

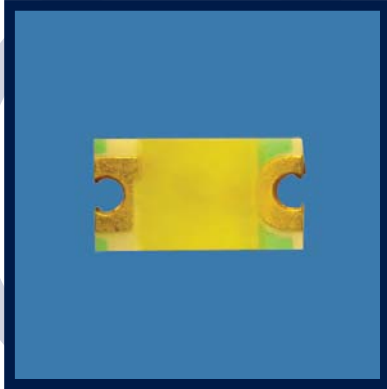


THE DATASHEET OF
5988070107F



Dialight

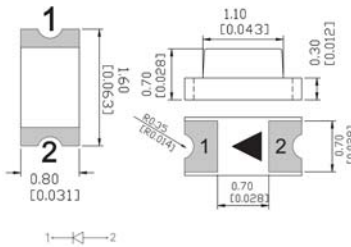
Micro LED® SMD LED “598 SERIES” 0603 PACKAGE (1.6mm X 0.8mm X 0.7mm) Single Color



FEATURES / BENEFITS

- ▲ Compatible with automatic placement equipment
- ▲ RoHS compliant
- ▲ Packaged in 8mm tape, 7” reel and 20 per strip
- ▲ MSL 3
- ▲ 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 0 1 0 - 1 0 **7** F

Packaging Option

| | |
|---|------------------------|
| 2 | 20 pieces on tape |
| 7 | 7” reel 4000pcs / reel |

PART NUMBERS

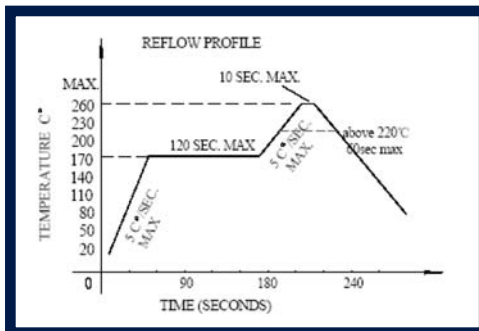
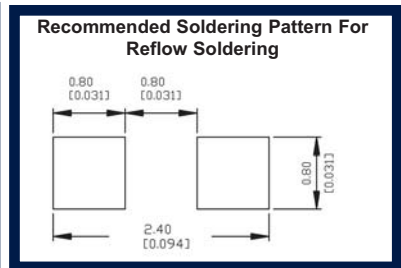
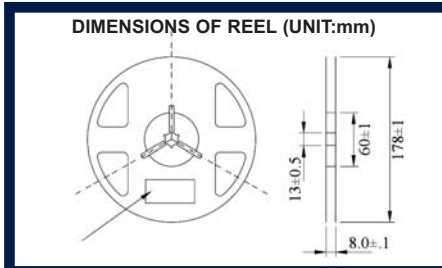
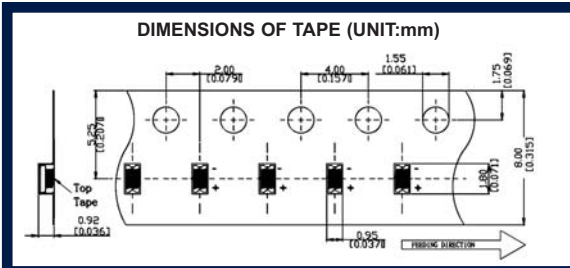
| DIALIGHT P/N | EMITTED COLOR | MATERIAL | LENS COLOR | LUMINOUS INTENSITY | | | DOMINANT WAVELENGTH | | | FORWARD VOLTAGE | | | VIEWING ANGLE |
|---------------|---------------|----------|-------------|--------------------|-----|-----|---------------------|-----|-----|-----------------|-----|-----|---------------|
| | | | | mcd @ If = 20 ma | | | nm @ If = 20 ma | | | V @ If = 20 ma | | | ° DEGREES |
| | | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| 598-8010-107F | RED | AllnGaP | Water Clear | 40 | 60 | 80 | 630 | 635 | 640 | 1.8 | 2 | 2.4 | 140 |
| 598-8020-107F | RED-ORANGE | AllnGaP | Water Clear | 150 | 240 | 330 | 620 | 625 | 630 | 1.8 | 2 | 2.2 | 140 |
| 598-8030-107F | ORANGE | AllnGaP | Water Clear | 90 | 120 | 150 | 600 | 605 | 610 | 1.8 | 2 | 2.2 | 140 |
| 598-8040-107F | YELLOW | AllnGaP | Water Clear | 80 | 140 | 200 | 590 | 593 | 595 | 1.8 | 2 | 2.2 | 140 |
| 598-8050-107F | YELLOW | AllnGaP | Water Clear | 80 | 140 | 200 | 585 | 588 | 590 | 1.8 | 2 | 2.2 | 140 |
| 598-8060-107F | YELLOW-GREEN | AllnGaP | Water Clear | 28 | 40 | 60 | 567 | 571 | 575 | 1.8 | 2 | 2.4 | 140 |
| 598-8070-107F | GREEN | GaP | Water Clear | 10 | 20 | 40 | 565 | 568 | 570 | 1.8 | 2 | 2.4 | 140 |
| 598-8081-107F | GREEN | InGaP | Water Clear | 260 | 340 | 430 | 520 | 523 | 525 | 2.8 | 3.2 | 3.5 | 140 |
| 598-8091-107F | BLUE | InGaP | Water Clear | 90 | 140 | 200 | 465 | 470 | 475 | 2.9 | 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) | (V) |
| 598-8010-107F | 60 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8020-107F | 55 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8030-107F | 55 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8040-107F | 55 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8050-107F | 55 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8060-107F | 60 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8070-107F | 60 | 25 | 5 | -40~+100 | -40~+100 | 100 | 2000(HBM) |
| 598-8081-107F | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 1000(HBM) |
| 598-8091-107F | 70 | 20 | 5 | -40~+100 | -40~+100 | 100 | 1000(HBM) |



