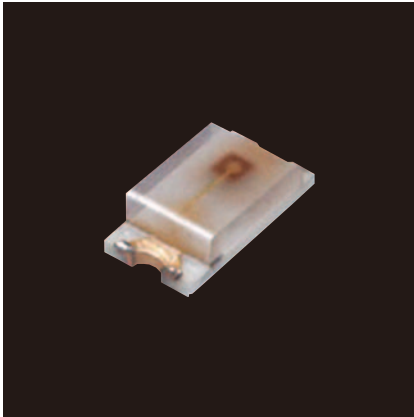




SML-E1 Series

1608(0603)
 1.6×0.8mm(t=0.36mm)

Features

- EXCELED™ series
- Compact, Thin size (1.6×0.8mm, t=0.36mm)
- LED die consists of 4 elements
- Original device technology enables high brightness and high reliability

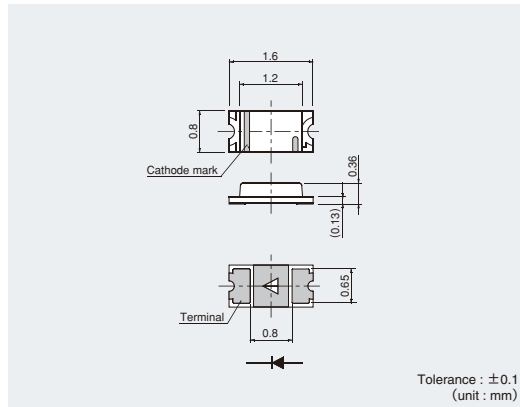
Color Type	V	U	D	Y
M	P	E	B	WB

Specifications

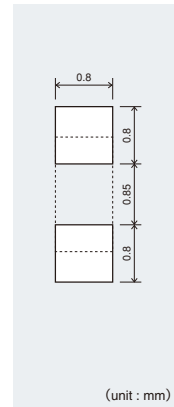
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation Pd(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ. (V)	IF(mA)	Max. (μA)	VR(V)	Dominant Wavelength λD Min.*3 (nm)	Typ. (nm)	Max.*3 (nm)	Luminous Intensity Iv Min. (mcd)	Typ. (mcd)	Iv(mA)
■ SML-E12V8W	AlGaInP on GaAs	Red	54	20	100*2	5	-40 to +85	-40 to +100	2.2				625	630	635	16	40	
■ SML-E12UW			62	25	60*1	4	-30 to +85	-40 to +85	2.1				619	624	629	36	100	
■ SML-E12U8W			54	20	100*2	5	-40 to +85	-40 to +100	2.2				615	620	625	25	63	
■ SML-E12DW		Orange	62	25	60*1	4	-30 to +85	-40 to +85	1.9	20		4	603.5	606.5	609.5	56	200	20
■ SML-E12D8W													602	605	608	40	100	
■ SML-E12Y8W		Yellow	54				-40 to +85		2.2				587	590	593	25	63	
■ SML-E12M8W		Yellowish Green											569	572	575	10	25	
■ SML-E12P8W		Green		20	100*2	5		-40 to +100					557	560	563	2.5	6.3	
■ SMLE12EC6T	InGaN	Bluish Green	68						3.0				520	527	535	36	85	
■ SMLE12BC7T		Blue	66				-30 to +85		2.9	5		5	464	470	476	9	22	5
■ SMLE12WBC7W		White									100		(x, y) (0.30, 0.30)			22	71	

