

# SML-A1 Series

## EXCELED™

1611 (0605)  
1.6 × 1.15mm (t=0.55mm)

### Features

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

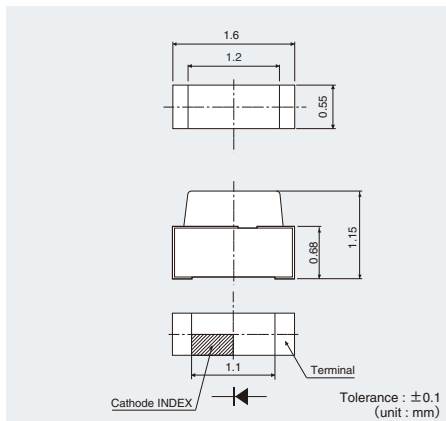


### Specifications

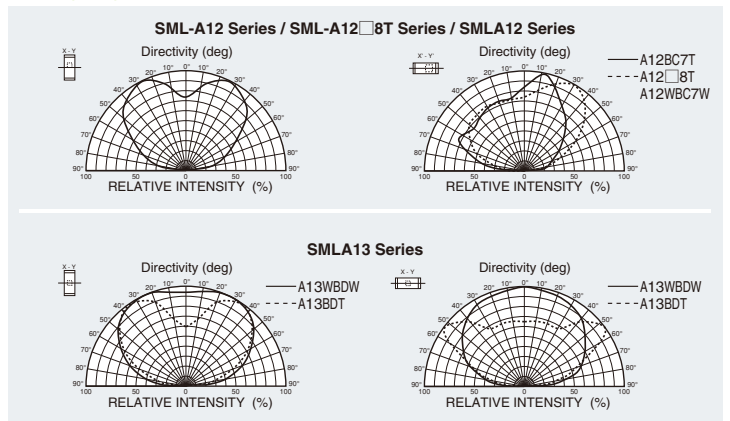
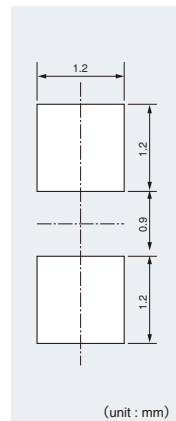
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)											
			Power Dissipation Pd (mW)	Forward Current If (mA)	Peak Forward Current Ifp (mA)	Reverse Voltage Vr (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage V <sub>F</sub> (V)	Forward Current If (mA)	Reverse Current Ir (μA)	Reverse Voltage Vr (V)	Dominant Wavelength λ <sub>D</sub> (nm)			Luminous Intensity Iv (mcd)			
■ SML-A12V8T	AlGaInP on GaAs	Red	54	20				2.2				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			-40 to +85	-40 to +100	2.2		10	5	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					2.2				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	Green	54	20			-40 to +85	-40 to +100	2.2		10		557	560	563	2.5	6.3		
■ SMLA12BC7T													465	470	475	5	5.6	16	5
■ SMLA13BDT													464	476	20	56	140	20	
□ SMLA12WBC7W	InGaN	White	66	20	100 <sup>*1</sup>	5	-30 to +85	-40 to +100	2.9	5	100	5	(x, y) (0.30,0.30)			5	22	56	5
□ SMLA13WBDW													3.1	10	10	90	180	10	

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

### Dimensions



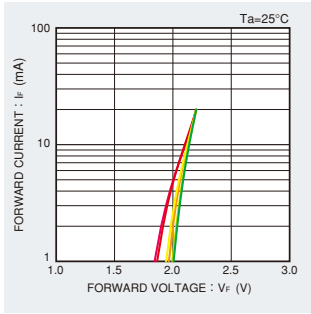
### Recommended Solder Pattern Viewing Angle



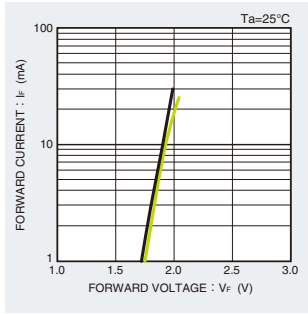
\* EXCELED™ is ROHM's pending trademark.

Electrical Characteristics Curves

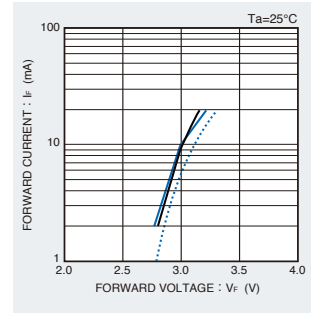
Forward Current-Forward Voltage



- SML-A12V8T
- SML-A12U8T
- SML-A12D8T
- SML-A12Y8T
- SML-A12M8T
- SML-A12P8T

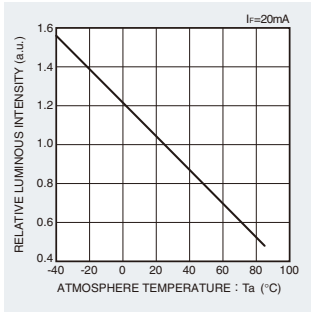


- SML-A12UT(J)
- SML-A12DT(J)
- SML-A12WT(J)
- SML-A12MT(J)

