

SML-21 Series

2012(0805)
2.0 × 1.25mm (t=0.8mm)

Features

- Abundant color variations with diverse luminous intensity types

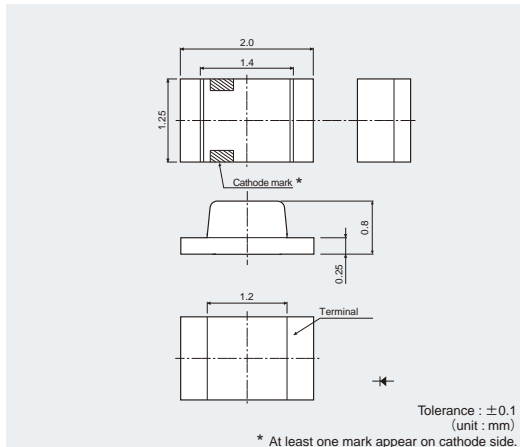


Specifications

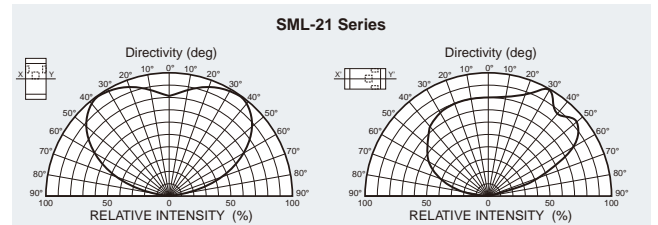
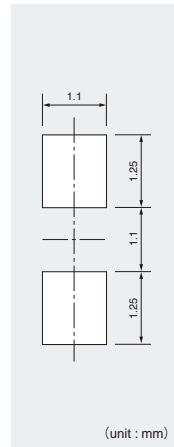
| Part No. | Chip Structure | Emitting Color | Absolute Maximum Ratings (Ta=25°C) | | | | | Electrical and Optical Characteristics (Ta=25°C) | | | | | | | | | | | |
|---------------|-----------------|-----------------|------------------------------------|-------------------------|-------------------------------|------------------------|---------------------------------|--|--------------------------------|-----------|--------------------------------|-------------|------------------------------------|-------------|---------------------|-----------------------------------|------------|---------------------|-----|
| | | | 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 V _F | | Reverse Current I _R | | Dominant Wavelength λ _D | | | Luminous Intensity I _v | | | |
| | | | | | | | | Typ. (V) | If (mA) | Max. (μA) | V _R (V) | Min.*3 (nm) | Typ. (nm) | Max.*3 (nm) | I _F (mA) | Min. (mcd) | Typ. (mcd) | I _F (mA) | |
| SML-212VT | AlGaInP on GaAs | Red | 75 | 30 | 60*1 | 4 | -30 to +85 | -40 to +85 | 2.05 | 20 | 100 | 4 | 625 | 630 | 635 | 20 | 22 | 63 | |
| SML-210VT | GaAsP on GaP | | 70 | 25 | | | | | 611 | | | | 615 | 619 | 1.4 | | 4 | 20 | |
| SML-212U2T(A) | | | 75 | 30 | 100*2 | 5 | -40 to +100 | -40 to +100 | 2 | 10 | 5 | 611 | 615 | 619 | 71 | 140 | | | |
| SML-211UT | AlGaInP on GaAs | Orange | 44 | 20 | 60*1 | 4 | -30 to +85 | -40 to +85 | 1.8 | 2 | 100 | 4 | 615 | 620 | 625 | 2 | 0.9 | 2.5 | 2 |
| SML-212DT | | | 75 | 30 | | | | | 602 | | | | 605 | 608 | 20 | | 25 | 63 | 20 |
| SML-211DT | | | 44 | 20 | 602 | 605 | 608 | 2 | 0.9 | 2.5 | 2 | | | | | | | | |
| SML-210DT | GaAsP on GaP | Yellow | 70 | 25 | 60*1 | 4 | -30 to +85 | -40 to +85 | 2.05 | 20 | 100 | 4 | 587 | 590 | 593 | 20 | 2.2 | 6.3 | 20 |
| SML-212WT(A) | | | 75 | 30 | | | | | 100*2 | | | | | | | | 5 | -40 to +100 | |
| SML-211WT | AlGaInP on GaAs | | 44 | 20 | 60*1 | 4 | -30 to +85 | -40 to +85 | 1.8 | 2 | 100 | 4 | 587 | 590 | 593 | 2 | 1.4 | 4 | 2 |
| SML-212YT | | 75 | 30 | 60*1 | 4 | -30 to +85 | -40 to +85 | 2.05 | 20 | 100 | 4 | 587 | 590 | 593 | 20 | 22 | 63 | 20 | |
| SML-211YT | | 44 | 20 | 60*1 | 4 | -30 to +85 | -40 to +85 | 1.8 | 2 | 100 | 4 | 584 | 587 | 590 | 2 | 1.4 | 4 | 2 | |
| SML-210YT | GaAsP on GaP | Yellowish Green | 70 | 25 | 60*1 | 4 | -30 to +85 | -40 to +85 | 2.1 | 20 | 100 | 4 | 567 | 570 | 573 | 20 | 3.6 | 16 | 20 |
| SML-210MT | | | | | | | | | 2.2 | | | | | | | | 567 | 570 | 573 |
| SML-210PT | GaP | Green | | | | | | | | | | | 557 | 560 | 563 | 1.4 | 4 | | |

