

# SML-A1 Series

## EXCELED™

1611 (0605)  
1.6 × 1.15mm (t=0.55mm)

### Features

- Side-view type
- 1.6 × 1.15mm, t=0.55mm

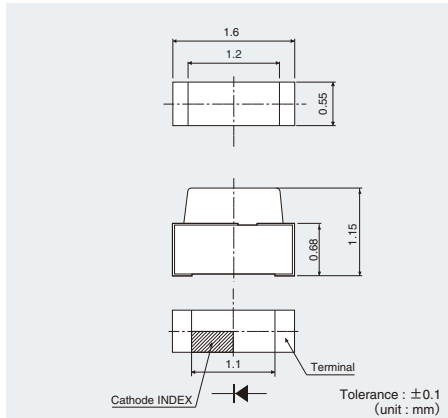


### Specifications

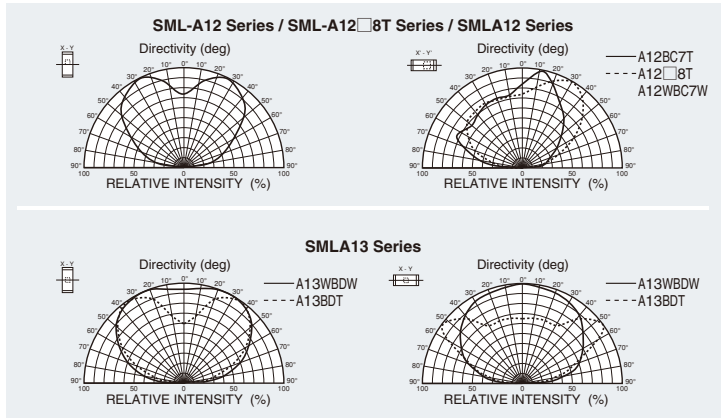
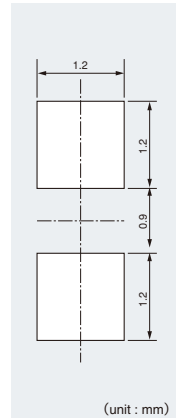
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation Pd (mW)	Forward Current If (mA)	Peak Forward Current Ifp (mA)	Reverse Voltage Vr (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage Vf (V)	Reverse Current Ir (μA)	Dominant Wavelength λd (nm)	Luminous Intensity Iv (mcd)					
SML-A12V8T	AlGaInP on GaAs	Red	54	20							625	630	635	16	40		
SML-A12U8T											615	620	625	25	63		
SML-A12UT(J)											619	624	629	36			
SML-A12D8T	AlGaInP on GaAs	Orange	54	20	100 <sup>*1</sup>	5	-40 to +85	-40 to +100			602	605	608	40	100		
SML-A12DT(J)											606	609	20	36	20		
SML-A12WT(J)											587	590	593	25	63		
SML-A12Y8T	AlGaInP on GaAs	Yellow	54	20							569	572	575	10	25		
SML-A12M8T											567	570	573	14	40		
SML-A12MT(J)											557	560	563	2.5	6.3		
SML-A12P8T	AlGaInP on GaAs	Yellowish Green	54	20			-30 to +85	-40 to +85	2.1	100	567	570	573	14	40		
SML-A12B7T											465	470	475	5	5.6	16	5
SMLA13BDT											464	476	20	56	140	20	
SMLA12WBC7W	InGaN	Blue	66		100 <sup>*1</sup>	5	-30 to +85	-40 to +100	3.2	20	5						
SMLA13BDW																464	476
SMLA12WBC7W	InGaN	White	66		100 <sup>*1</sup>	5	-30 to +85	-40 to +100	2.9	5	10						
SMLA13WBDW																3.1	10

\*1: Duty 1/10, 1kHz / \*2: Reference

### Dimensions



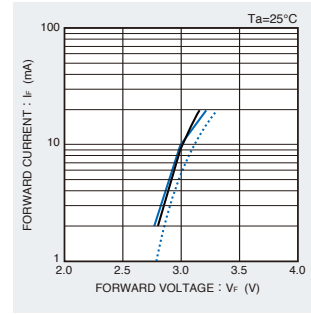
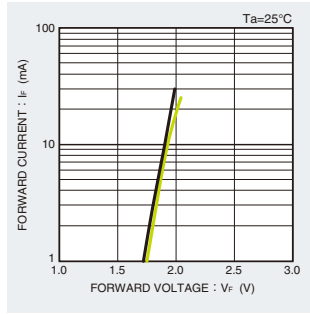
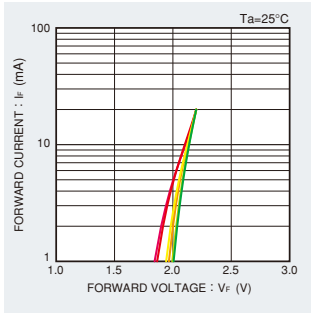
### Recommended Solder Pattern Viewing Angle



