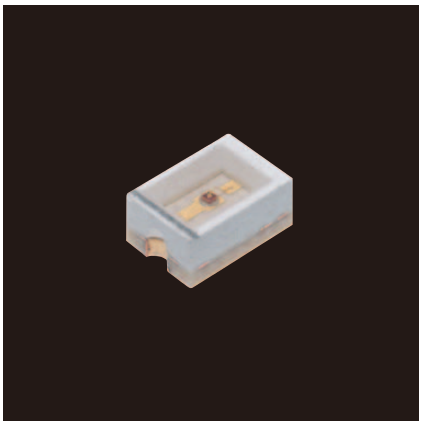


SML-01 Series

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

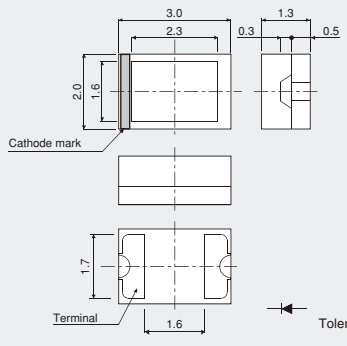
Color Type: V U D Y W / M P E B WB

Specifications

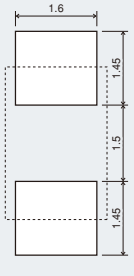
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25℃)						Electrical and Optical Characteristics (Ta=25℃)										
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(℃)	Storage Temperature Tstg(℃)	Forward Voltage VF Typ. (V)	VF IF(mA)	Reverse Current IR Max. (μA)	IR VR(V)	Dominant Wavelength λD Min.*2 (nm)	λD Typ. (nm)	λD Max.*2 (nm)	Luminous Intensity Iv IF(mA)	Iv Min. (mcd)	Iv Typ. (mcd)	Iv IF(mA)
SML-012VT(A)	AlGaInP on GaAs	Red	75	30	100*1	5	-40 to +100	-40 to +100	2.0	20	10	5	626	630	636	20	35.5	71	20
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			75	30			-40 to +100		2.0				615	620	625		36	100	
SML-011UT																	22	63	
SML-012D8T		Orange	54	20			-40 to +85		2.2								63	160	
SML-012DT			75	30			-40 to +100		2.0				602	605	608		36	100	
SML-011DT																	22	63	
SML-012WT(A)		Yellow	54	20			-40 to +85		2.2								140	280	
SML-012Y8T																	40	100	
SML-013YT			75	30			-40 to +100		2.0				587	590	593		100	250	
SML-012YT																	36	100	
SML-011YT																	22	63	
SML-012M8T		Yellowish Green	54	20			-40 to +85		2.2				569	572	575		16	40	
SML-012P8T		Green											557	560	563		2.5	6.3	
SML-012PT(A)			62	25	60*1		-40 to +100		2.1				558		564		9	18	
SML012ECT	InGaN	Bluish Green	84	20	100*1		-30 to +85		3.3		100		520	525	535		140	360	
SML012EC4T									3.2								56	140	
SML013BDT		Blue	78														90	250	
SML012BCT									3.3				465	470	475		36	100	
SML012BC4T			84						3.2								22	36	
SML013WBDW		White											(x, y) (0.30, 0.30)				360	900	

