

# SML-D1 Series

## EXCELED™

1608(0603)  
1.6 × 0.8mm (t=0.55mm)

### Features

- Original device technology enables high brightness and high reliability.

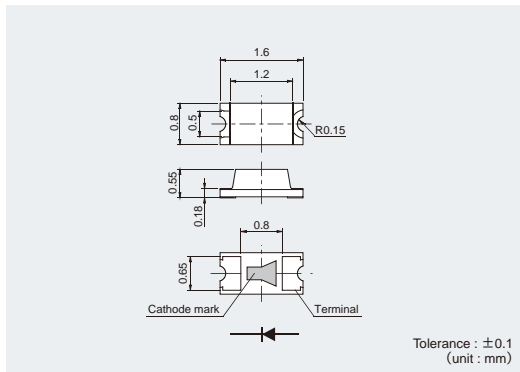


### Specifications

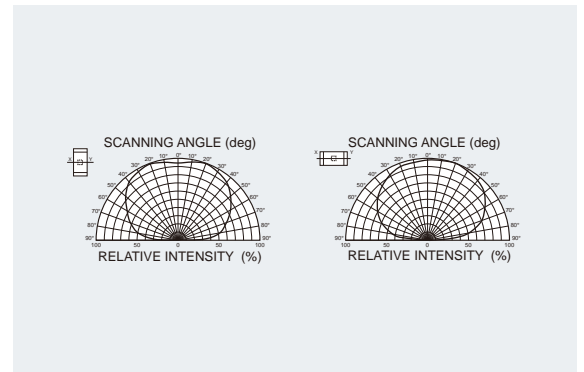
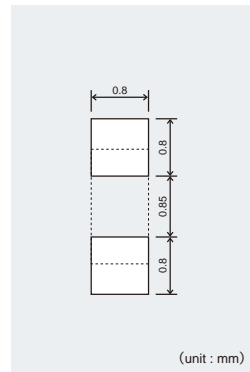
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)										
			Power Dissipation PD (mW)	Forward Current IF (mA)	Peak Forward Current I <sub>FP</sub> (mA)	Reverse Voltage VR (V)	Operating Temperature Topr (°C)	Storage Temperature Tstg (°C)	Forward Voltage VF Typ. (V)	IF (mA)	Reverse Current IR Max. (μA)	VR (V)	Dominant Wavelength λD (nm)			Luminous Intensity Iv (mcd)		
■ SML-D12V8W	AlGaInP on GaAs	Red	54	20	100*1	5	-40 to +85	-40 to +100	2.2	20	10	625	630	635	20	16	40	20
■ SML-D12U8W		Red										615	620	625		25	63	
■ SML-D12D8W		Orange										602	605	608		40	100	
■ SML-D12Y8W		Yellow										587	590	593		25	63	
■ SML-D12M8W		Yellowish Green										569	572	575		10	25	
■ SML-D12P8W		Green										557	560	563		2.5	6.3	
■ SML-D13L8W		Red	50	52	100*1	5	-40 to +85	-40 to +100	2.0	20	10	630	635	640	20	16	22	20
☆ ■ SML-D13V8W		Red	625									630	635	25		48		
■ SML-D13U8W		Red	615									620	625	40		70		
☆ ■ SML-D13D8W		Orange	54	20	100*1	5	-40 to +85	-40 to +100	2.1	20	10	602	605	608	20	63	110	20
■ SML-D13Y8W		Yellow										587	590	593		63	100	
■ SML-D13M8W		Yellowish Green										568	572	574		16	40	
☆ ■ SML-D13P8W	Green	557	560	563	4	7.2												

\* 1: Duty 1/10, 1kHz / \* 2: Reference  
☆: Under development

### Dimensions



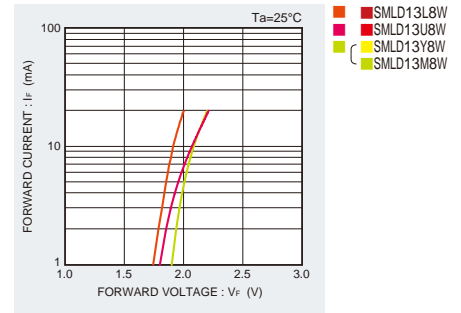
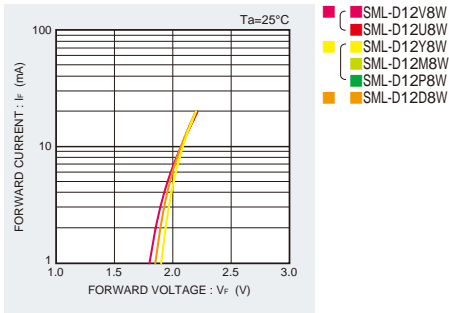
### Recommended Solder Pattern Viewing Angle



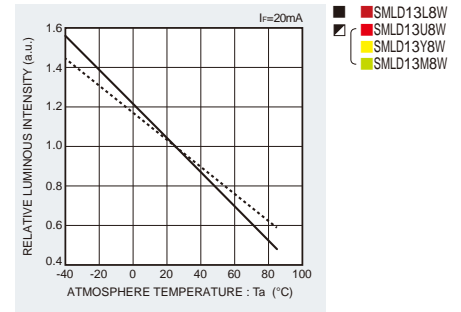
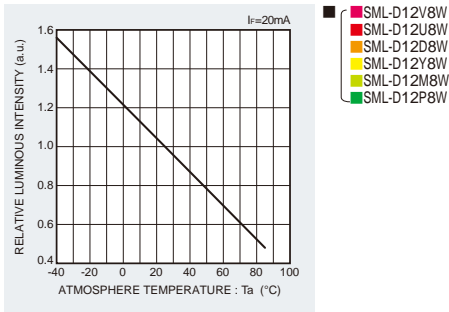
EXCELED™ is ROHME's pending trademark.

