

# SML-02 Series

3025(1210)  
3.0×2.5mm(t=1.3mm)

### Features

- 2-color type with reflector (standard)

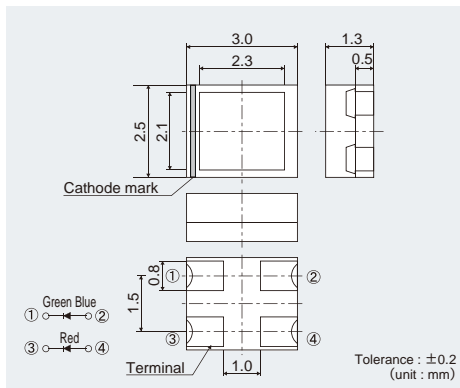


### Specifications

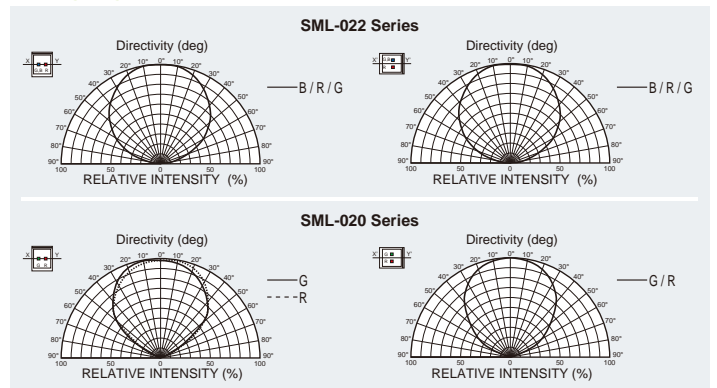
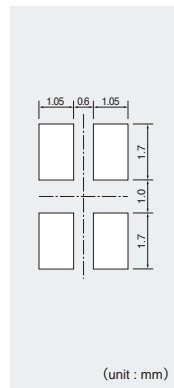
| Part No.        | Chip Structure  | Emitting Color | Absolute Maximum Ratings (Ta=25°C) |                        |   |                       |                                |                              | Electrical and Optical Characteristics (Ta=25°C) |        |                              |             |                         |             |        |                       |            |        |
|-----------------|-----------------|----------------|------------------------------------|------------------------|---|-----------------------|--------------------------------|------------------------------|--|--------|------------------------------|-------------|-------------------------|-------------|--------|-----------------------|------------|--------|
|                 |                 |                | 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 λ D |             |        | Luminous Intensity Iv |            |        |
|                 |                 |                |                                    |                        |   |                       |                                |                              |  |        |                              | Min.*3 (nm) | Typ. (nm)               | Max.*3 (nm) | IF(mA) | Min. (mcd)            | Typ. (mcd) | IF(mA) |
| ■ ■ SML022BUT   | InGaN           | Blue           | 120                                | 30                     | 80*2                                      | 5                     |                                | -40 to +100                  | 3.2  |        | 5                            | 464         | 470                     | 476         |        | 56                    | 140        |        |
|                 | AlGaInP on GaAs | Red            | 75                                 |                        |   |                       |                                |                              | 2  |        |                              | 619         | 624                     | 629         |        | 90                    | 220        |        |
| ■ ■ SML-020MVT  | GaAsP on GaAs   | Green          | 60                                 | 25                     | 60*1                                      |                       | -30 to +85                     | -40 to +85                   | 2.2  | 20     | 100                          | 20          | 569                     | 572         | 575    | 9                     | 20         | 20     |
|                 |                 | Red            |                                    |                        |   |                       |                                |                              | 2  |        |                              |             | 625                     | 630         | 635    | 3.6                   | 6.3        |        |
| ■ ■ SML-022ML8T | AlGaInP on GaAs | Green          | 52                                 | 20                     | 60*2                                      |                       |                                | -40 to +100                  | 2.1  |        |                              | 4           | 569                     | 572         | 575    | 16                    | 40         |        |
|                 |                 | Red            |                                    |                        |   |                       |                                |                              |  |        |                              |             |                         | 630         | 635    | 640                   | 10         |        |

