

Home > 5988740302F

Part Number: **5988740302F**

General Description

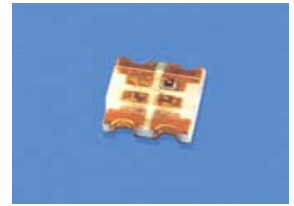
| | |
|-----------------|---------------------------------|
| Lamp Type | Tri-Color |
| Lens Color | Non-Diffused |
| Compliance | EIA-481-1 |
| Series | 598 |
| Configuration | 0606(1.6MM X 1.6MM X 0.7MM) |
| Description | SMD LED 0606 PACKAGE, TRI-COLOR |
| Package Options | Sample Strip |

Absolute Maximum Ratings (Ta = 25°)

| | |
|------------------------|---------------------|
| Forward Current mA | 20mA |
| Reverse Current | 10 μ A@ Vr = 5V |
| Forward Current Pulsed | 100mA |
| Derating | from 80° = .75mA/°C |
| Solder Temperature | 260° for 10 sec |
| Operating Temperature | -40~ +100 |
| Storage Temperature | -40~ +100 |
| ESD | 2000 |

Operating Characteristics

| Color | Yellow | Green | Blue |
|-----------------------------|---------|-------|-------|
| LED Type | AlInGaP | InGaN | InGaN |
| Luminous Intensity Min | 90 | 150 | 60 |
| Luminous Intensity Typical | 110 | 220 | 90 |
| Luminous Intensity Max | 150 | 300 | 140 |
| Forward Voltage Min | 1.8 | 2.8 | 2.8 |
| Dominant Wavelength Min | 587nm | 520nm | 465nm |
| Dominant Wavelength Typical | 590nm | 525nm | 470nm |
| Dominant Wavelength Max | 595nm | 530nm | 475nm |



[check stock](#)



This is a
RoHS Compliant Product
To learn more click here

Power Dissipation Max

48mW

70mW

70mW

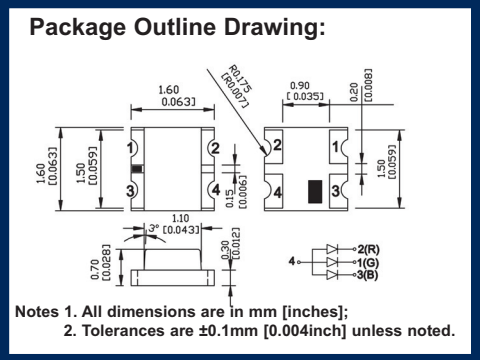
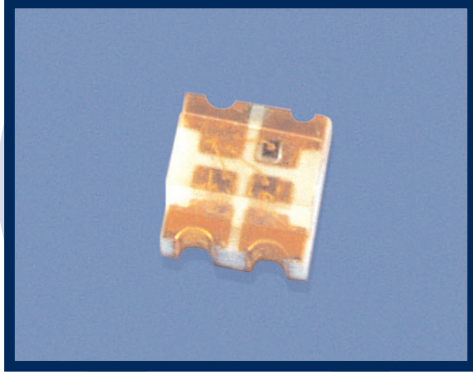


Dialight

Micro LED[®] SMD LED “598 SERIES” 0606 PACKAGE (1.6mm X 1.6mm 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.



ORDERING INFORMATION

| | |
|---|------------------------|
| 5 9 8 - 8 7 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 | PINOUT |
|---------------|---------------|----------|-------------|--------------------|-----|-----|---------------------|-----|-----|-----------------|-----|-----|---------------|-------------|
| | | | | If = 20 ma | | | If = 20 ma | | | If = 20 ma | | | ° DEGREES | |
| | | | | MIN | TYP | MAX | MIN | TYP | MAX | MIN | TYP | MAX | | |
| 598-8710-307F | 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 | |
| 598-8720-307F | RED-ORANGE | AlInGaP | WATER CLEAR | 60 | 80 | 150 | 620 | 625 | 630 | 1.8 | 2.2 | 2.4 | 140 | |
| | GREEN | InGaN | WATER CLEAR | 90 | 150 | 220 | 520 | 525 | 530 | 2.8 | 3 | 3.5 | 140 | |
| | BLUE | InGaN | WATER CLEAR | 40 | 60 | 90 | 465 | 470 | 475 | 3 | 3.2 | 3.5 | 140 | |
| 598-8721-307F | RED-ORANGE | AlInGaP | WATER CLEAR | 60 | 80 | 150 | 620 | 625 | 630 | 1.8 | 2.2 | 2.4 | 140 | |
| | GREEN | InGaN | WATER CLEAR | 90 | 150 | 220 | 520 | 525 | 530 | 2.8 | 3 | 3.5 | 140 | |
| | BLUE | InGaN | WATER CLEAR | 40 | 60 | 90 | 465 | 470 | 475 | 3 | 3.2 | 3.5 | 140 | |
| 598-8730-307F | 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 | |
| 598-8740-307F | YELLOW | AlInGaP | WATER CLEAR | 90 | 110 | 150 | 587 | 590 | 595 | 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) |
| 598-8710-307F | 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 |
| 598-8720-307F | 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 |
| 598-8721-307F | 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 |
| 598-8730-307F | 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 |
| 598-8740-307F | 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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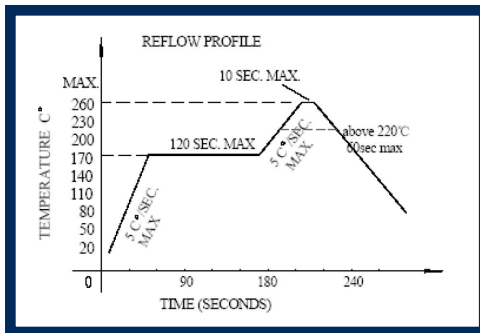
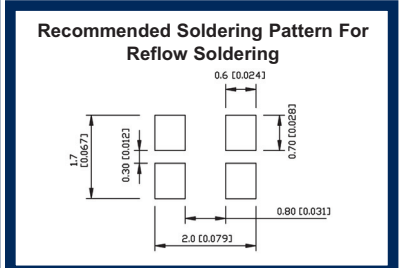
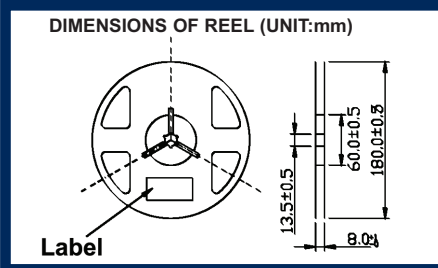
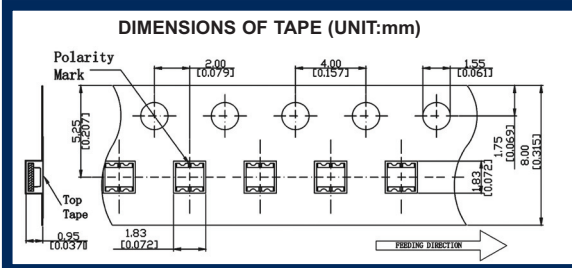