∗ 1:Duty1/10, 1kHz / ∗ 2:Reference

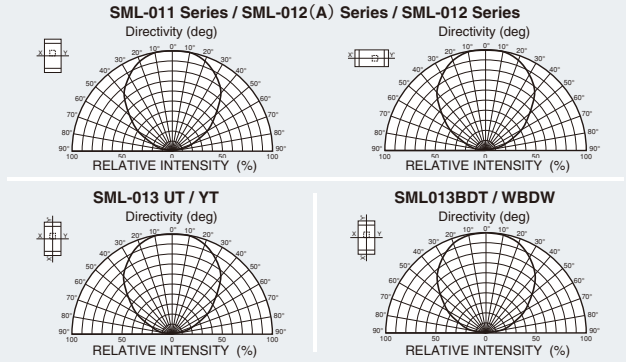
Dimensions



Recommended Solder Pattern



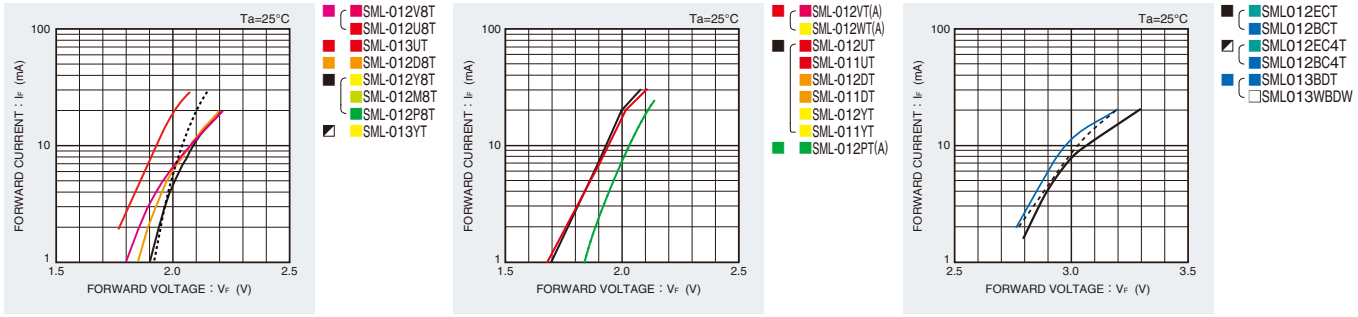
Viewing Angle



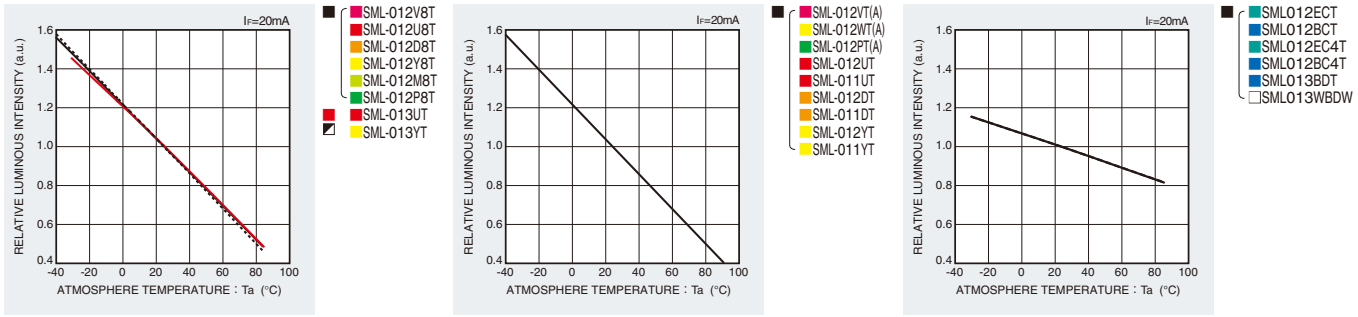
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Electrical Characteristics Curves

