

◆ Home > 5988040107F

Part Number: **5988040107F**


General Description


| | |
|-----------------|------------------------------------|
| Lamp Type | Single Color |
| Lens Color | Non-Diffused |
| Compliance | EIA-481-1 |
| Series | 598 |
| Configuration | 0603(1.6MM X 0.8MM X 0.7MM) |
| Description | SMD LED 0603 PACKAGE, SINGLE COLOR |
| Package Options | Tape and Reel |


Absolute Maximum Ratings (Ta = 25°)

| | |
|------------------------|----------------------|
| Forward Current mA | 25mA |
| Reverse Current | 10 μ A@ Vr = 5V |
| Forward Current Pulsed | 100mA |
| Derating | from 25°C = .33mA/°C |
| Solder Temperature | 260° for 10 sec |
| Operating Temperature | -30~ +85 |
| Storage Temperature | -40~ +100 |
| ESD | 1000 |

Operating Characteristics

| | |
|----------------------------|--|
| Color |  Yellow |
| LED Type | AllnGaP |
| Luminous Intensity Min | 100 |
| Luminous Intensity Typical | 130 |
| Luminous Intensity Max | 160 |
| Forward Voltage Min | 1.7 |
| Dominant Wavelength Min | 590nm |
| Dominant Wavelength Max | 595nm |
| Power Dissipation Max | 55mW |

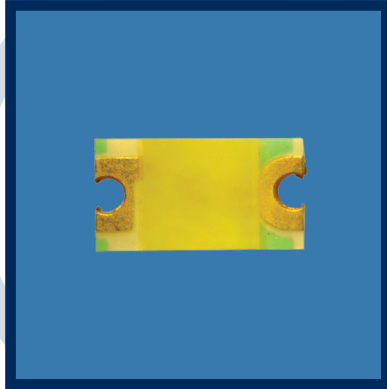




This is a
RoHS Compliant Product
To learn more click here

Dialight

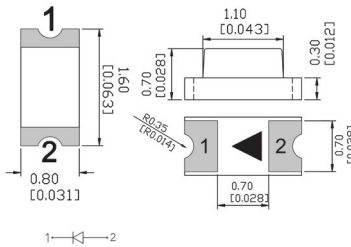
Micro LED[®] SMD LED "598 SERIES" 0603 PACKAGE (1.6mm X 0.8mm X 0.7mm) Single Color



FEATURES / BENEFITS

- ▲ Compatible with automatic placement equipment
- ▲ RoHS compliant
- ▲ Packaged in 8mm tape, 7" reel and 20 per strip
- ▲ 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

7
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 ° DEGREES |
|---------------|---------------|----------|-------------|--------------------|-----|-----|---------------------|-----|-----|-----------------|-----|-----|----------------------------|
| | | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | |
| 598-8010-107F | RED | AlInGaP | Water Clear | 30 | 40 | 80 | 630 | 635 | 642 | 1.7 | 2.2 | 2.4 | 140 |
| 598-8020-107F | RED-ORANGE | AlInGaP | Water Clear | 120 | 150 | 200 | 620 | 625 | 630 | 1.7 | 2 | 2.4 | 140 |
| 598-8030-107F | ORANGE | AlInGaP | Water Clear | 70 | - | 150 | 600 | - | 610 | 1.7 | 2 | 2.4 | 140 |
| 598-8040-107F | YELLOW | AlInGaP | Water Clear | 100 | 130 | 160 | 590 | - | 595 | 1.7 | 2 | 2.2 | 140 |
| 598-8050-107F | YELLOW | AlInGaP | Water Clear | 100 | 130 | 160 | 583 | - | 590 | 1.7 | 2 | 2.4 | 140 |
| 598-8060-107F | YELLOW-GREEN | AlInGaP | Water Clear | 20 | 40 | 60 | 570 | - | 575 | 1.8 | 2 | 2.4 | 140 |
| 598-8070-107F | GREEN | GaP | Water Clear | 10 | 20 | 40 | 562 | - | 570 | 1.8 | 2 | 2.4 | 140 |
| 598-8080-107F | GREEN | InGaP | Water Clear | 150 | 220 | 300 | 520 | 523 | 525 | 3 | 3.2 | 3.5 | 140 |
| 598-8081-107F | GREEN | InGaP | Water Clear | 220 | 300 | 400 | 520 | 523 | 525 | 3 | 3.2 | 3.5 | 140 |
| 598-8090-107F | BLUE | InGaP | Water Clear | 60 | 90 | 140 | 470 | 473 | 475 | 2.8 | 3.2 | 3.5 | 140 |
| 598-8091-107F | BLUE | InGaP | Water Clear | 90 | 140 | 160 | 470 | 473 | 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) |
| 598-8010-107F | 60 | 25 | 5 | -30~+85 | -40~+100 | 100 | 2000 |
| 598-8020-107F | 60 | 25 | 5 | -30~+85 | -40~+100 | 100 | 2000 |
| 598-8030-107F | 60 | 25 | 5 | -30~+85 | -40~+100 | 100 | 2000 |
| 598-8040-107F | 55 | 25 | 5 | -30~+85 | -40~+100 | 100 | 1000 |
| 598-8050-107F | 55 | 25 | 5 | -30~+85 | -40~+100 | 100 | 1000 |
| 598-8060-107F | 60 | 25 | 5 | -30~+85 | -40~+100 | 100 | 2000 |
| 598-8070-107F | 60 | 25 | 5 | -30~+85 | -40~+100 | 100 | 2000 |
| 598-8080-107F | 87.5 | 25 | 5 | -30~+85 | -40~+100 | 100 | 1000 |
| 598-8081-107F | 70 | 20 | 5 | -30~+85 | -40~+100 | 100 | 1000 |
| 598-8090-107F | 87.5 | 25 | 5 | -30~+85 | -40~+100 | 100 | 1000 |
| 598-8091-107F | 70 | 20 | 5 | -30~+85 | -40~+100 | 100 | 1000 |