* 1:Duty1/5, 200Hz / * 2:Duty1/10, 1kHz * 3:Reference

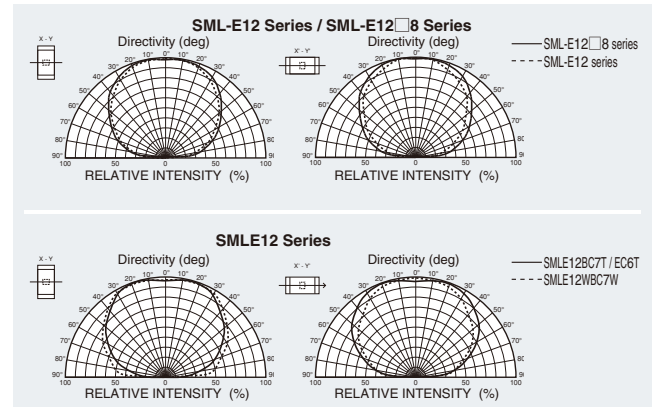
Dimensions



Recommended Solder Pattern



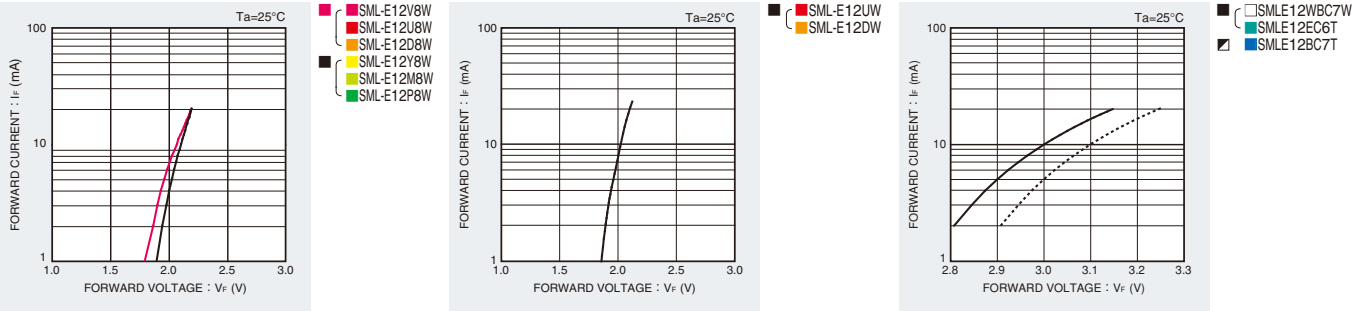
Viewing Angle



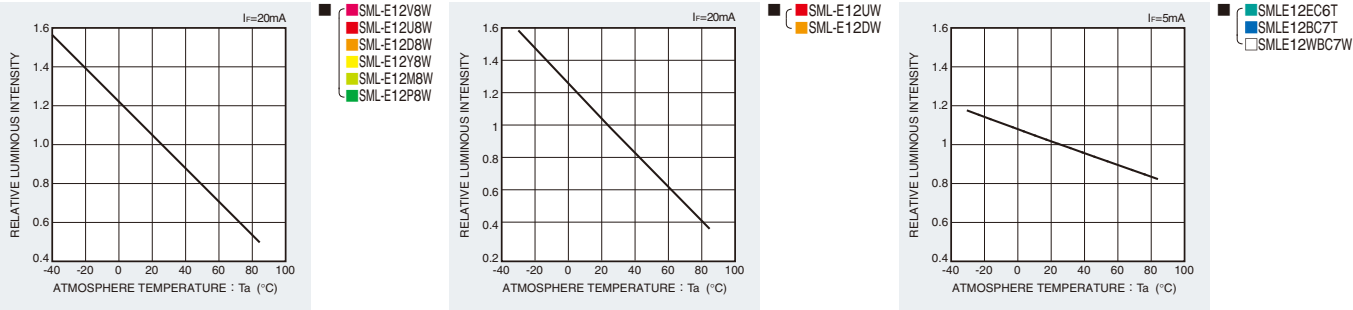
* EXCELED™ is ROHM's pending trademark.

