tolerance of within ±10%.

Yellow (Y)

(Ta=25°C, If=20mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	
Chip LEDs with reflector	3020	1.3	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600		
			SML-011YT*															
			SML-012Y8T															
			SML-012YT*															
			SML-013YT															

※Brightness on specification sheet include tolerance of within ±10%.

Green (M, P, E)

(Ta=25°C, If=20mA)

	Package size(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
		Height(mm)	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
Chip LEDs with reflector	3020	1.3								SML012EC4T [®]						
							SML-012M8T					SML012ECT [®]				
			SML-012P8T													

※Brightness on specification sheet include tolerance of within ±10%.

Blue (B)

(Ta=25°C, If=20mA)

	Package size (mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
	Height (mm)		0.9 to 1.4	1.4 to 2.2	2.2 to 3.6	3.6 to 5.6	5.6 to 9.0	9 to 14	14 to 22	22 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900
Chip LEDs with Reflector	3020	1.3								SML012BC4T							
											SML012BCT						
												SML013BDT					

White (WB)

(Ta=25°C, If=5mA)

	Package size (mm)	Luminous Intensity (mcd)	P	Q	R	S	T	U	V	W	X1	X2	Y1	Y2	Z1
	Height (mm)		25 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900	900 to 1100	1100 to 1400	1400 to 1800	1800 to 2200	2200 to 2800
Chip LEDs with reflector	3020	1.3								SML013WBDW					

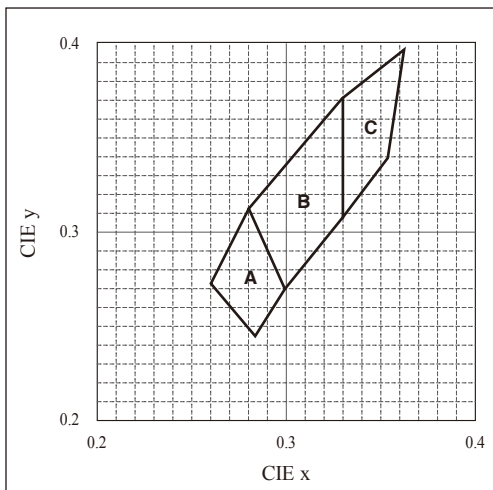
SML-012(A)

(Ta=25°C, If=20mA)

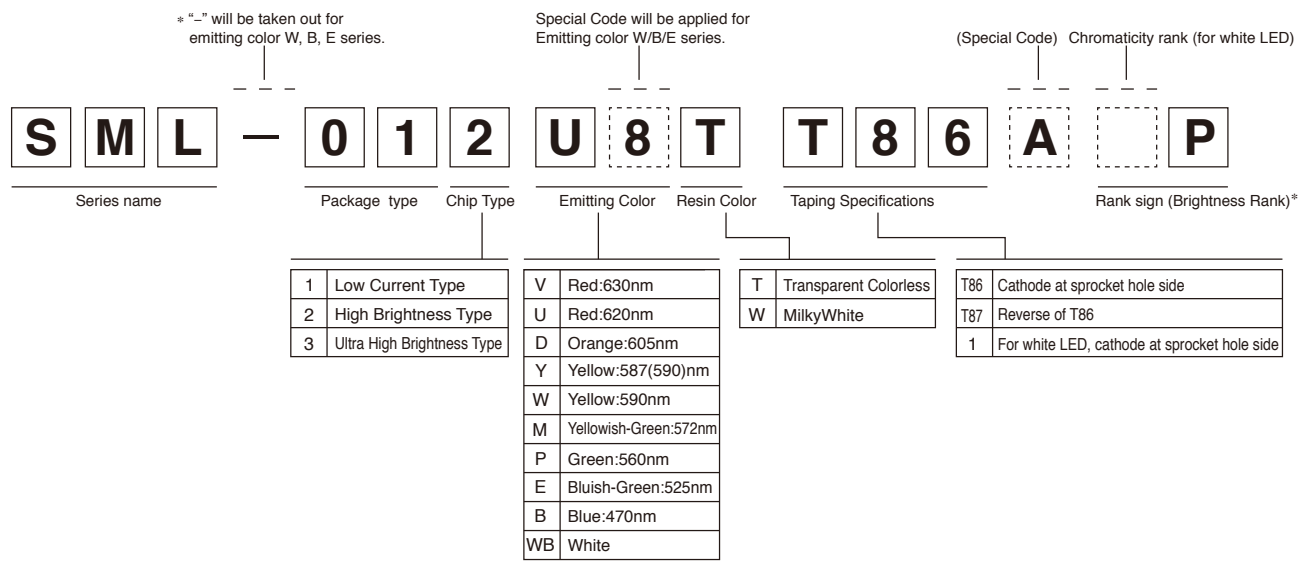
		(A)=ES, (P)=EPR																								
	Package size (mm)	Luminous intensity (mcd)	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ						
		Height(mm)	9.0 to 11.2	11.2 to 14	14 to 18	18 to 22.4	22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560						
Chip LEDs with Reflector	3020	1.3							SML-012VT(A)																	
			SML-012PT(A)*												SML-012WT(A)*											

* Please note that the brightness of some products may fall between ranks (half rank).

Chromaticity Diagram (White)



Part No. Construction



- * Concerning the Brightness rank
- Please refer to the rank chart above for luminous intensity classification.
 - Part name is individual for each rank.
 - When shipped as sample, the part name will be a representative part name.
- General products are free of ranks. Please contact sales if rank appointment is needed.

Packing Specification

ROHM LED products are being shipped with desiccant (silica gel) concluded in moisture-proof bags.

Pasting the moisture sensitive label on the outer surface of the moisture-proof bags or enclosing the humidity indication card inside the bag is available upon request.

Please contact the nearest sales office or distributor if necessary.

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