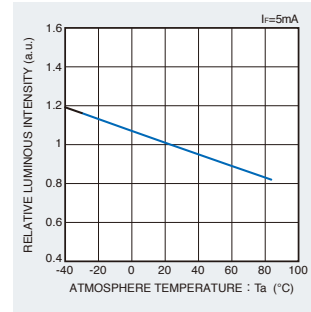
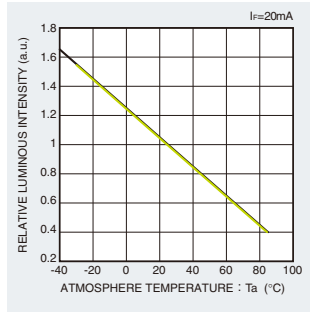
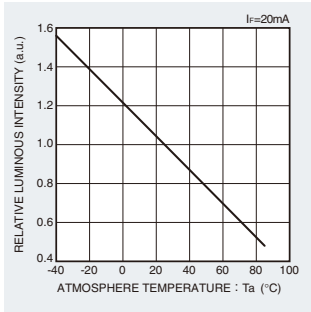
\* EXCELED™ is ROHM's pending trademark.

Electrical Characteristics Curves

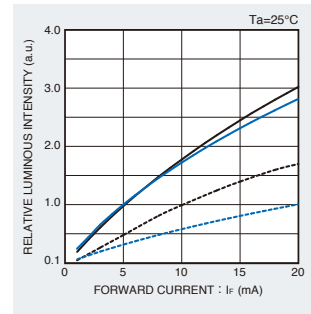
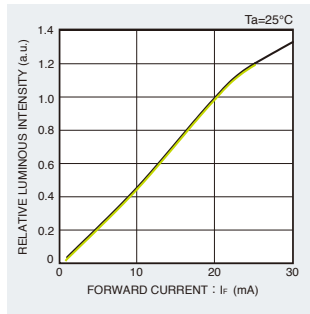
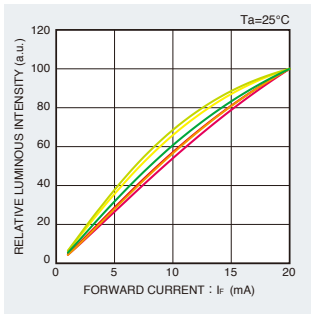
Forward Current-Forward Voltage



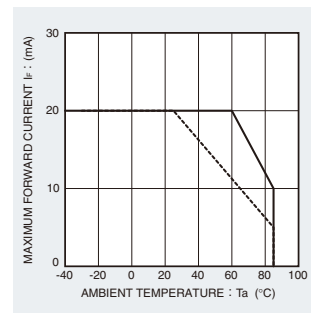
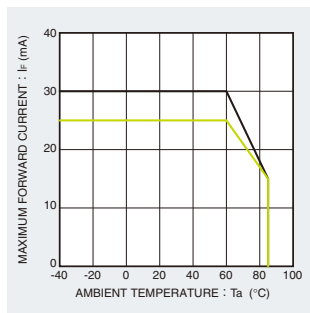
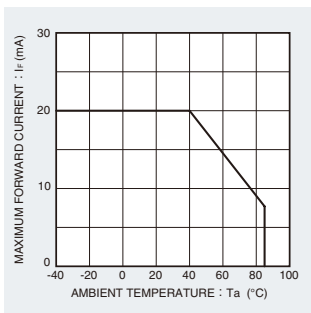
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



# SML-A1 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	
Side View Chip LEDs	16115	0.55								SML-A12V8T									
										SML-A12U8T									
										SML-A12UT*									

### 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	
Side View Chip LEDs	16115	0.55									SML-A12D8T								
										SML-A12DT*									

### 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	
Side View Chip LEDs	16115	0.55									SML-A12Y8T								
										SML-A12WT*									

### Green (M, P)

(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	
Side View Chip LEDs	16115	0.55								SML-A12MT*									
										SML-A12M8T									
										SML-A12P8T									

### Blue (B)

(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	
			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	
Side View Chip LEDs	16115	0.55								SMLA12BC7T**2				SMLA13BDT				

### White (WB)

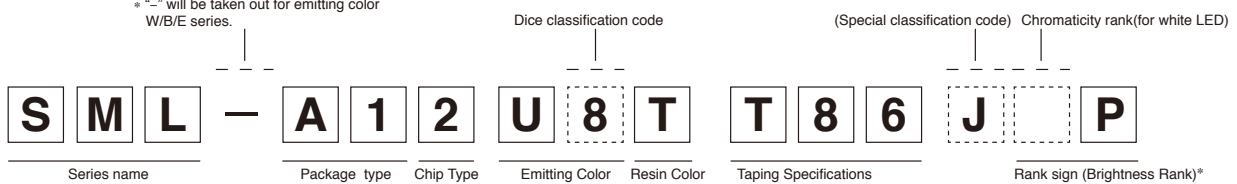
(Ta=25°C, If=20mA)

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
Side View Chip LEDs	16115	0.55													
			SMLA12WBC7W**2			SMLA13WBDW**1									

\*\*Brightness on specification sheet include tolerance of within ± 10%.  
 ※1: If=10mA ※2: If=5mA

## Part No. Construction

\* "-" will be taken out for emitting color W/B/E series.



2	High Brightness Type
3	Ultra High Brightness Type

V	Red:630nm
U	Red:620(624)nm
D	Orange:605(606)nm
Y	Yellow:587(590)nm
W	Yellow:590nm
M	Yellowish-Green:572nm
P	Green:560nm
B	Blue:470nm
WB	White

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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