



SML-M1 Series

20125 (0805)
2.0 × 1.25mm (t=0.8mm)

Features

- Compact LED with reflector
- Die is located at the center of the package, achieving equivalent distribution of light emission.
- New emitting color, including the pastel colors available upon request.

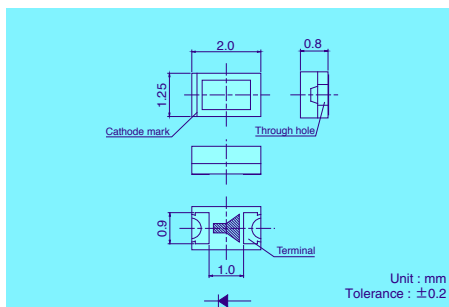
HB GB CB AB SB White

Specifications

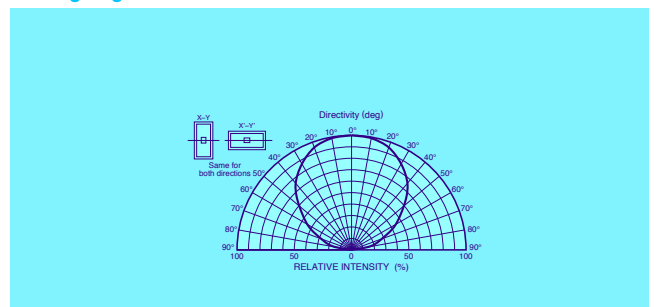
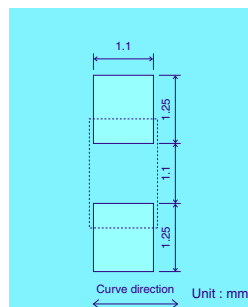
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)															
			Power Dissipation PD (mW)	Forward Current IF (mA)	Peak Forward Current IFP (mA)	Reverse Voltage VR (V)	Operating Temperature Topr (°C)	Storage Temperature Tsig (°C)	Forward Typ. Voltage VF (V)	Forward Current IF (mA)	Reverse Current IR (μA)	Reverse Voltage VR (V)	Dominant Wavelength λD (nm)			Luminous Intensity I _v (mcd)							
SML-M13VT	AlGaInP on GaAs	Red	63	25	100*1	5	-40 to +85	-40 to +100	2.0	20*1	10	5	625	630	635	20	100	200	20				
SML-M13UT													615	620	625					63	120		
SML-M13DT		Orange											602	605	608					20	100	200	20
SML-M13YT		Yellow											587	590	593					20	100	160	20
SML-M13MT		Yellowish Green	68	30					2.2			5	569	572	575		6.3	16					
SML-M13PT		Green											557	560	563					6.3	16		
SMLM12BC7T	InGaN	Blue	66	20			-30 to +85		2.9	5*1	100		465	470	475	5	-	36	5				
SMLM12WBC7W		White											(x, y) (0.30, 0.30)	56	100					5			

