

# 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)

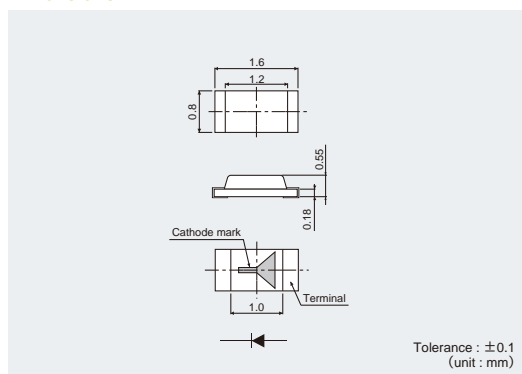


### Specifications

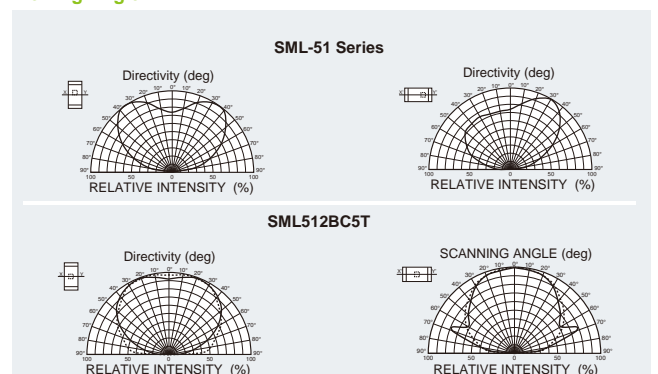
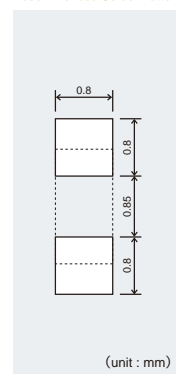
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)																			
			Power Dissipation Pd (mW)	Forward Current If (mA)	Peak Forward Current Ifp (mA)	Reverse Voltage Vr (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage Vf Typ. (V)	Forward Current If (mA)	Reverse Current Ir Max. (μA)	Reverse Voltage Vr (V)	Dominant Wavelength λD (nm)			Luminous Intensity Iv (mcd)												
■ SML-512VW(A)		Red	75	30	100*2	5	-40 to +100	-40 to +100			10	5	626	630	636	35.5	56											
■ SML-512VW													619	624	629	22	63											
■ SML-512UW													615	620	625	14	40											
■ SML-511UW													62	25	60*1	4	-30 to +85	-40 to +85										
■ SML-512CW(A)	AlGaInP on GaAs	Orange	75	30	100*2	5	-40 to +100	-40 to +100	2.0		10	5	600	603	606	71	112											
■ SML-512DW													603	606	609	20	36	100	20									
■ SML-511DW													62	25	60*1	4	-30 to +85	-40 to +85										
■ SML-512WW		Yellow	75	30	100*2	5	-40 to +100	-40 to +100			10	5	587	590	593	36	63											
■ SML-511WW													62	25	60*1	4	-30 to +85	-40 to +85										
■ SML-512MW													65	25	100*2	5	-40 to +100	-40 to +100										
■ SML-512PW(A)		Yellowish Green	65	25	100*2	5	-40 to +100	-40 to +100	2.1		100	5	567	570	575	14	40											
■ SML-512BC5T													InGaN	Blue	66	20												

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

### Dimensions



### Recommended Solder Pattern Viewing Angle



Electrical Characteristics Curves

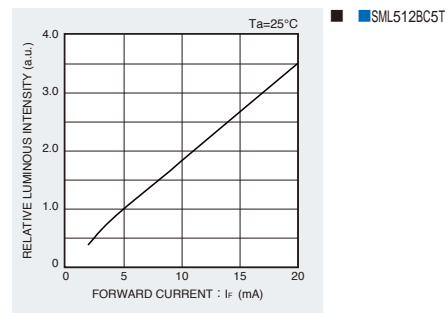
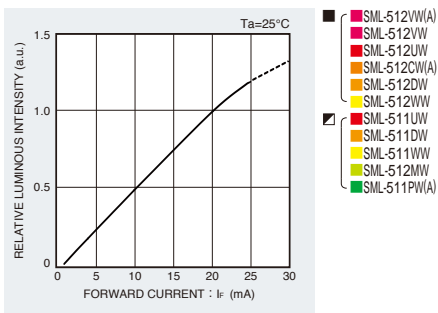
Forward Current-Forward Voltage



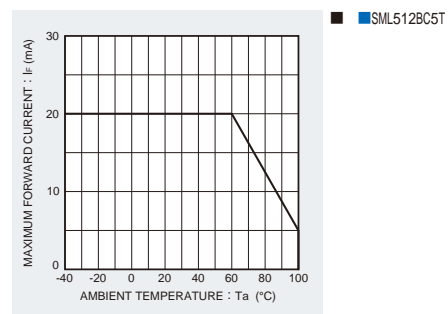
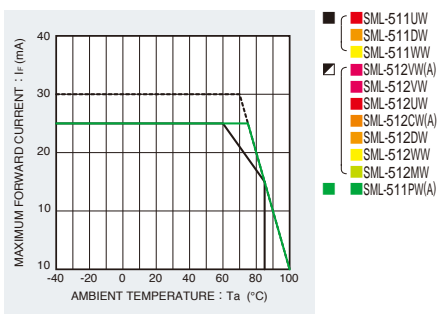
Luminous Intensity-Atmosphere Temperature



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%.

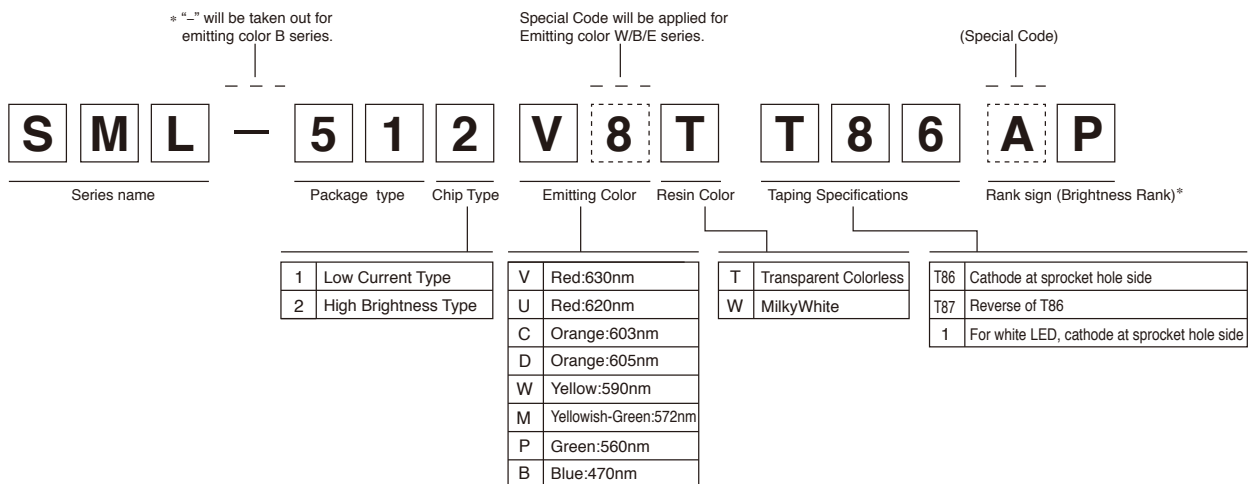
### SML-512(A)

(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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