\* 1:Duty1/5, 200Hz \* 2:Duty1/10, 1kHz \* 3:Reference

### Dimensions

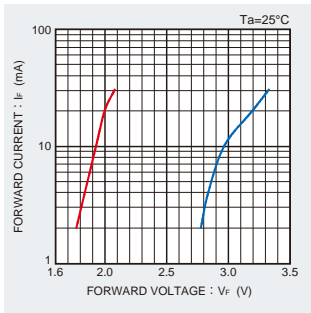


### Recommended Solder Pattern Viewing Angle

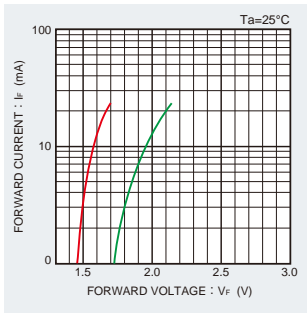


## Electrical Characteristics Curves

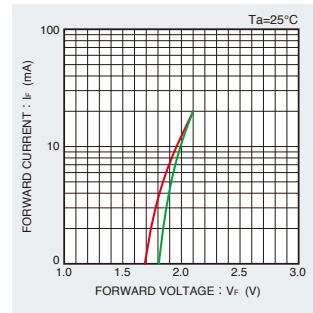
### Forward Current-Forward Voltage



■ SML022BUT(U)  
■ SML022BUT(B)

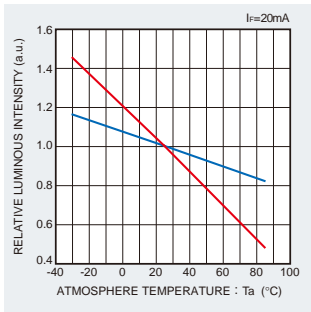


■ SML-020MVT(V)  
■ SML-020MVT(M)

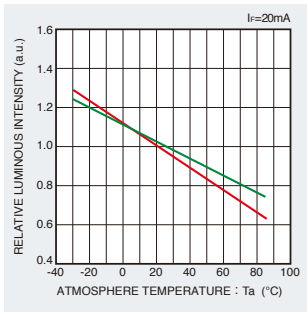


■ SML-022ML8T(L)  
■ SML-022ML8T(M)

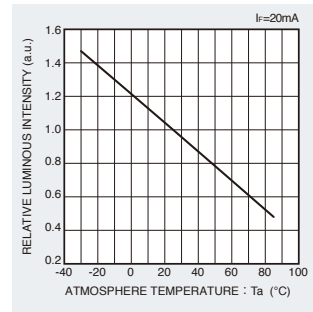
### Luminous Intensity-Atmosphere Temperature



■ SML022BUT(U)  
■ SML022BUT(B)

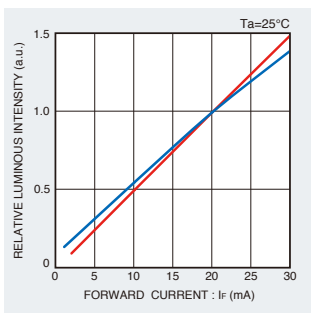


■ SML-020MVT(V)  
■ SML-020MVT(M)

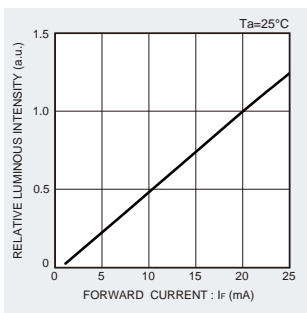


■ SML-022ML8T

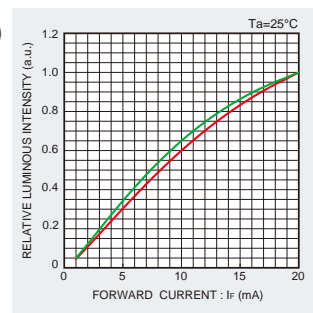
### Luminous Intensity-Forward Current



■ SML022BUT(U)  
■ SML022BUT(B)