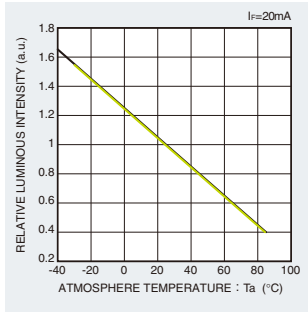


- SMLA12BC7T
- SMLA12WBC7W
- SMLA13BDT
- SMLA13WBDW

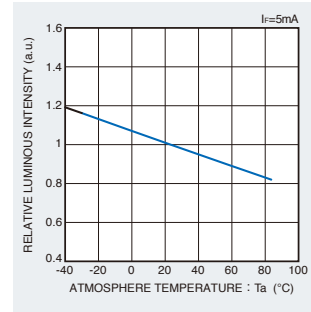
Luminous Intensity-Atmosphere Temperature



- SML-A12V8T
- SML-A12U8T
- SML-A12D8T
- SML-A12Y8T
- SML-A12M8T
- SML-A12P8T

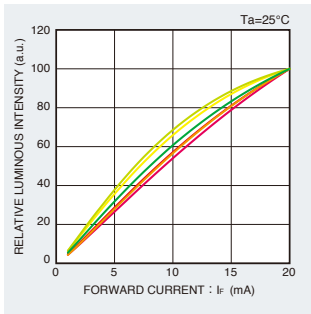


- SML-A12UT(J)
- SML-A12DT(J)
- SML-A12WT(J)
- SML-A12MT(J)

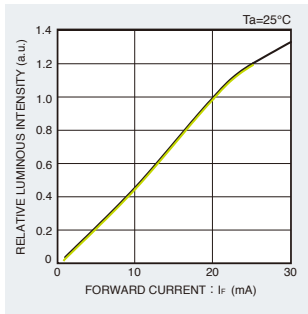


- SMLA13BDT
- SMLA12BC7T
- SMLA12WBC7W
- SMLA13WBDW

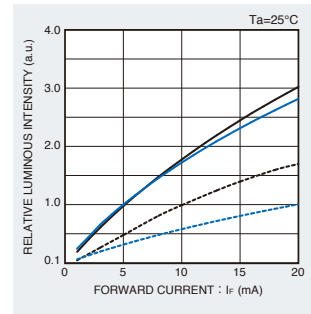
Luminous Intensity-Forward Current



- SML-A12V8T
- SML-A12U8T
- SML-A12D8T
- SML-A12Y8T
- SML-A12M8T
- SML-A12P8T

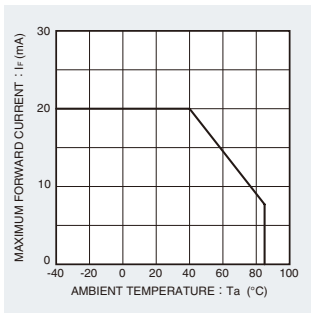


- SML-A12UT(J)
- SML-A12DT(J)
- SML-A12WT(J)
- SML-A12MT(J)

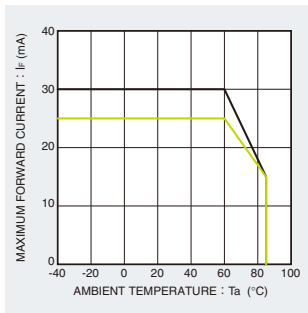


- SMLA12WBC7W
- SMLA12BC7T
- SMLA12WBC7W
- SMLA13WBDW
- SMLA13BDT

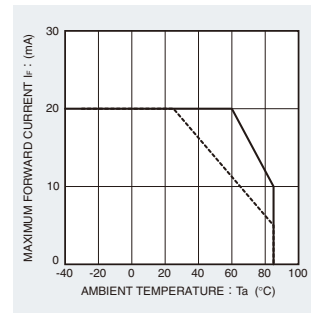
Derating



- SML-A12V8T
- SML-A12U8T
- SML-A12D8T
- SML-A12Y8T
- SML-A12M8T
- SML-A12P8T



- SML-A12UT(J)
- SML-A12DT(J)
- SML-A12WT(J)
- SML-A12MT(J)



- SMLA12BC7T
- SMLA13BDT
- SMLA12WBC7W
- SMLA13WBDW

# 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)

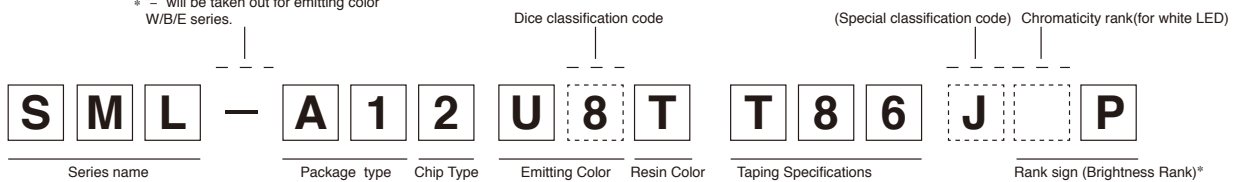
(Ta=25°C, If=20mA)

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	V	Red:630nm	T	Transparent Colorless	T86	Cathode at sprocket hole side
3	Ultra High Brightness Type	U	Red:620(624)nm	W	MilkyWhite	T87	Reverse of T86
		D	Orange:605(606)nm			1	For white LED, cathode at sprocket hole side
		Y	Yellow:587(590)nm				
		W	Yellow:590nm				
		M	Yellowish-Green:572nm				
		P	Green:560nm				
		B	Blue:470nm				
		WB	White				

- \* 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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