



# SML-51 Series

1608(0603)  
1.6 × 0.8mm (t=0.55mm)

## Features

- Original device technology enables high brightness and high reliability
- High reliability due to the wide operation temperature (-40°C to +100°C) (SML-512(A) Series)

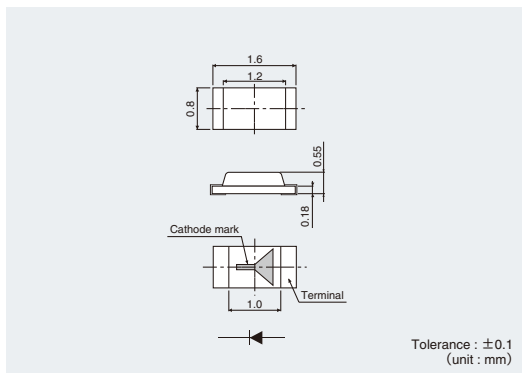
Color Type	V	U	C	D
	V	U	C	D
	W	M	P	B

## Specifications

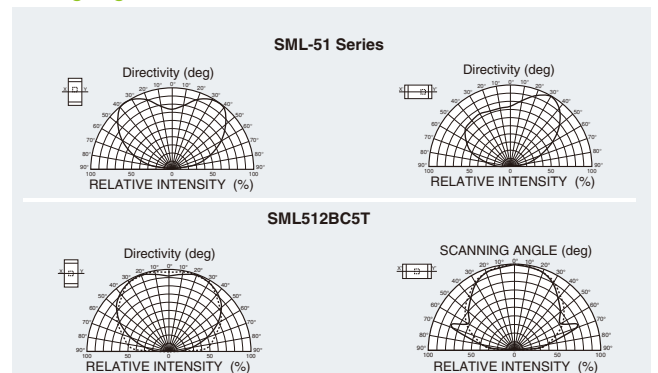
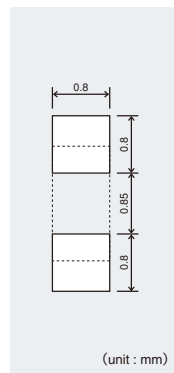
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current I <sub>FP</sub> (mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ. (V)	IF(mA)	Reverse Current IR Max. (μA)	VR(V)	Dominant Wavelength λD (nm)			Luminous Intensity Iv (mcd)		
<b>SML-512VW(A)</b>	AlGaInP on GaAs	Red	75	30	100*2	5	-40 to +100	-40 to +100	2.0	20	10	5	626	630	636	35.5	56	
<b>SML-512VW</b>													619	624	629	22	63	
<b>SML-512UW</b>													615	620	625	14	40	
<b>SML-511UW</b>													600	603	606	71	112	
<b>SML-512CW(A)</b>	AlGaInP on GaAs	Orange	75	30	100*2	5	-40 to +100	-40 to +100	2.0	20	10	5	600	603	606	36	100	20
<b>SML-512DW</b>													603	606	609	14	40	
<b>SML-511DW</b>													602	605	608	14	40	
<b>SML-512WW</b>	AlGaInP on GaAs	Yellow	75	30	100*2	5	-40 to +100	-40 to +100	2.0	20	10	5	587	590	593	36	63	
<b>SML-511WW</b>													567	570	575	22	40	
<b>SML-512MW</b>													557	560	563	14	14	
<b>SML-512PW(A)</b>	AlGaInP on GaAs	Yellowish Green	65	25	100*2	5	-40 to +100	-40 to +100	2.1	100	5	5	464	470	476	5.6	16	5
<b>SML512BC5T</b>													InGaN	Blue	66	20		

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

## Dimensions

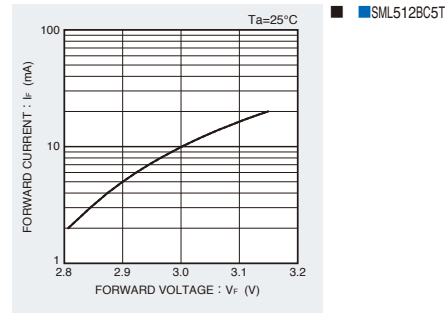
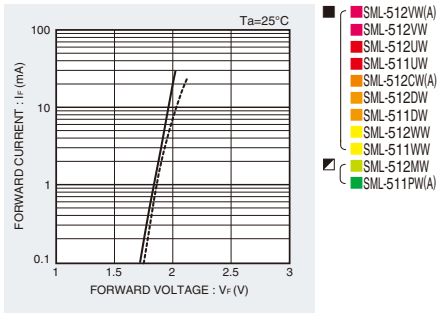


## Recommended Solder Pattern Viewing Angle

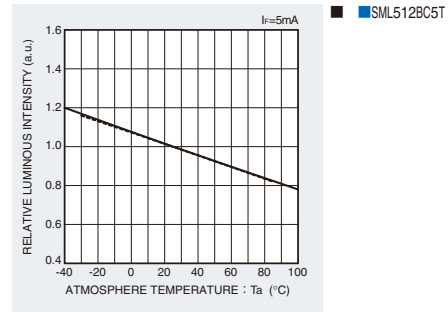
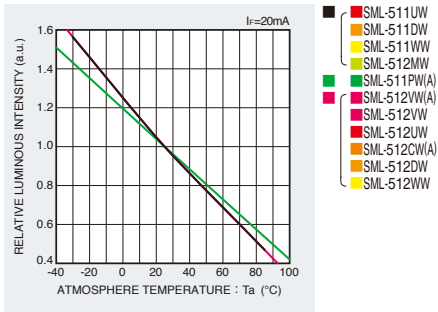


