



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)

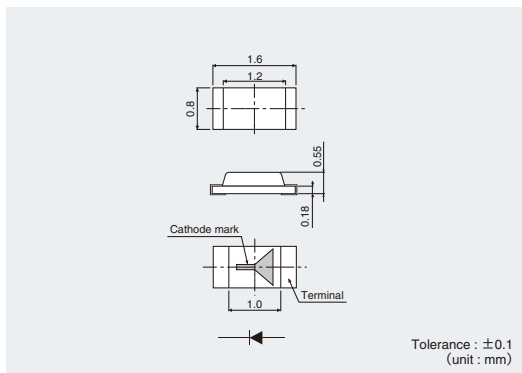
Color Type	V	U	C	D
	V	U	C	D
	W	M	P	B

Specifications

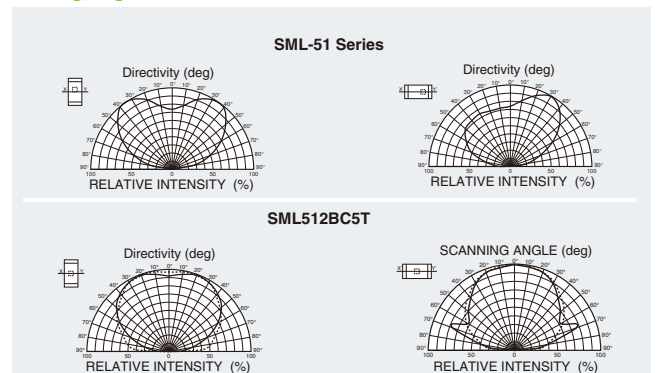
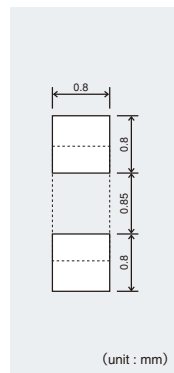
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current I _{FP} (mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ. (V)	IF(mA)	Reverse Current IR Max. (μA)	VR(V)	Dominant Wavelength λD (nm)			Luminous Intensity Iv (mcd)		
SML-512VW(A)	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	
SML-512VW													619	624	629	22	63	
SML-512UW													615	620	625	14	40	
SML-511UW													600	603	606	71	112	
SML-512CW(A)	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
SML-512DW													603	606	609	14	40	
SML-511DW													602	605	608	14	40	
SML-512WW	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	
SML-511WW													567	570	575	22	40	
SML-512MW													557	560	563	14	14	
SML-512PW(A)	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
SML512BC5T													InGaN	Blue	66	20		

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

Dimensions

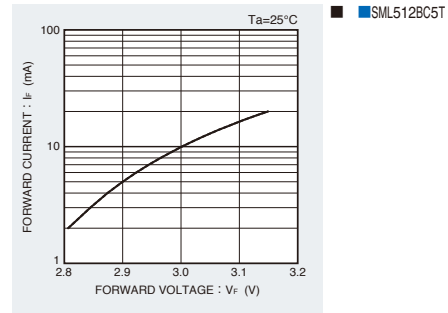
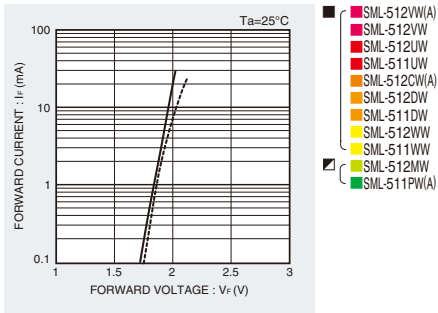


Recommended Solder Pattern Viewing Angle

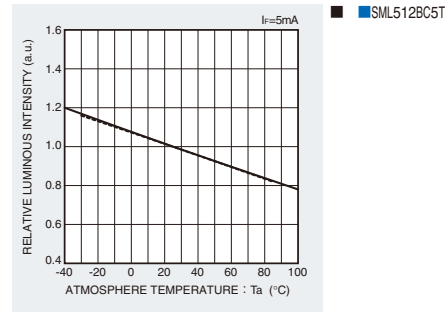
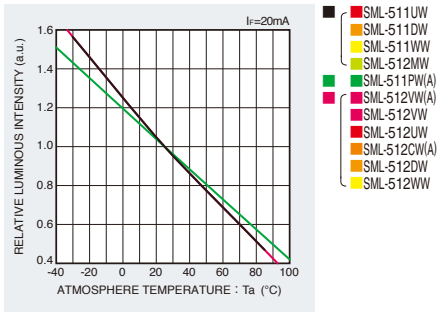


Electrical Characteristics Curves

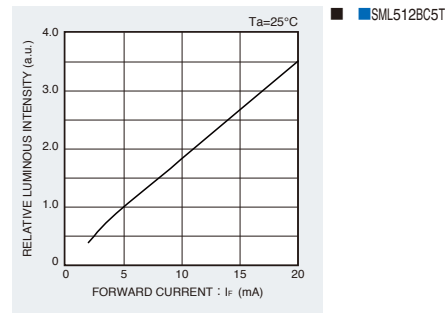
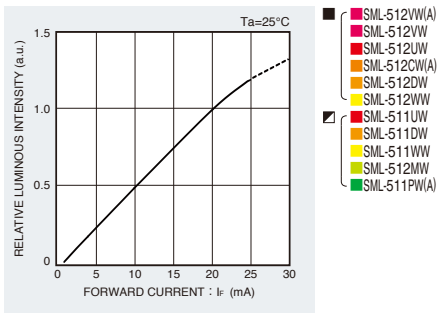
Forward Current-Forward Voltage



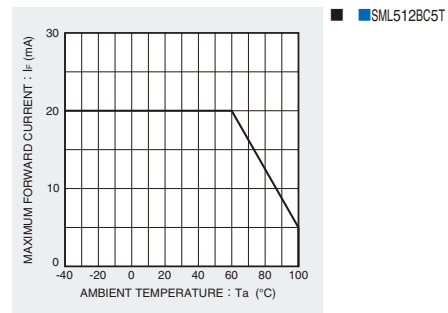
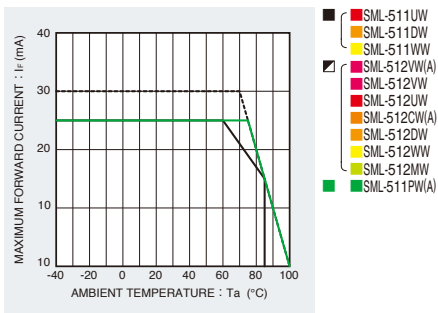
Luminous Intensity-Atmosphere Temperature



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*									
			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									
			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-512PW(A)										SML-512CW(A)						
			SML-512PW(A)										SML-512CW(A)						

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

Part No. Construction

* "-" will be taken out for emitting color B series.

Special Code will be applied for Emitting color W/B/E series.

(Special Code)



1	Low Current Type
2	High Brightness Type

V	Red:630nm
U	Red:620nm
C	Orange:603nm
D	Orange:605nm
W	Yellow:590nm
M	Yellowish-Green:572nm
P	Green:560nm
B	Blue:470nm

T	Transparent Colorless
W	MilkyWhite

T86	Cathode at sprocket hole side
T87	Reverse of T86
1	For white LED, cathode at sprocket hole side

- * 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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