

# SML-P11 Series

## PICOLED™-eco

1006(0402)  
1.0×0.6mm(t=0.2mm)

### Features

- Ultra compact, thin size 1.0×0.6mm, t=0.2mm
- Accomplishes low power consuming application specification assured at  $I_F=1\text{mA}$

Color Type  
V U D Y  
M

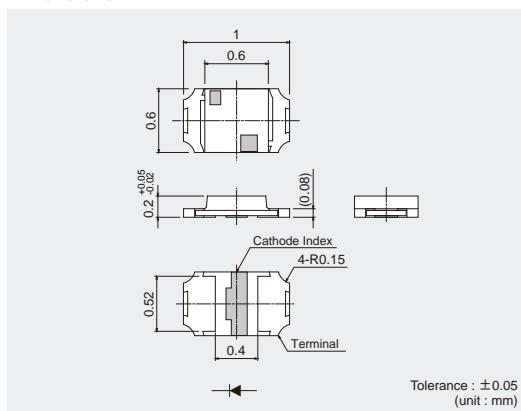
### Specifications

#### PICOLED™-eco

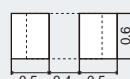
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation $P_D$ (mW)	Forward Current $I_F$ (mA)	Peak Forward Current $I_{FP}$ (mA)	Reverse Voltage $V_R$ (V)	Operating Temperature $T_{Op}$ (°C)	Storage Temperature $T_{Stg}$ (°C)	Forward Voltage $V_F$ Typ.(V)	Reverse Current $I_R$ Max. ( $\mu\text{A}$ )	Reverse Voltage $V_R$ (V)	Dominant Wavelength $\lambda_D$ Min. <sup>*2</sup> (nm)	Dominant Wavelength $\lambda_D$ Typ. <sup>*2</sup> (nm)	Dominant Wavelength $\lambda_D$ Max. <sup>*2</sup> (nm)	Luminous Intensity $I_V$ Min. (mcd)	Luminous Intensity $I_V$ Typ. (mcd)	Luminous Intensity $I_V$ Max. (mcd)	
■ SML-P11VT(R)	AlGaNP on GaAs	Red	50						1.8			621	626	631	1.6	4.0		
■ SML-P11UT(R)		Red										616	621	626	2.5	6.3		
■ SML-P11DT(R)		Orange		20	100 <sup>*1</sup>	5	-40 to +85	-40 to +100		1	10	4	602	605	608	1	7.3	1
■ SML-P11YT(R)		Yellow										583	586	589	4.0	7.6		
■ SML-P11MT(R)		Yellowish Green		52								566	569	572	1.0	2.1		

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

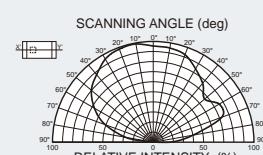
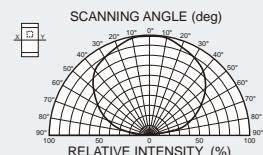
#### Dimensions



#### Recommended Solder Pattern



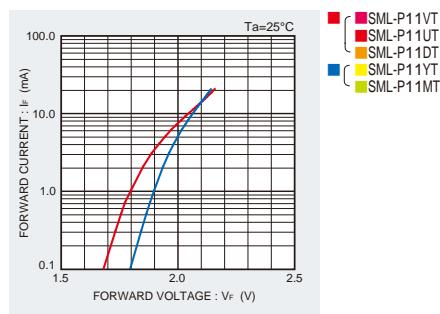
#### Viewing Angle



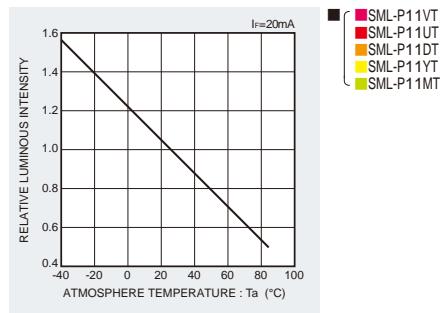
\* PICOLED™ is ROHM's pending trademark.

