

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.

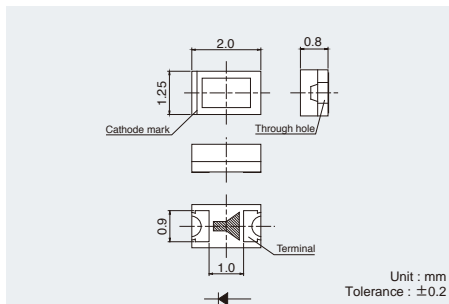


Specifications

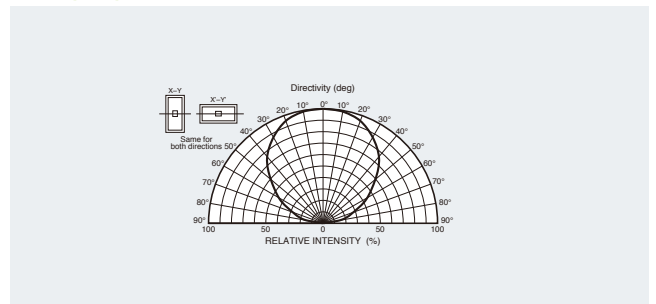
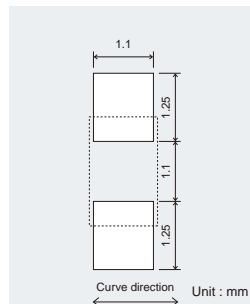
| Part No. | Chip Structure | Emitting Color | Absolute Maximum Ratings (Ta=25°C) | | | | | Electrical and Optical Characteristics (Ta=25°C) | | | | | | | | | | | | | | | | | | | | | |
|---------------|----------------|-----------------|------------------------------------|-------------------------|-------------------------------|------------------------|---------------------------------|--|-----------------------------|-------------------------|------------------------------|------------------------|------------------------------|-----|----|-----------------------------|----|----|--|--|--|--|--|--|--|--|--|--|--|
| | | | 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 Vf Typ. (V) | Forward Current If (mA) | Reverse Current Ir Max. (μA) | Reverse Voltage Vr (V) | Dominant Wavelength λ D (nm) | | | Luminous Intensity Iv (mcd) | | | | | | | | | | | | | |
| ■ SML-M13VT | AlGaInP | Red | 75 | 30 | | | | 2.0 | 20 | | | 625 | 630 | 635 | 20 | 40 | 75 | 20 | | | | | | | | | | | |
| ■ SML-M13UT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SML-M13DT | | Orange | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SML-M13YT | | Yellow | | | | | -40 to +85 | | | | | | | | | | | | | | | | | | | | | | |
| ■ SML-M13MT | | Yellowish Green | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SML-M13PT | | Green | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SMLM12BC7T | InGaN | Blue | 66 | 20 | 100*1 | 5 | | 2.2 | 10 | 5 | | 557 | 560 | 563 | 5 | 6.3 | 16 | 5 | | | | | | | | | | | |
| □ SMLM12WBC7W | | White | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SMLM12ABC7W | | Blue lagoon | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SMLM12CBC7W | | Ice blue | | | | | -40 to +85 | | | | | | | | | | | | | | | | | | | | | | |
| ■ SMLM12GBC7W | | Blue green | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■ SMLM12SBC7W | | Sapphire blue | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*1: Duty1/10 1KHz *2: Reference