## Electrical Characteristics Curves

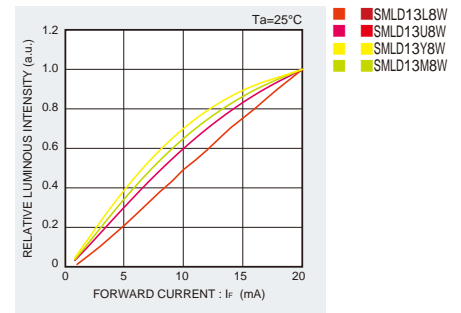
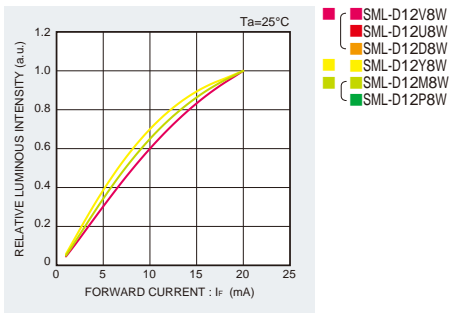
### Forward Current-Forward Voltage



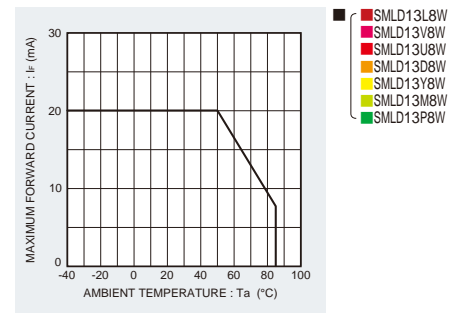
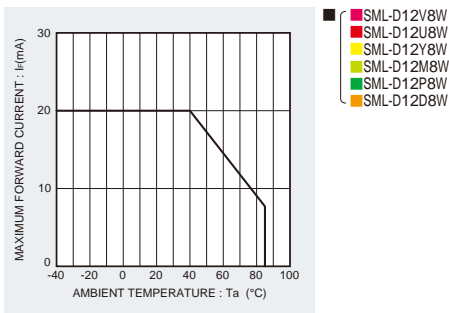
### Luminous Intensity-Atmosphere Temperature



### Luminous Intensity-Forward Current



### Derating



# SML-D1 Series

## Rank Reference of Brightness

### Red (L, V, U)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	H	J	K	L	M	N	P	Q	R	S	T	U
			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
Mini-mold Chip LEDs	1608	0.55	SML-D13L8W											
			SML-D13V8W											
			SML-D13U8W											
			SML-D12V8W											
			SML-D12U8W											

### Orange (D)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	H	J	K	L	M	N	P	Q	R	S	T	U
			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
Mini-mold Chip LEDs	1608	0.55	SML-D13D8W											
			SML-D12D8W											

### Yellow (Y)

(Ta=25°C, If=20mA)

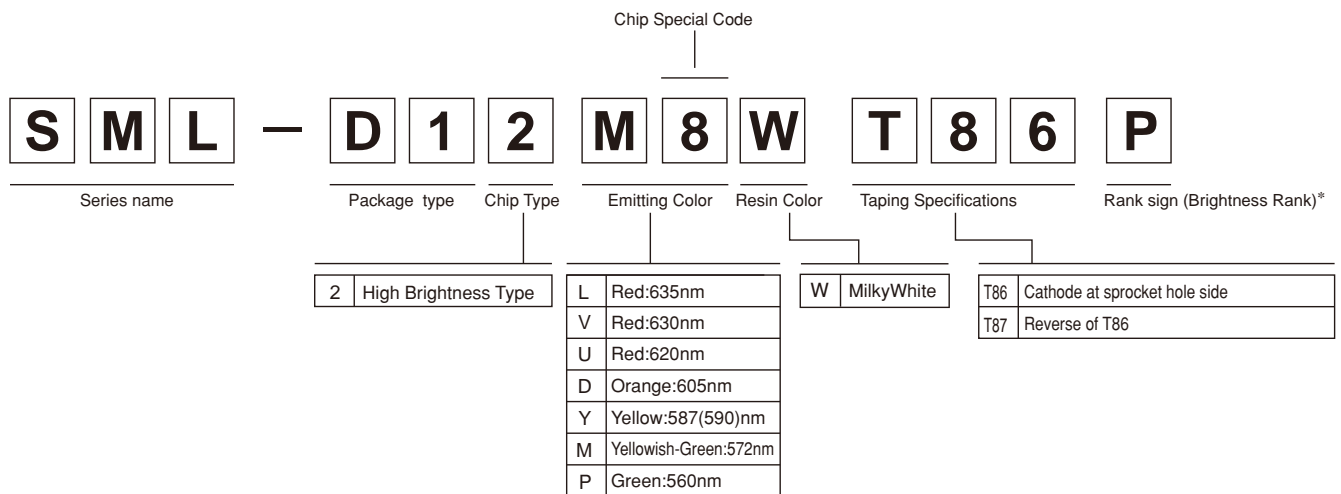
Package size(mm)	Height(mm)	Luminous Intensity (mcd)	H	J	K	L	M	N	P	Q	R	S	T	U
			1.6 to 2.5	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400
Mini-mold Chip LEDs	1608	0.55	SML-D13Y8W											
			SML-D12Y8W											

### Green (M, P)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity (mcd)	H	J	K	L	M	N	P	Q	R	S	T	U
			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
Mini-mold Chip LEDs	1608	0.55	SML-D13P8W											
			SML-D13M8W											
			SML-D12P8W											
			SML-D12M8W											

## 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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