

Dialight

Micro LED® SMD LED

“598 SERIES” 1210 PACKAGE

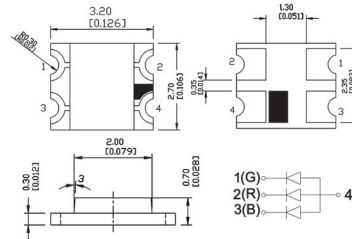
(3.2mm X 2.7mm X 0.7mm) Tri-Color



FEATURES / BENEFITS

- ▲ Compatible with automatic placement equipment
- ▲ RoHS compliant
- ▲ Packaged in 8mm tape, 7" reel and 20 per strip
- ▲ Meets EIA-481-1 pkg. std.

Package Outline Drawing:



Notes 1. All dimensions are in mm [inches];
2. Tolerances are ±0.1mm [0.004inch] unless noted.

ORDERING INFORMATION

5 9 8 - 8 6 1 0 - 3 0 7 F

Packaging Option

| | |
|---|------------------------|
| 2 | 20 pieces on tape |
| 7 | 7" reel 3000pcs / reel |

PART NUMBERS

| Dialight P/N | EMITTED COLOR | MATERIAL | LENS COLOR | LUMINOUS INTENSITY | | | DOMINANT WAVELENGTH | | | FORWARD VOLTAGE | | | VIEWING ANGLE ° DEGREES | PINOUT |
|---------------|---------------|----------|-------------|--------------------|-----|-----|---------------------|-----|-----|-----------------|-----|-----|----------------------------|-------------|
| | | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | | |
| 598-8610-307F | RED | AlInGaP | Water Clear | 40 | 60 | 80 | 630 | 635 | 645 | 1.9 | 2 | 2.2 | 140 | SEE EXAMPLE |
| | GREEN | InGaN | Water Clear | 90 | 120 | 220 | 520 | 525 | 530 | 2.8 | 3.2 | 3.5 | 140 | |
| | BLUE | InGaN | Water Clear | 60 | 90 | 140 | 465 | 470 | 475 | 2.8 | 3.2 | 3.5 | 140 | |
| 598-8920-307F | RED-ORANGE | AlInGaP | Water Clear | 90 | 120 | 150 | 620 | 625 | 630 | 1.9 | 2 | 2.2 | 140 | |
| | GREEN | InGaN | Water Clear | 90 | 150 | 220 | 520 | 525 | 530 | 3 | 3.2 | 3.5 | 140 | |
| | BLUE | InGaN | Water Clear | 30 | 60 | 90 | 465 | 470 | 475 | 3 | 3.2 | 3.5 | 140 | |
| 598-9920-307F | RED-ORANGE | AlInGaP | Diffused | 40 | 60 | 80 | 620 | 625 | 630 | 1.8 | 2.2 | 2.4 | 140 | |
| | GREEN | InGaN | Diffused | 80 | 100 | 150 | 520 | 525 | 530 | 3 | 3.2 | 3.5 | 140 | |
| | BLUE | InGaN | Diffused | 30 | 40 | 60 | 465 | 470 | 475 | 3 | 3.2 | 3.5 | 140 | |
| 598-8930-307F | ORANGE | AlInGaP | Water Clear | 70 | 120 | 150 | 600 | 605 | 610 | 1.8 | 2.2 | 2.4 | 140 | |
| | GREEN | InGaN | Water Clear | 150 | 220 | 300 | 520 | 525 | 530 | 2.8 | 3.2 | 3.5 | 140 | |
| | BLUE | InGaN | Water Clear | 60 | 90 | 140 | 465 | 470 | 475 | 2.8 | 3.2 | 3.5 | 140 | |
| 598-8940-307F | YELLOW | AlInGaP | Water Clear | 90 | 110 | 150 | 587 | 590 | 592 | 1.8 | 2.2 | 2.4 | 140 | |
| | GREEN | InGaN | Water Clear | 150 | 220 | 300 | 520 | 525 | 530 | 2.8 | 3.2 | 3.5 | 140 | |
| | BLUE | InGaN | Water Clear | 60 | 90 | 140 | 465 | 470 | 475 | 2.8 | 3.2 | 3.5 | 140 | |

ABSOLUTE RATINGS (@ Ta = 25°C)

| Dialight P/N | Power Dissipation | Forward Current | Reverse Voltage | Operating Temperature Range | Storage Temperature Range | Peak Pulse Forward Current | Electrostatic Discharge |
|---------------|-------------------|-----------------|-----------------|-----------------------------|---------------------------|----------------------------|-------------------------|
| | (mW) | (mA) | (V) | (°C) | (°C) | (mA) | (HBM) |
| 598-8610-307F | 44 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| 598-8920-307F | 44 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| 598-9920-307F | 44 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| 598-8930-307F | 48 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| 598-8940-307F | 48 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |
| | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 2000 |