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MECHANICAL DIMENSIONS

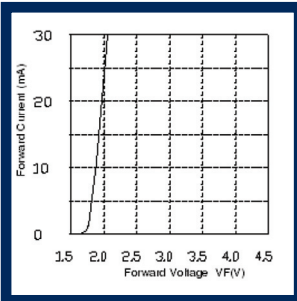


| REFLOW SOLDERING | | HAND SOLDERING | |
|------------------|-------------------------------|----------------|------------------------------|
| Pre-heat | 160~180°C | Temperature | 300°C Max. |
| Pre-heat time | 120 seconds Max. | | |
| Peak temperature | 260°C Max. | Soldering time | 3 second Max (one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

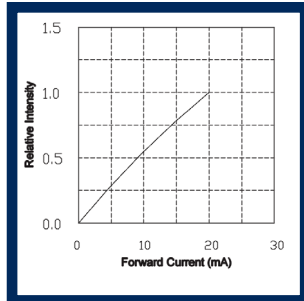
OPTICAL AND ELECTRICAL CHARACTERISTICS CURVES

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

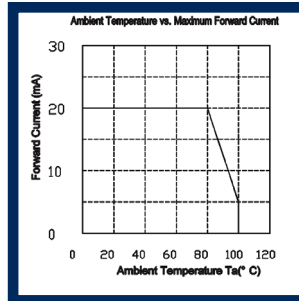
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



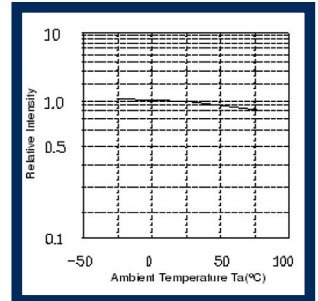
RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)



DERATING

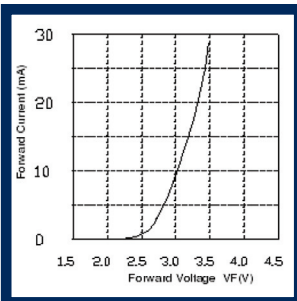


RELATIVE INTENSITY VS AMBIENT TEMPERATURE

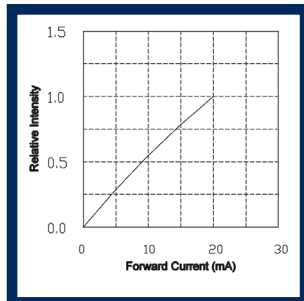


GREEN 520-525NM, BLUE 470-475NM

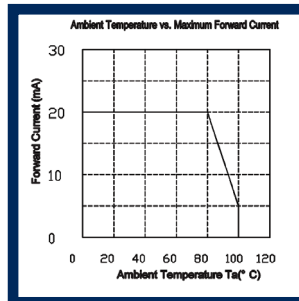
FORWARD VOLTAGE VS FORWARD CURRENT (Ta=25°C)



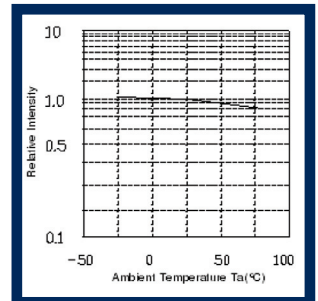
RELATIVE INTENSITY VS FORWARD CURRENT (Ta=25°C)



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RELATIVE INTENSITY VS AMBIENT TEMPERATURE



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