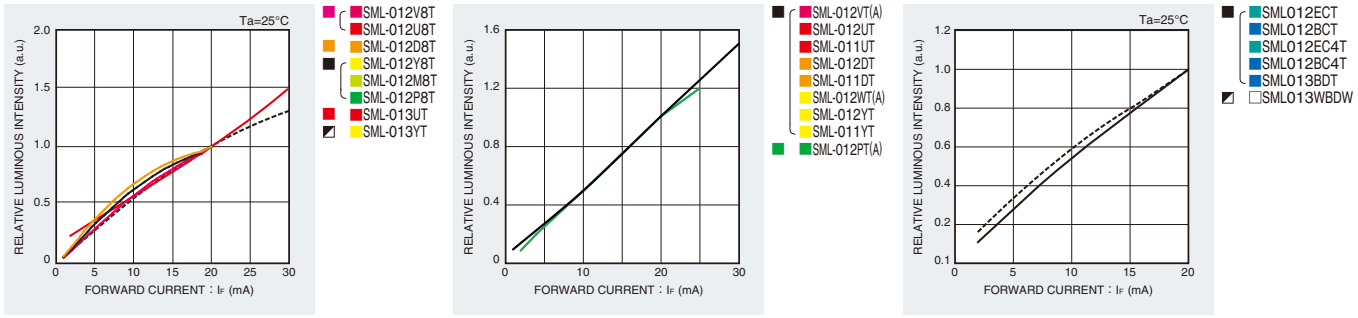
Forward Current-Forward Voltage



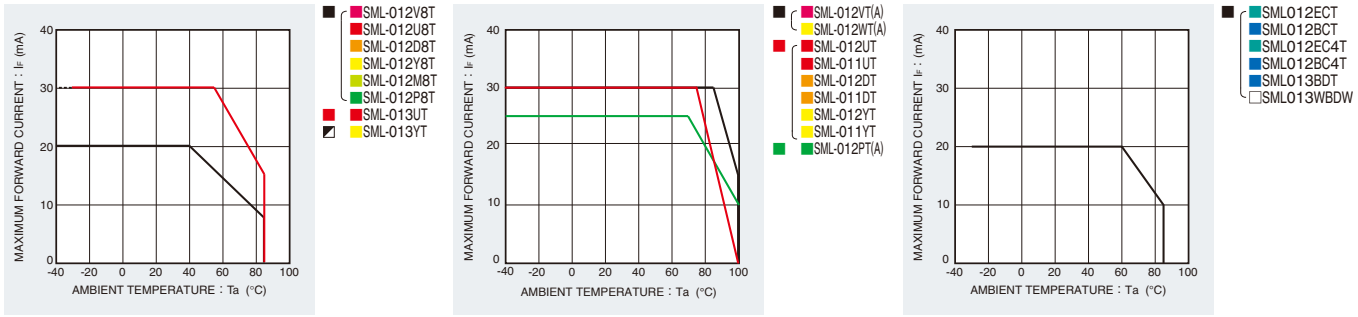
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



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Rank Reference of Brightness

Red (V, U)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
			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-013UT					
									SML-012U8T							
									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) / Height(mm)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
			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)	Luminous Intensity (mcd) / Height(mm)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
			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-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) / Height(mm)	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
			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) / Height(mm)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
			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) / Height(mm)	P	Q	R	S	T	U	V	W	X1	X2	Y1	Y2	Z1
			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						

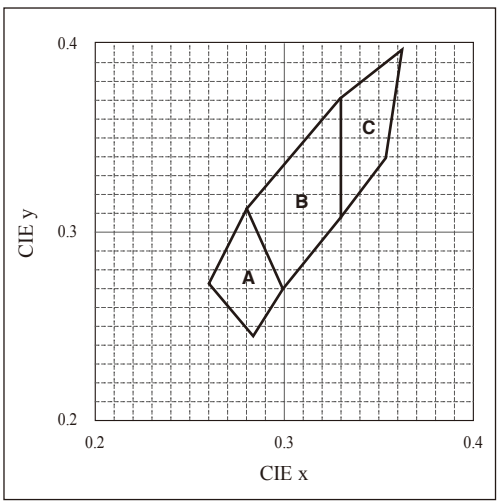
SML-012(A)

(Ta=25°C, IF=20mA)

	Package size (mm)	Luminous Intensity (mcd) / Height(mm)	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ
			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-012WT(A)*					
			SML-012PT(A)*																	

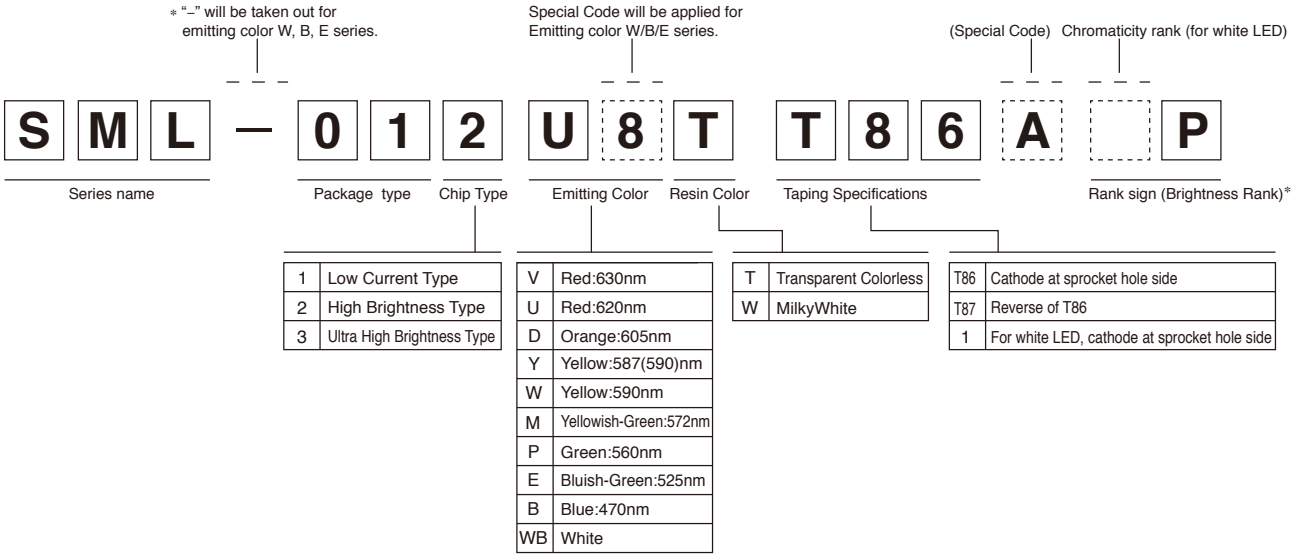
∗Please note that the brightness of some products may fall between ranks (half rank).

Chromaticity Diagram (White)



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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 distributer if necessary.

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