MECHANICAL DIMENSIONS

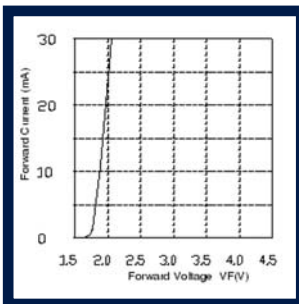


| REFLOW SOLDERING | | HAND SOLDERING | |
|------------------|-------------------------------|----------------|------------------------------|
| Pre-heat | 160~180°C | Temperature | 300°C Max. |
| Pre-heat time | 120 seconds Max. | | |
| Peak temperature | 260°C Max. | Soldering time | 3 second Max (one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

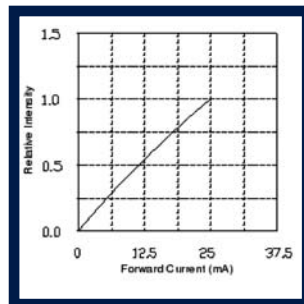
OPTICAL AND ELECTRICAL CHARACTERISTICS CURVES

RED 630-640NM, RED-ORANGE 620-630NM, ORANGE 600-610NM, YELLOW 590-595NM, YELLOW 585-590NM, YELLOW GREEN 567-575NM, GREEN 565-570NM

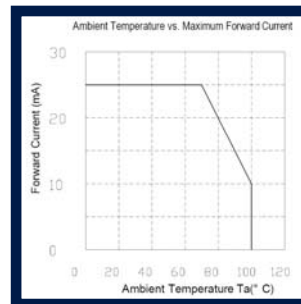
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



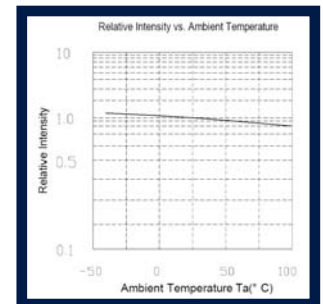
RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)



DERATING

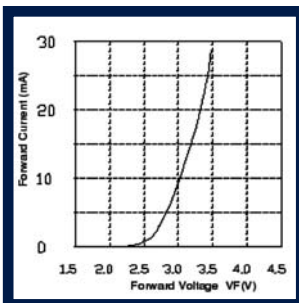


RELATIVE INTENSITY VS AMBIENT TEMPERATURE

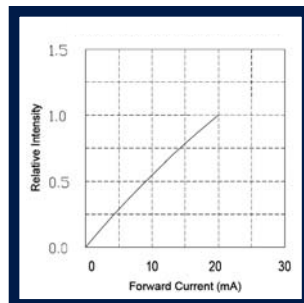


GREEN 520-525NM, BLUE 465-475NM

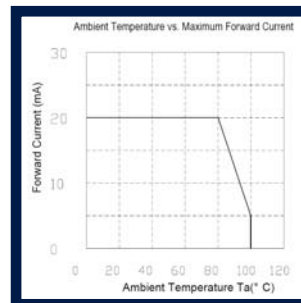
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



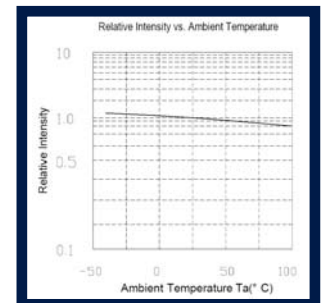
RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)



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RELATIVE INTENSITY VS AMBIENT TEMPERATURE



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