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

Dimensions

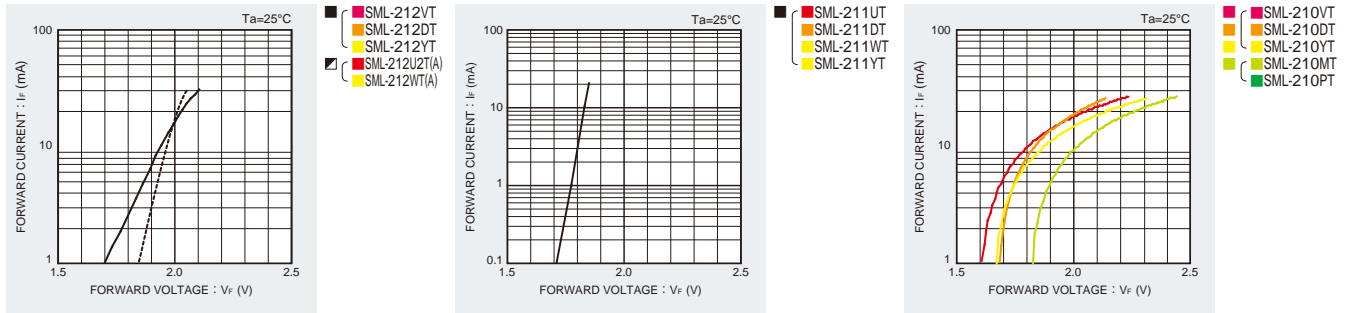


Recommended Solder Pattern Viewing Angle

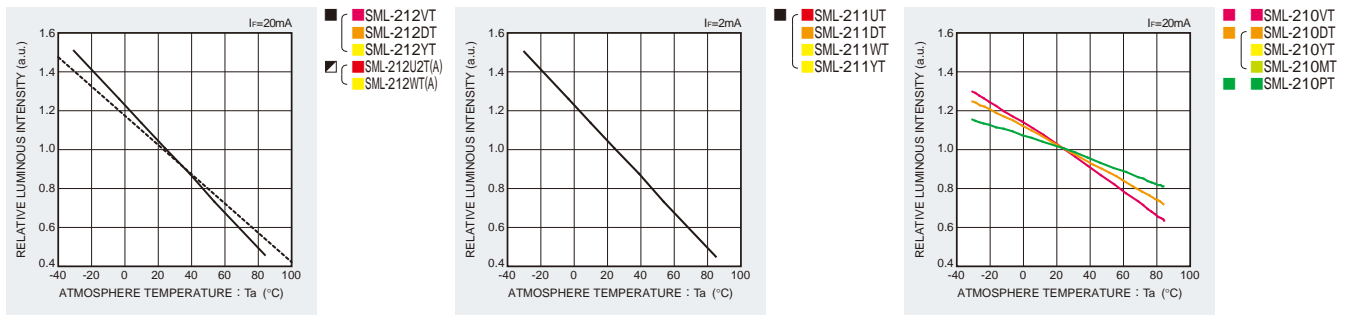


Electrical Characteristics Curves

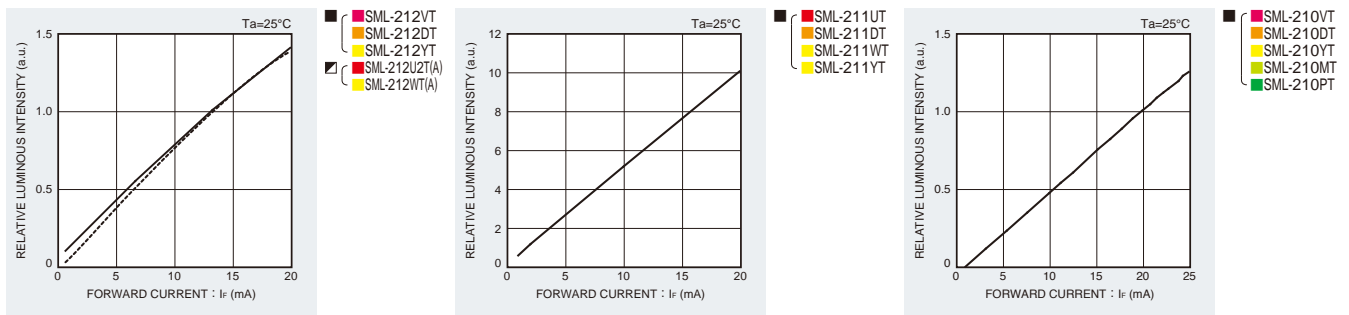
Forward Current-Forward Voltage



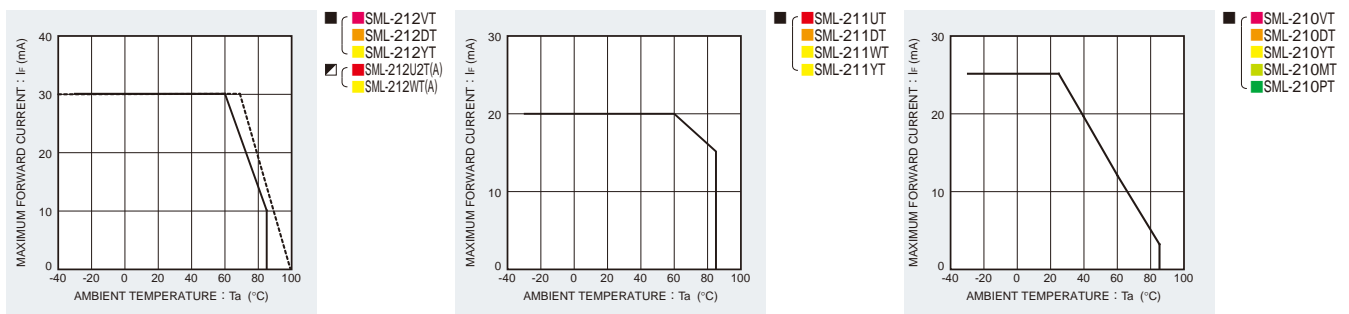
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



SML-21 Series

Rank Reference of Brightness

Red (V, U)

(Ta=25°C, If=20mA)

| Package size(mm) | Height(mm) | Luminous Intensity (mcd) | G | H | J | K | L | M | N | P | Q | R | S | T | U | V | W | X |
|---------------------|------------|--------------------------|---------------------------|------------|------------|------------|-----------|----------------------------|----------|----------|----------|-----------|------------|------------|------------|------------|-------------|--------------|
| | | | 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 | 40 to 63 | 63 to 100 | 100 to 160 | 160 to 250 | 250 to 400 | 400 to 630 | 630 to 1000 | 1000 to 1600 |
| Mini-mold Chip LEDs | 20125 | 0.8 | SML-211UT ^{※/※1} | | | | | SML-212VT [※] | | | | | | | | | | |
| | | | SML-210VT [※] | | | | | SML-212U2T(A) [*] | | | | | | | | | | |

Orange (D)