*1: Duty 1/10 1KHz *2: Reference

Dimensions

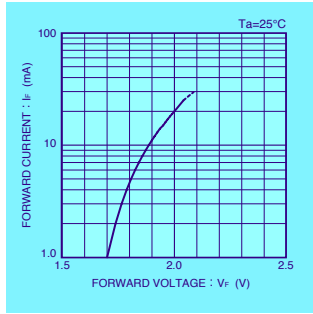


Recommended Solder Pattern Viewing Angle

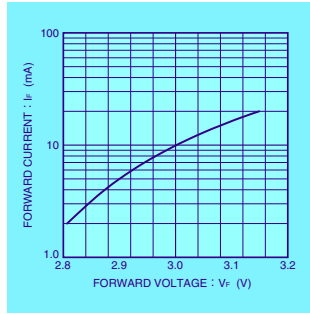


Electrical Characteristics Curves

Forward Current-Forward Voltage

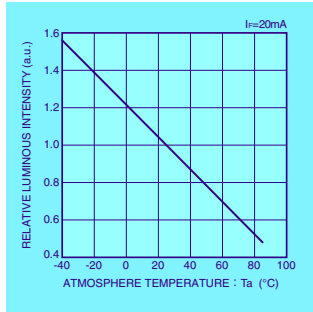


- SML-M13VT
- SML-M13UT
- SML-M13DT
- SML-M13YT
- SML-M13MT
- SML-M13PT

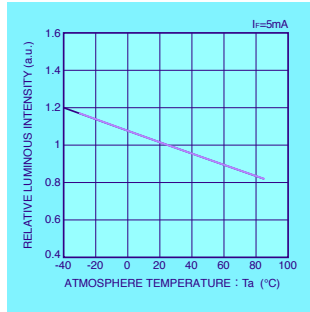


- SML-M12BC7T
- SML-M12WBC7W

Luminous Intensity-Atmosphere Temperature

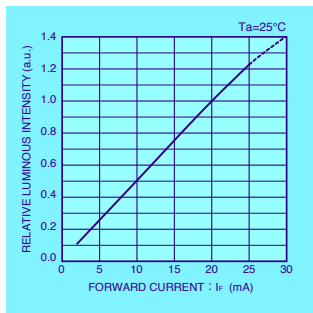


- SML-M13VT
- SML-M13UT
- SML-M13DT
- SML-M13YT
- SML-M13MT
- SML-M13PT

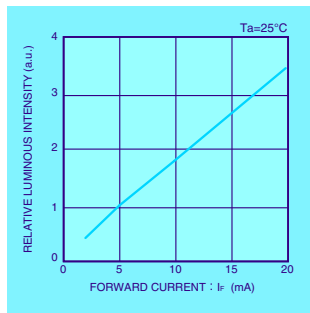


- SML-M12BC7T
- SML-M12WBC7W

Luminous Intensity-Forward Current

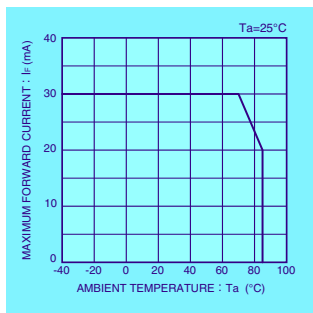


- SML-M13VT
- SML-M13UT
- SML-M13DT
- SML-M13YT
- SML-M13MT
- SML-M13PT

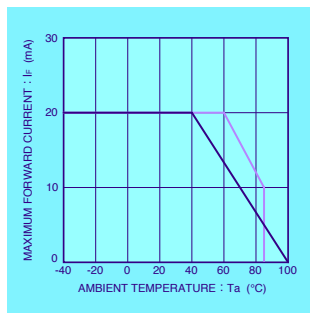


- SML-M12BC7T
- SML-M12WBC7W

Derating



- SML-M13VT
- SML-M13UT
- SML-M13DT
- SML-M13YT
- SML-M13MT
- SML-M13PT



- SML-M12BC7T
- SML-M12WBC7W

SML-M1 Series

Rank Reference of Brightness

Red (V, U)

(Ta=25°C, If=20mA)

Package size(mm) Height(mm)	Luminous Intensity (mcd)	K	L	M	N	P	Q	R	S	T	U	V	W	X
		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
Small LEDs with reflector 20125 0.8							SML-M13VT							
							SML-M13UT							

Orange (D)

(Ta=25°C, If=20mA)

Package size(mm) Height(mm)	Luminous Intensity (mcd)	K	L	M	N	P	Q	R	S	T	U	V	W	X	
		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	
Small LEDs with reflector 20125 0.8									SML-M13DT						

Yellow (Y)

(Ta=25°C, If=20mA)

Package size(mm) Height(mm)	Luminous Intensity (mcd)	K	L	M	N	P	Q	R	S	T	U	V	W	X	
		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	
Small LEDs with reflector 20125 0.8									SML-M13YT						

Green (M, P)

(Ta=25°C, If=20mA)