Electrical Characteristics Curves

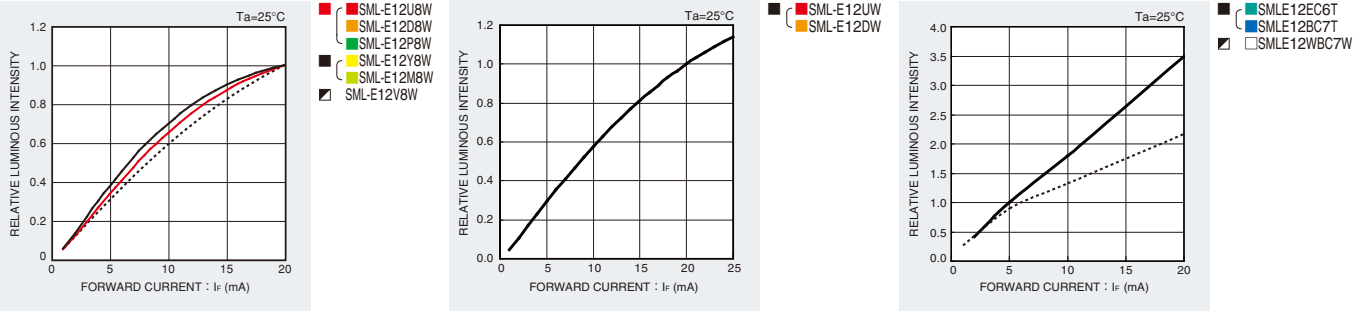
Forward Current-Forward Voltage



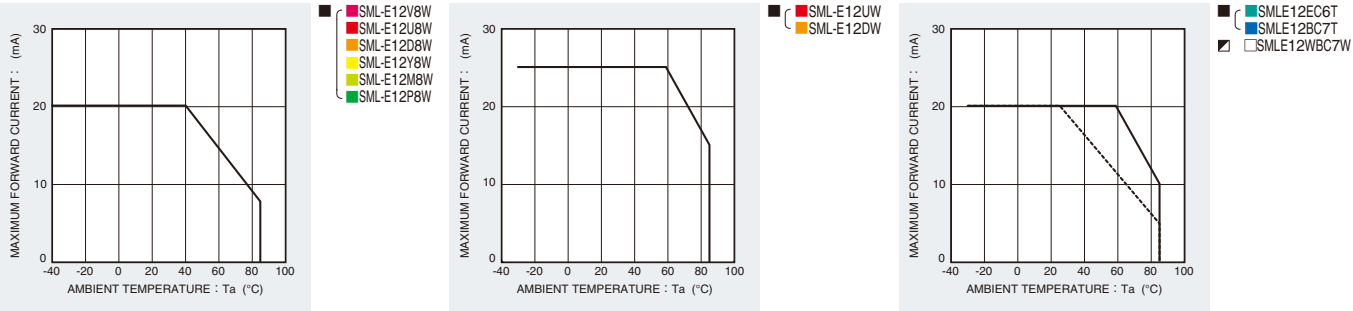
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



SML-E1 Series

Rank Reference of Brightness

Red (V, U)

				(Ta=25°C, If=20mA)															
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
				1.0 to 1.6	1.6 to 2.5	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
Mini-mold Chip LEDs	1608	0.36									SML-E12V8W								
											SML-E12U8W								
											SML-E12UW*								

Orange (D)

				(Ta=25°C, If=20mA)															
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
				1.0 to 1.6	1.6 to 2.5	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
Mini-mold Chip LEDs	1608	0.36												SML-E12DW*					
														SML-E12D8W					

Yellow (Y)

				(Ta=25°C, If=20mA)															
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
				1.0 to 1.6	1.6 to 2.5	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
Mini-mold Chip LEDs	1608	0.36									SML-E12Y8W								

Green (M, P, E)

Green (W, I, L)																			(Ta=25°C, If=20mA)			
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X		
				0.63 to 1.0	1.0 to 1.6	1.6 to 2.5	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 1800		
Mini-mold Chip LEDs	1608	0.36					SML-E12P8W							SMLE12EC6T [®]								
											SML-E12M8W											

Blue (B)

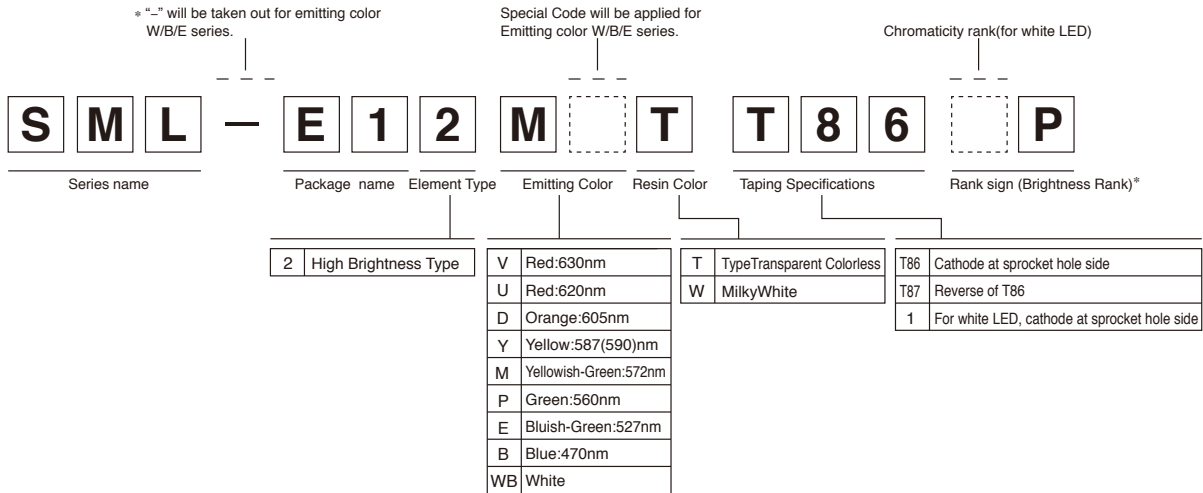
				(Ta=25°C, If=5mA)															
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
				0.9 to 1.4	1.4 to 2.2	2.2 to 3.6	3.6 to 5.6	5.6 to 9.0	9 to 14	14 to 22	22 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900	
Mini-mold Chip LEDs	1608	0.36								SMLE12BC7T									

White (WB)

				(Ta=25°C, If=5mA)															
	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	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			
Mini-mold Chip LEDs	1608	0.36		SMLE12WBC7W															

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

Part No. Explanation



- * 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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