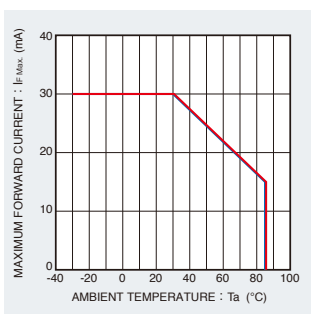


■ SML-020MVT(V)  
■ SML-020MVT(M)

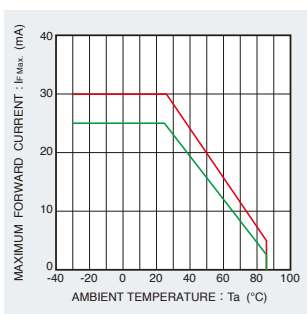


■ SML-022ML8T(L)  
■ SML-022ML8T(M)

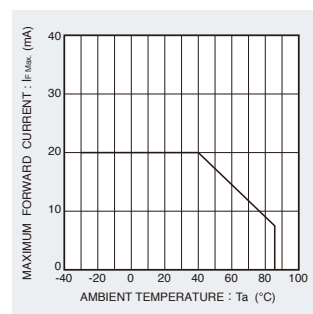
### Derating



■ SML022BUT(U)  
■ SML022BUT(B)



■ SML-020MVT(V)  
■ SML-020MVT(M)



■ SML-022ML8T

## Rank Reference of Brightness

### Dual Color

(Ta=25°C, If=20mA)

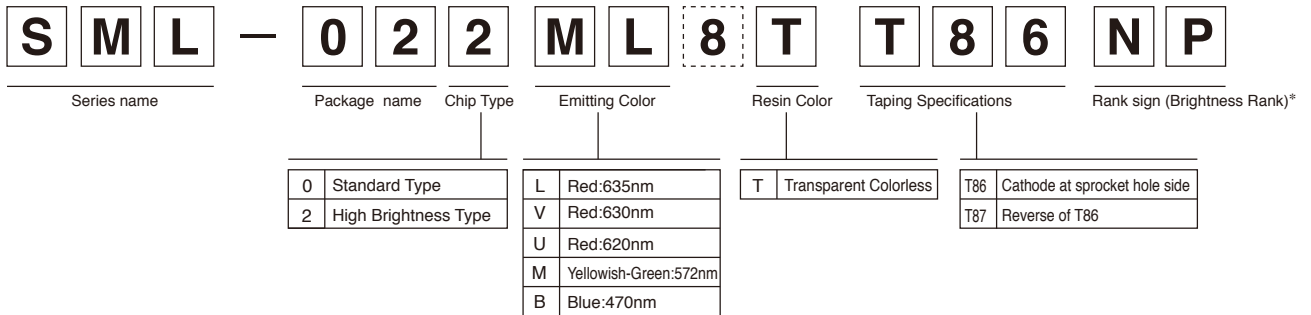
| Emitting Color | Luminous Intensity (mcd) | K          | L         | M        | N        | P        | Q        | R         | S         | T          | U          |
|----------------|--------------------------|------------|-----------|----------|----------|----------|----------|-----------|-----------|------------|------------|
|                |                          | 4.0 to 6.3 | 6.3 to 10 | 10 to 16 | 16 to 25 | 25 to 40 | 40 to 63 | 63 to 100 | 90 to 140 | 140 to 220 | 220 to 360 |
| Red            |                          |            |           |          |          |          |          |           |           | U          |            |
| Blue           |                          |            |           |          |          |          |          |           | B         |            |            |
| Red            |                          | V          |           |          |          |          |          |           |           |            |            |
| Green          |                          |            |           | M        |          |          |          |           |           |            |            |
| Red            |                          |            |           |          | L        |          |          |           |           |            |            |
| Green          |                          |            |           |          | M        |          |          |           |           |            |            |

※Brightness on specification sheet include tolerance of within ± 10%.

## Part No. Construction

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

Special Code



- \* 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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