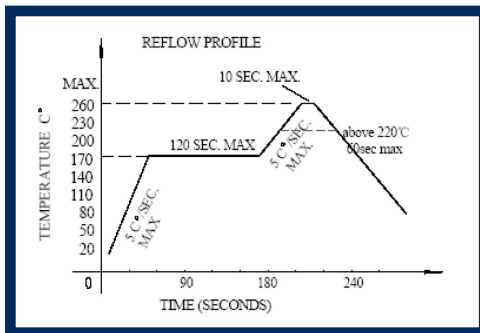
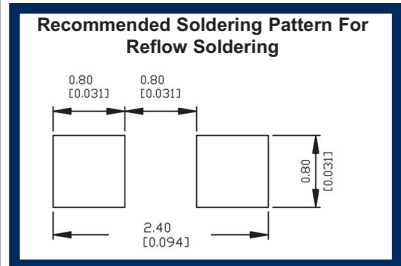
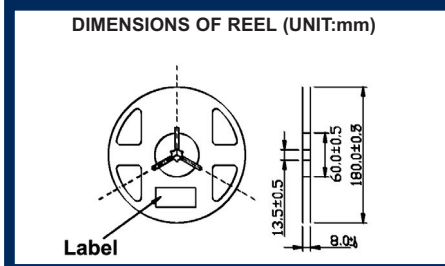
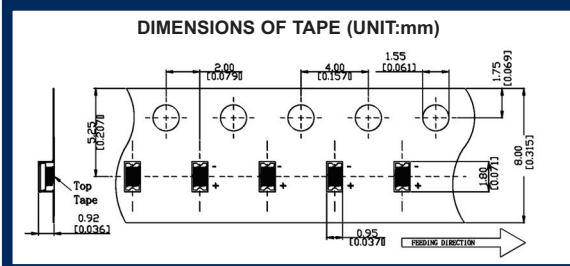
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ISO 9001



MECHANICAL DIMENSIONS

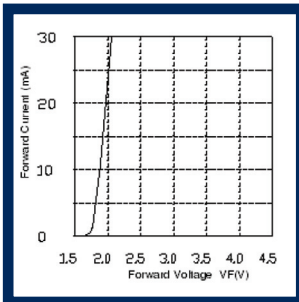


| REFLOW SOLDERING | | HAND SOLDERING | |
|------------------|-------------------------------|----------------|------------------------------|
| Pre-heat | 160~180°C | Temperature | 300°C Max. |
| Pre-heat time | 120 seconds Max. | Soldering time | 3 second Max (one time only) |
| Peak temperature |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

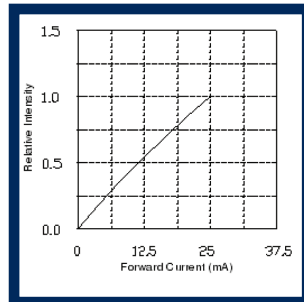
OPTICAL AND ELECTRICAL CHARACTERISTICS CURVES

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

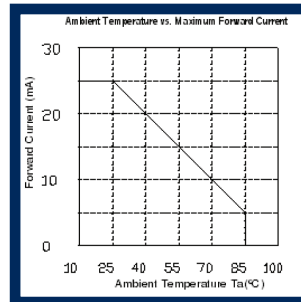
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



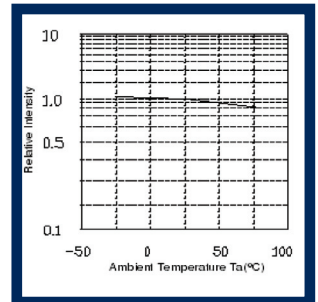
RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)



DERATING

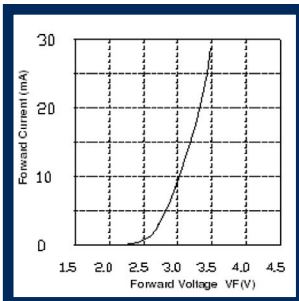


RELATIVE INTENSITY VS AMBIENT TEMPERATURE

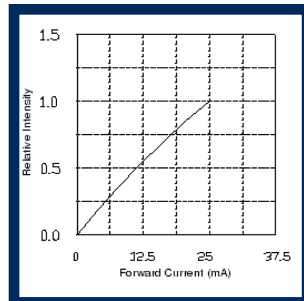


GREEN 520-525NM, BLUE 470-475NM

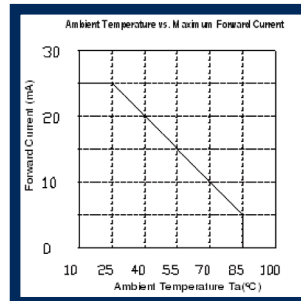
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



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



DERATING



RELATIVE INTENSITY VS AMBIENT TEMPERATURE