## Electrical Characteristics Curves

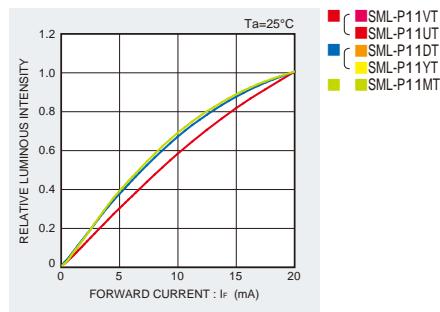
### Forward Current-Forward Voltage



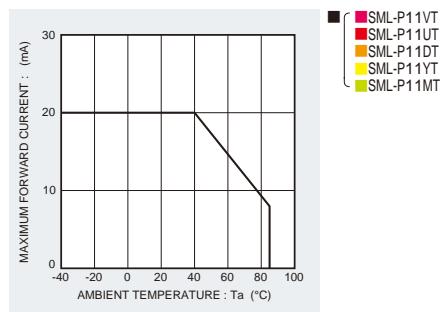
### Luminous Intensity-Atmosphere Temperature



### Luminous Intensity-Forward Current



### Derating



## Rank Reference of Brightness

### ■ Red (V, U)

		(Ta=25°C, If=1mA)														
	Package size(mm) Height(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Mini-mold Chip LEDs	1006 0.2	0.063 to 0.1	0.1 to 0.16	0.16 to 0.25	0.25 to 0.4	0.4 to 0.63	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	

### ■ Orange (D)

		(Ta=25°C, If=1mA)														
	Package size(mm) Height(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Mini-mold Chip LEDs	1006 0.2	0.063 to 0.1	0.1 to 0.16	0.16 to 0.25	0.25 to 0.4	0.4 to 0.63	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	

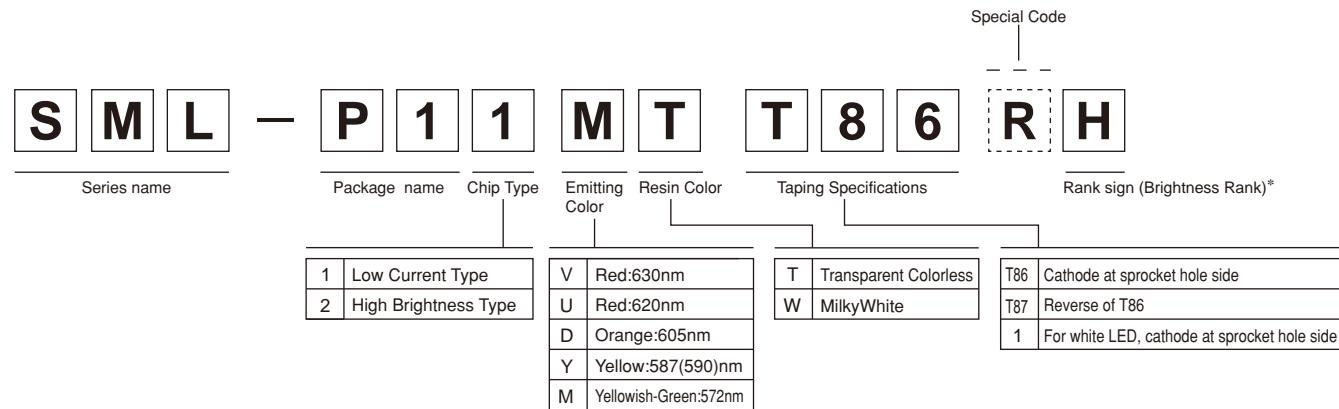
### ■ Yellow (Y)

		(Ta=25°C, If=1mA)														
	Package size(mm) Height(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Mini-mold Chip LEDs	1006 0.2	0.063 to 0.1	0.1 to 0.16	0.16 to 0.25	0.25 to 0.4	0.4 to 0.63	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	

### ■ Green (M)

		(Ta=25°C, If=1mA)														
	Package size(mm) Height(mm)	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Mini-mold Chip LEDs	1006 0.2	0.063 to 0.1	0.1 to 0.16	0.16 to 0.25	0.25 to 0.4	0.4 to 0.63	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	

## 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

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors. Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
- 5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.
- 6) The Products are intended for use in general electronic equipment (i.e. AV/OA devices, communication, consumer systems, gaming/entertainment sets) as well as the applications indicated in this document.
- 7) The Products specified in this document are not designed to be radiation tolerant.
- 8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.
- 9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.
- 10) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.
- 11) ROHM has used reasonable care to ensure the accuracy of the information contained in this document. However, ROHM does not warrant that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.
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