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ISO 9001



Dialight Corporation

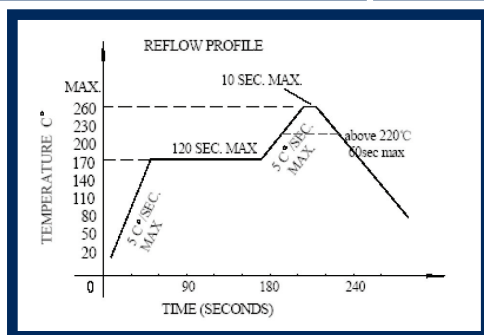
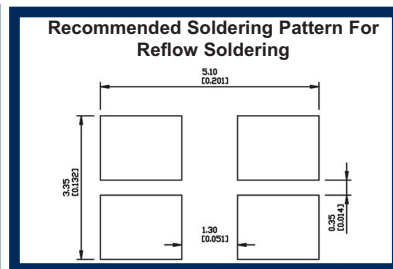
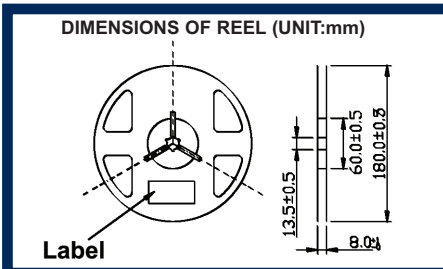
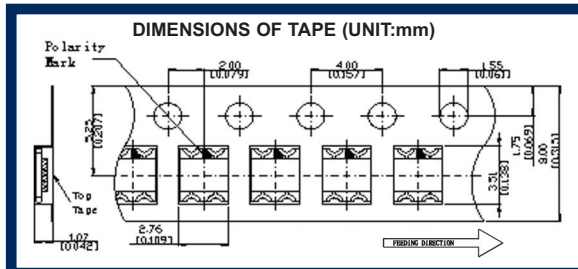
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Tel: (1) 732-919-3119 • Fax: (1) 732-751-5778 • www.dialight.com



MDEI5981210TRI_A

MECHANICAL DIMENSIONS



| | REFLOW SOLDERING | HAND SOLDERING |
|------------------|-------------------------------|------------------------------|
| Pre-heat | 160~180°C | Temperature |
| Pre-heat time | 120 seconds Max. | 300°C Max. |
| Peak temperature | 260°C Max. | Soldering time |
| Soldering time | 10 seconds Max. | 3 second Max (one time only) |
| Condition | Refer to temperature -profile | |

OPTICAL AND ELECTRICAL CHARACTERISTICS CURVES

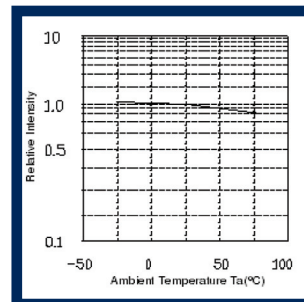
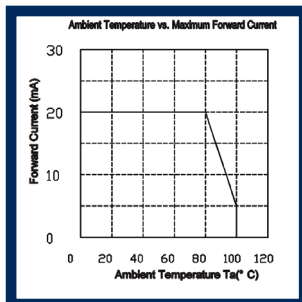
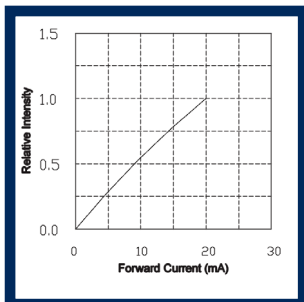
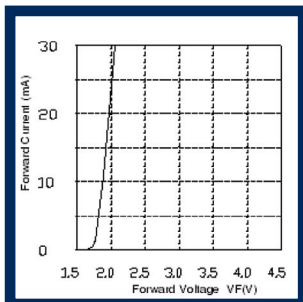
RED 630-642NM, RED-ORANGE 620-630NM, ORANGE 600-610NM, YELLOW 590-595NM, YELLOW 583-590NM, YELLOW GREEN 570-575NM, GREEN 562-570NM

FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)

RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)

DERATING

RELATIVE INTENSITY VS AMBIENT TEMPERATURE



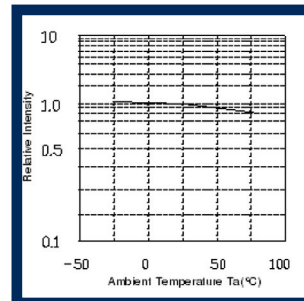
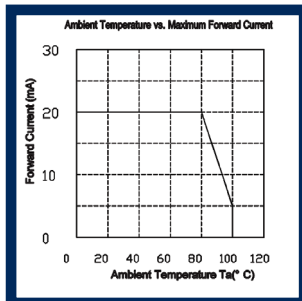
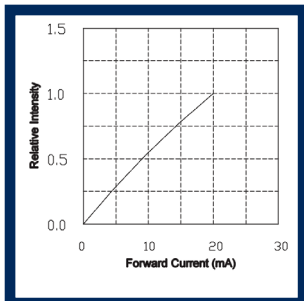
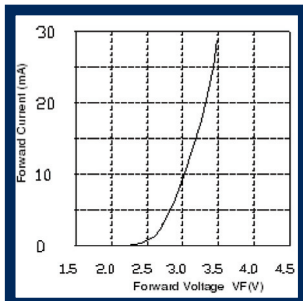
GREEN 520-525NM, BLUE 470-475NM

FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)

RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)

DERATING

RELATIVE INTENSITY VS AMBIENT TEMPERATURE



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