Dimensions

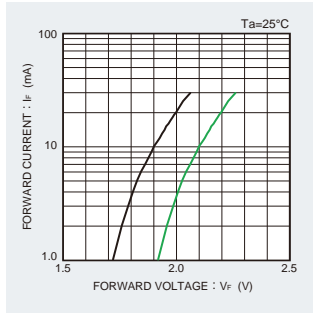


Recommended Solder Pattern Viewing Angle

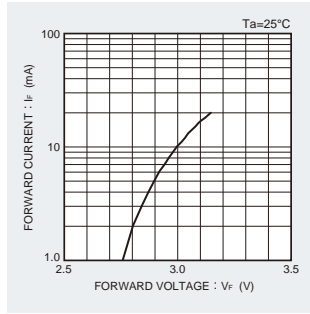


Electrical Characteristics Curves

Forward Current-Forward Voltage

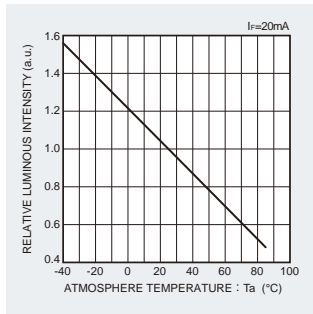


- SML-M13VT
- SML-M13UT
- SML-M13DT
- SML-M13YT
- SML-M13MT
- SML-M13PT

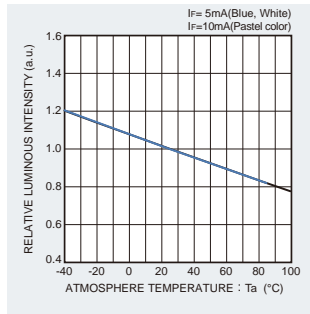


- SMLM12BC7T
- SMLM12VBC7W
- SMLM12ABC7W
- SMLM12C8C7W
- SMLM12BC7W
- SMLM12GBC7W
- SMLM12SBC7W

Luminous Intensity-Atmosphere Temperature

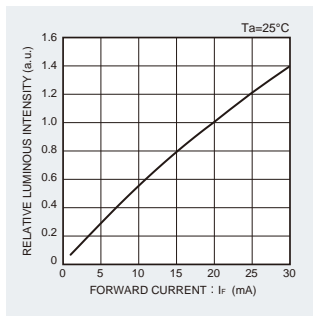


- SML-M13VT
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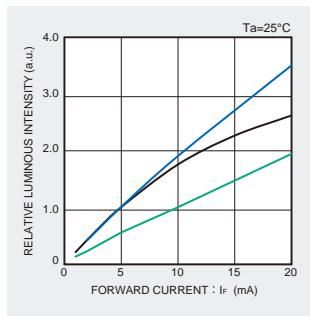


- SMLM12BC7T
- SMLM12VBC7W
- SMLM12ABC7W
- SMLM12C8C7W
- SMLM12BC7W
- SMLM12GBC7W
- SMLM12SBC7W

Luminous Intensity-Forward Current

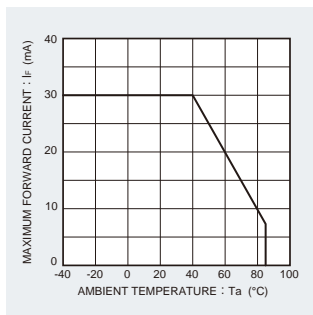


- SML-M13VT
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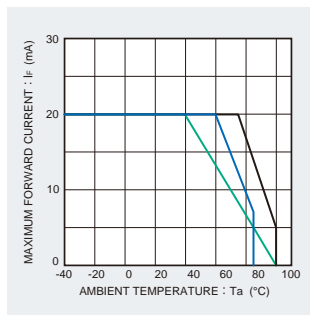


- SMLM12BC7T
- SMLM12VBC7W
- SMLM12ABC7W
- SMLM12C8C7W
- SMLM12BC7W
- SMLM12GBC7W
- SMLM12SBC7W

Derating



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



- SMLM12BC7T
- SMLM12VBC7W
- SMLM12ABC7W
- SMLM12C8C7W
- SMLM12BC7W
- SMLM12GBC7W
- SMLM12SBC7W

SML-M1 series

Rank Reference of Brightness

Red (V, U)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 |
| Reflector | 20125 | 0.8 | 20 | | | | | | | SML-M13VT | | | | | | |
| | | | | | | | | | | SML-M13UT | | | | | | |

Orange (D)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 |
| Reflector | 20125 | 0.8 | 20 | | | | | | | | | SML-M13DT | | | | |

Yellow (Y)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 |
| Reflector | 20125 | 0.8 | 20 | | | | | | | | SML-M13YT | | | | | |

Green (M, P)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 |
| Reflector | 20125 | 0.8 | 20 | | | SML-M13PT | | SML-M13MT | | | | | | | | |

Blue (B)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 |
| Reflector | 20125 | 0.8 | 5 | | | | SMLM12BC7T | | | | | | | | |