Package size(mm) Height(mm)	Luminous Intensity (mcd)	K	L	M	N	P	Q	R	S	T	U	V	W	X
		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
Small LEDs with reflector 20125 0.8				SML-M13PT		SML-M13MT								

Blue (B)

(Ta=25°C, If=5mA)

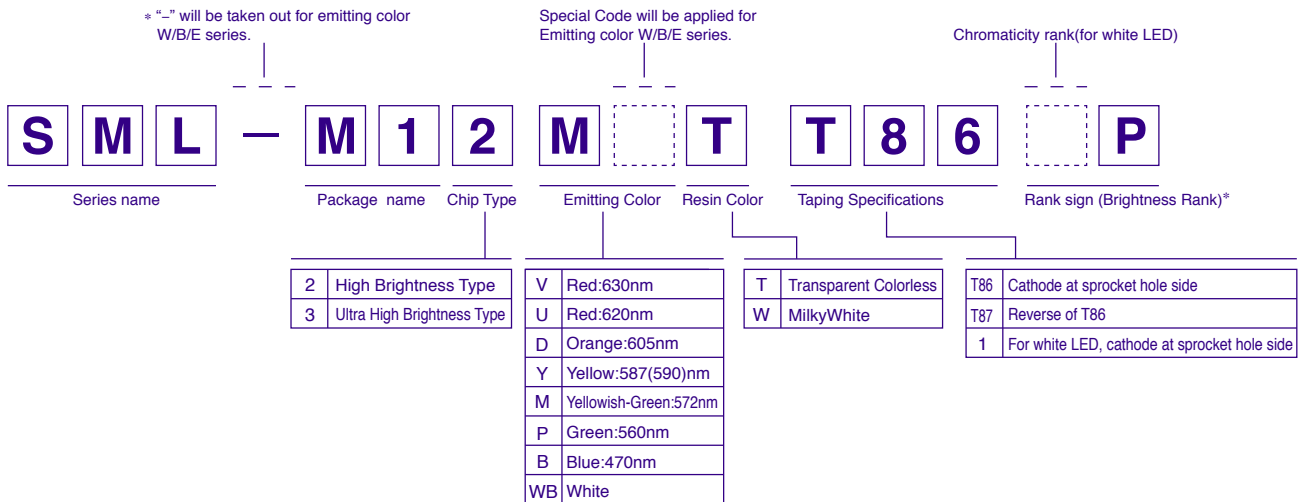
Package size(mm) Height(mm)	Luminous Intensity (mcd)	K	L	M	N	P	Q	R	S	T	U	V	W
		3.6 to 5.6	5.6 to 9.0	9 to 14	14 to 22	22 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900
Small LEDs with reflector 20125 0.8					SMLM12BC7T								

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	
Small LEDs with reflector 20125 0.8		SMLM12WBC7W								

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.

Notes

No copying or reproduction of this document, in part or in whole, is permitted without the consent of ROHM Co.,Ltd.

The content specified herein is subject to change for improvement without notice.

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request.

Examples of application circuits, circuit constants and any other information contained herein illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.

Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of the information, ROHM shall bear no responsibility for such damage.

The technical information specified herein is intended only to show the typical form of examples of application circuits for the Products. ROHM does not grant, explicitly or implicitly, any license to use or exercise intellectual property or other rights of third parties. ROHM shall bear no responsibility whatsoever for any damage arising from the use of such technical information.

The Products specified in this document are intended to be used in equipment or devices (such as audio visual equipment, office equipment, communication devices, electronic appliances and amusement equipment).

The Products specified in this document are not designed for use in medical equipment.

While ROHM always makes efforts to enhance the reliability of its Products, a Product may fail or malfunction for a variety of reasons.

Please be sure to implement in your design appropriate measures to protect against the possibility of physical damage to the Products. In the event of failure of any Product, such as physical damage, ROHM shall bear no responsibility for any damage, whether or not in accordance with the scope or not in accordance with the scope of the warranty.

The Products are not intended for use in systems which require high reliability.