



# SML-R1 Series

## PICOLED™-side

16115(0604)  
1.6 × 1.15mm (t=0.2mm)

### Features

- Ultra compact, thin side-view type LED
- Ultra low height package t=0.2mm

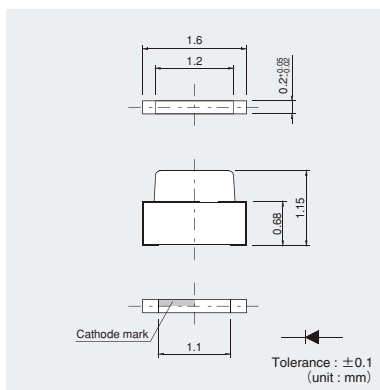


### Specifications

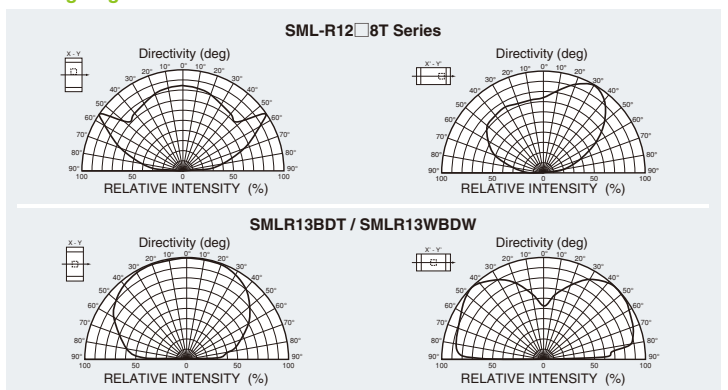
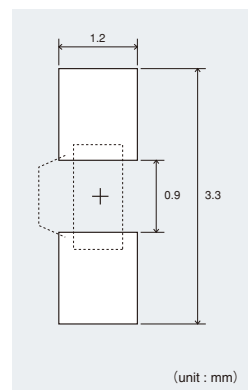
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)											
			Power Dissipation Pd (mW)	Forward Current IF (mA)	Peak Forward Current I <sub>FP</sub> (mA)	Reverse Voltage VR (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage VF		Reverse Current IR		Dominant Wavelength λ D			Luminous Intensity Iv			
							Typ. (V)	IF (mA)	Max. (μA)	VR (V)	Min.*2 (nm)	Typ. (nm)	Max.*2 (nm)	IF (mA)	Min. (mcd)	Typ. (mcd)	IF (mA)		
■ SML-R12V8T	AlGaInP on GaAs	Red	54	20	100*1	5	-40 to +85	-40 to +100	2.2	20	10	5	625	630	635	20	16	40	20
■ SML-R12U8T													615	620	625		25	63	
■ SML-R12D8T		602											605	608	40		100		
■ SML-R12Y8T		587											590	593	25		63		
■ SML-R12M8T		569											572	575	10		25		
■ SML-R12P8T		Green									557	560	563		2.5	6.3			
■ SMLR13BDT	InGaN on SiC	Blue	66						3.0	5					14	36			
□ SMLR13WBDW		White	78											(x, y) (0.30, 0.30)	5	56	110		5

\* 1:Duty1/10, 1kHz / \* 2:Reference

### Dimensions



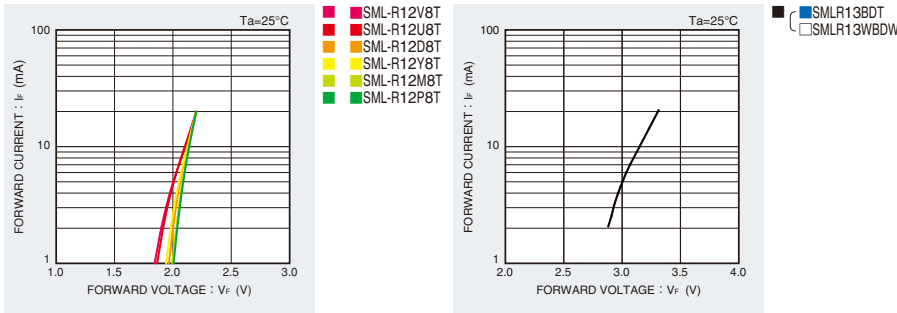
### Recommended Solder Pattern Viewing Angle