(Ta=25°C, If=20mA)

| Package size(mm) | Height(mm) | Luminous Intensity (mcd) | G | H | J | K | L | M | N | P | Q | R | S | T | U | V | W | X |
|---------------------|------------|--------------------------|---------------------------|------------|------------|------------|-----------|------------------------|----------|----------|----------|-----------|------------|------------|------------|------------|-------------|--------------|
| | | | 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 | 40 to 63 | 63 to 100 | 100 to 160 | 160 to 250 | 250 to 400 | 400 to 630 | 630 to 1000 | 1000 to 1600 |
| Mini-mold Chip LEDs | 20125 | 0.8 | SML-211DT ^{※/※1} | | | | | SML-210DT [※] | | | | | SML-212DT | | | | | |
| | | | | | | | | | | | | | | | | | | |

Yellow (Y, W)

(Ta=25°C, If=20mA)

| Package size(mm) | Height(mm) | Luminous Intensity (mcd) | G | H | J | K | L | M | N | P | Q | R | S | T | U | V | W | X |
|---------------------|------------|--------------------------|---------------------------|------------|------------|------------|-----------|------------------------|----------|----------|----------|-----------|---------------------------|------------|------------|------------|-------------|--------------|
| | | | 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 | 40 to 63 | 63 to 100 | 100 to 160 | 160 to 250 | 250 to 400 | 400 to 630 | 630 to 1000 | 1000 to 1600 |
| Mini-mold Chip LEDs | 20125 | 0.8 | SML-211YT ^{※/※1} | | | | | SML-212YT [※] | | | | | | | | | | |
| | | | SML-211WT ^{※/※1} | | | | | | | | | | SML-212WT(A) [*] | | | | | |
| | | | SML-210YT [※] | | | | | | | | | | | | | | | |

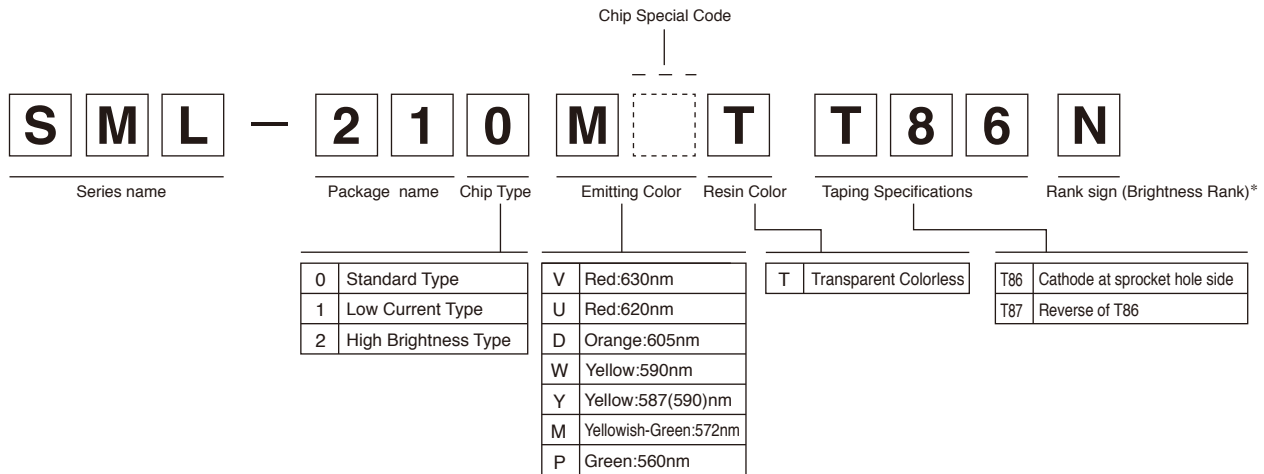
Green (M, P)

(Ta=25°C, If=20mA)

| Package size(mm) | Height(mm) | Luminous Intensity (mcd) | F | G | H | J | K | L | M | N | P | Q | R | S | T | U | V | W | X |
|---------------------|------------|--------------------------|------------------------|------------|------------|------------|------------|------------------------|----------|----------|----------|----------|-----------|------------|------------|------------|------------|-------------|--------------|
| | | | 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 | 40 to 63 | 63 to 100 | 100 to 160 | 160 to 250 | 250 to 400 | 400 to 630 | 630 to 1000 | 1000 to 1800 |
| Mini-mold Chip LEDs | 20125 | 0.8 | SML-210PT [※] | | | | | SML-210MT [※] | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

* Please note that the brightness of some products may fall between ranks (half rank).
 ※Brightness on specification sheet include tolerance of within ± 10%. ※1 If=2mA

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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