## Electrical Characteristics Curves

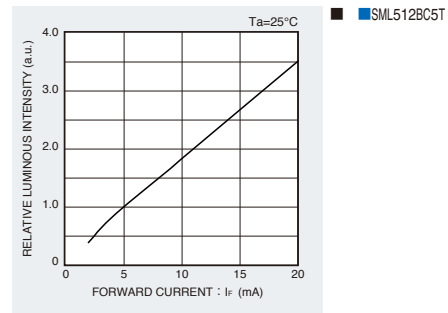
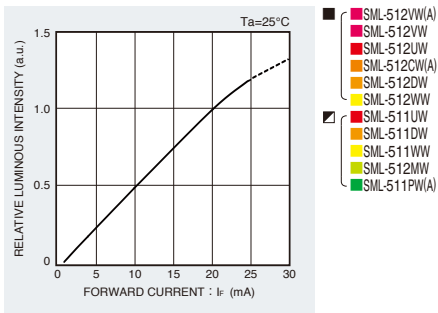
### Forward Current-Forward Voltage



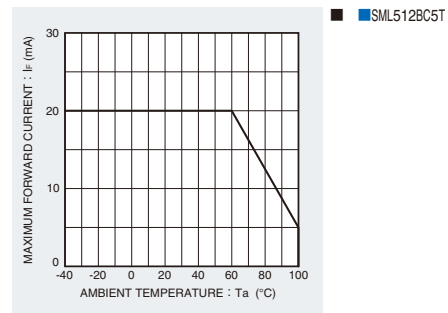
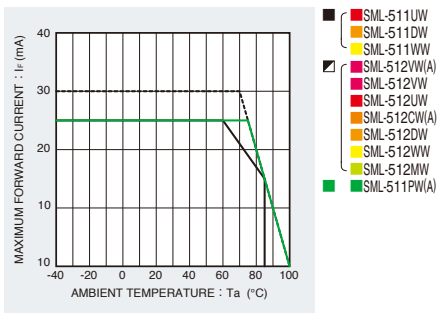
### Luminous Intensity-Atmosphere Temperature



### Luminous Intensity-Forward Current



### Derating



# SML-51 Series

## Rank Reference of Brightness

### Red (V, U)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T
			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
Mini-mold Chip LEDs	1608	0.55	SML-512VW*									
			SML-511UW*									
			SML-512UW*									

### Orange (D)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T
			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
Mini-mold Chip LEDs	1608	0.55	SML-511DW*									
			SML-512DW*									

### Yellow (W)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T
			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
Mini-mold Chip LEDs	1608	0.55	SML-511WW*									
			SML-512WW*									

### Green (M)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T
			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
Mini-mold Chip LEDs	1608	0.55	SML-512MW*									

### Blue (B)

(Ta=25°C, If=5mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	J	K	L	M	N	P	Q	R	S	T
			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
Mini-mold Chip LEDs	1608	0.55	SML-512BC5T									

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

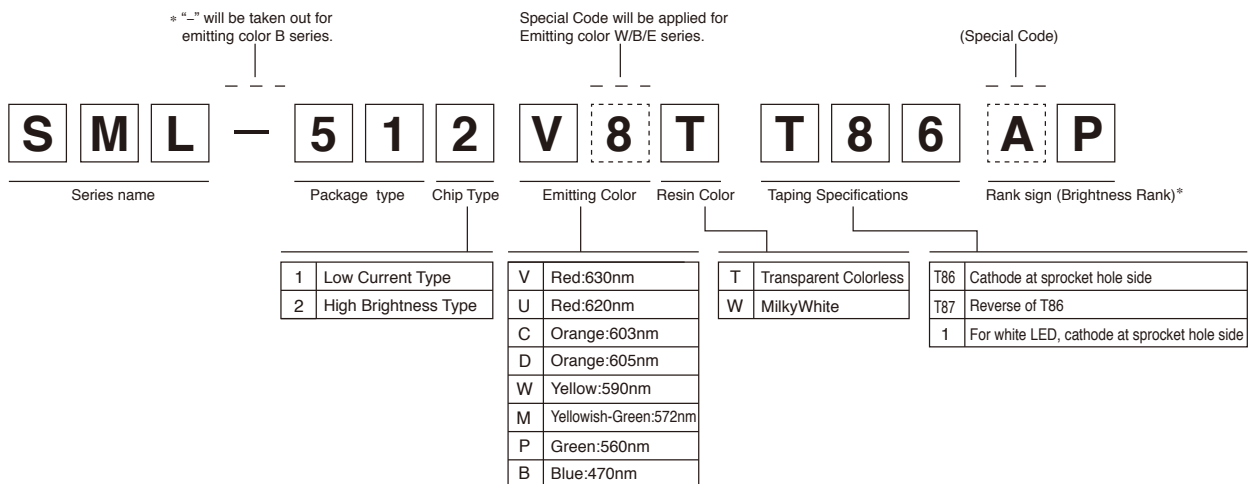
### SML-512(A)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	AE	AF	AG	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	
			5.6 to 7.1	7.1 to 9.0	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	
Mini-mold Chip LEDs	1608	0.55	SML-512PW(A)										SML-512VW(A)						
			SML-512VW(A)										SML-512CW(A)						

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

## 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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