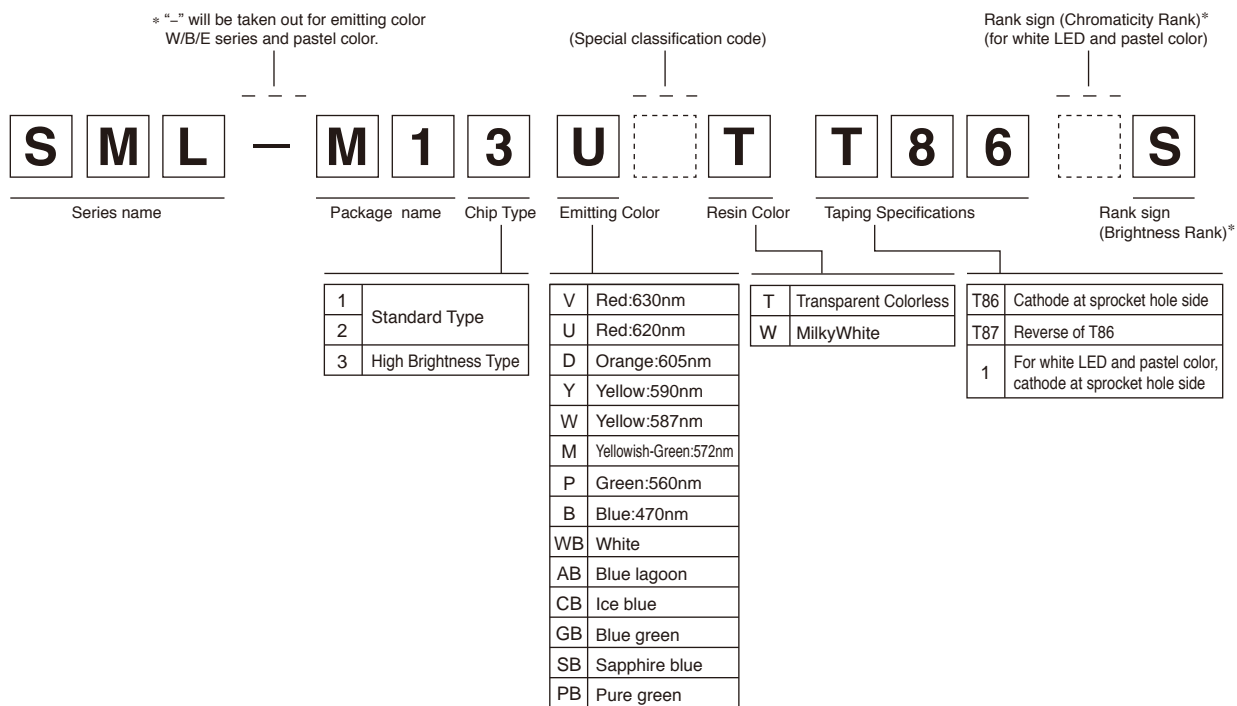
White (WB)

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | 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 | 25 to 36 | 36 to 56 | 56 to 90 | 90 to 140 | 140 to 220 | 220 to 360 | 360 to 560 | 560 to 900 |
| Reflector | 20125 | 0.8 | 5 | | | | | | | SMLM12WBC7W | | | | | |

Pastel Color

| Package structure | Package size | Height (mm) | Luminous Intensity I_f (mA) | Q1 | Q2 | R1 | R2 | S1 | S2 | T1 | T2 | U1 | U2 | V1 | V2 | W1 | W2 |
|-------------------|--------------|-------------|----------------------------------|----------|----------|-------------|----------|-----------|------------|-------------|------------|------------|------------|------------|------------|------------|----|
| | | | | 36 to 45 | 45 to 56 | 56 to 71 | 71 to 90 | 90 to 110 | 110 to 140 | 140 to 180 | 180 to 220 | 220 to 280 | 280 to 360 | 360 to 450 | 450 to 560 | 560 to 710 | |
| Reflector | 20125 | 0.8 | 10 | | | SMLM12ABC7W | | | | SMLM12CBC7W | | | | | | | |
| | | | | | | | | | | SMLM12GBC7W | | | | | | | |
| | | | | | | | | | | SMLM12SBC7W | | | | | | | |

Part No. Construction



- * Concerning the Brightness rank
- Please refer to the rank chart above for luminous intensity classification.
- Please refer to the Specification sheet for color 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.
- * Please refer to the Specification sheet about Taping specification.

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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