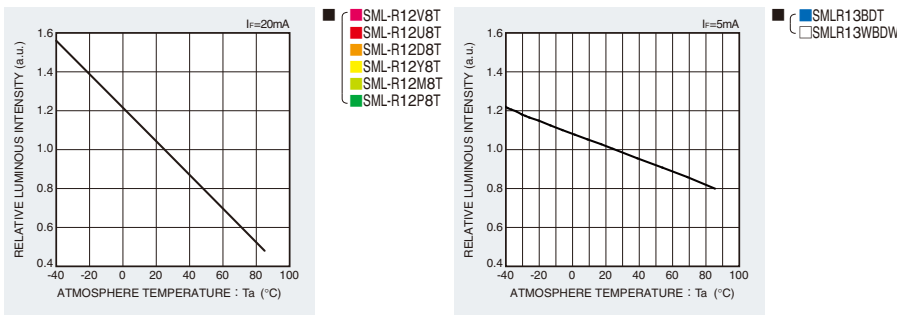
\* PICOLED™ is ROHM's pending trademark.

## Electrical Characteristics Curves

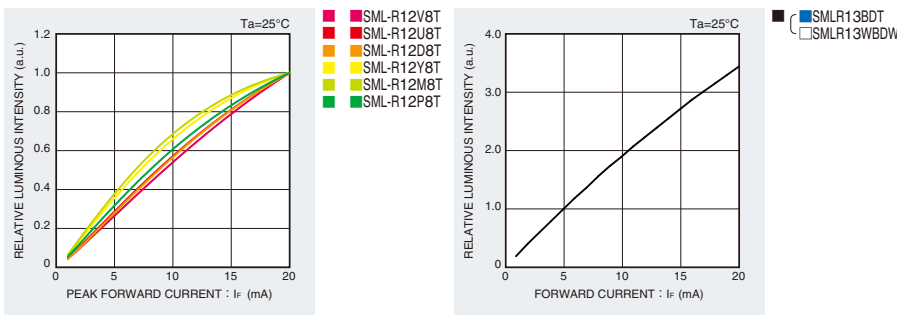
### Forward Current-Forward Voltage



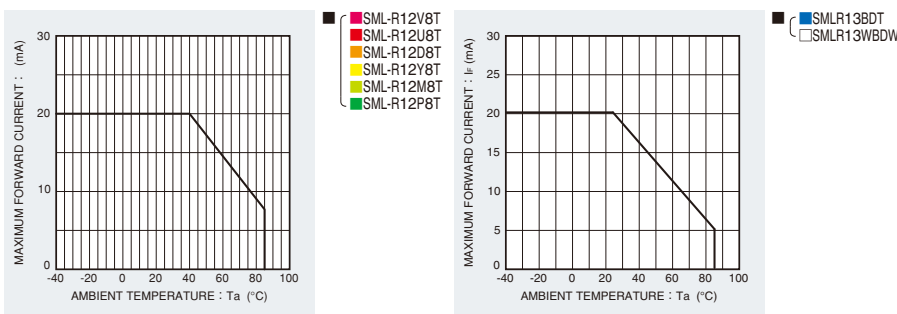
### Luminous Intensity-Atmosphere Temperature



### Luminous Intensity-Forward Current



### Derating



# SML-R1 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	0.2								SML-R12V8T										
									SML-R12U8T										

### 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	0.2									SML-R12D8T								

### 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	0.2								SML-R12Y8T								

### Green (M, P)

(Ta=25°C, If=20mA)

Package size(mm) Height(mm)	Luminous Intensity (mcd)	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
		0.63 to 1.0	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	0.2									SML-R12M8T								
								SML-R12P8T										

### Blue (B)

(Ta=25°C, If=5mA)

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	0.2								SMLR13BDT								

### White (WB)

(Ta=25°C, If=5mA)

Package size (mm) Height(mm)	Luminous Intensity (mcd)	P	Q	R	S	T	U	V	W
		25 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 1810	0.35			SMLR13WBDW					

## Part No. Construction

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

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

Chromaticity rank(for white LED)



2	High Brightness Type
3	Ultra High Brightness Type

V	Red:630nm
U	Red:620nm
D	Orange:605nm
Y	Yellow:587(590)nm
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) included 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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