

| ASSY. NO.<br>(CAT. NO.) | LED COLOR  |            |
|-------------------------|------------|------------|
|                         | POSITION 1 | POSITION 2 |
| 553-0101F               | BLANK      | RED        |
| 553-0102F               | BLANK      | GREEN      |
| 553-0103F               | BLANK      | YELLOW     |
| 553-0107F               | BLANK      | ORANGE     |
| 553-0108F               | BLANK      | BLUE       |
| 553-0110F               | RED        | BLANK      |
| 553-0111F               | RED        | RED        |
| 553-0112F               | RED        | GREEN      |
| 553-0113F               | RED        | YELLOW     |
| 553-0118F               | RED        | BLUE       |
| 553-0120F               | GREEN      | BLANK      |
| 553-0121F               | GREEN      | RED        |
| 553-0122F               | GREEN      | GREEN      |
| 553-0123F               | GREEN      | YELLOW     |
| 553-0127F               | GREEN      | ORANGE     |
| 553-0128F               | GREEN      | BLUE       |
| 553-0130F               | YELLOW     | BLANK      |
| 553-0131F               | YELLOW     | RED        |
| 553-0132F               | YELLOW     | GREEN      |
| 553-0133F               | YELLOW     | YELLOW     |
| 553-0171F               | ORANGE     | RED        |
| 553-0172F               | ORANGE     | GREEN      |
| 553-0173F               | ORANGE     | YELLOW     |
| 553-0177F               | ORANGE     | ORANGE     |
| 553-0181F               | BLUE       | RED        |
| 553-0182F               | BLUE       | GREEN      |
| 553-0188F               | BLUE       | BLUE       |
| 553-0199F               | WHITE      | WHITE      |
| 553-0201F               | BLANK      | RED        |
| 553-0202F               | BLANK      | GREEN      |
| 553-0203F               | BLANK      | YELLOW     |
| 553-0210F               | RED        | BLANK      |
| 553-0211F               | RED        | RED        |
| 553-0212F               | RED        | GREEN      |
| 553-0213F               | RED        | YELLOW     |
| 553-0220F               | GREEN      | BLANK      |
| 553-0221F               | GREEN      | RED        |
| 553-0222F               | GREEN      | GREEN      |
| 553-0223F               | GREEN      | YELLOW     |
| 553-0230F               | YELLOW     | BLANK      |
| 553-0231F               | YELLOW     | RED        |
| 553-0232F               | YELLOW     | GREEN      |
| 553-0233F               | YELLOW     | YELLOW     |
| 553-0301F               | BLANK      | RED        |
| 553-0302F               | BLANK      | GREEN      |
| 553-0303F               | BLANK      | YELLOW     |
| 553-0310F               | RED        | BLANK      |
| 553-0311F               | RED        | RED        |
| 553-0312F               | RED        | GREEN      |
| 553-0313F               | RED        | YELLOW     |
| 553-0320F               | GREEN      | BLANK      |
| 553-0321F               | GREEN      | RED        |
| 553-0322F               | GREEN      | GREEN      |
| 553-0323F               | GREEN      | YELLOW     |
| 553-0331F               | YELLOW     | RED        |
| 553-0332F               | YELLOW     | GREEN      |
| 553-0333F               | YELLOW     | YELLOW     |



**RoHS COMPLIANT 553-0XXXF**  
Part Numbers with the "F" suffix ending are RoHS Compliant.  
For example: 553-0101F  
Packaging is marked with "RoHS Compliant" label or equivalent markings. Parts can be wave soldered, dip soldered or hand soldered using typical lead-free soldering process with max 260°C temp. for 5 sec.

| BIN | LIMITS (WHITE LED)<br>(CHROMATICITY COORDINATES) |       |       |       |
|-----|--|-------|-------|-------|
|     | X  | Y     | Z     | U     |
| A3  | 0.270  | 0.270 | 0.250 | 0.250 |
|     | 0.275  | 0.325 | 0.300 | 0.250 |
| A4  | 0.270  | 0.250 | 0.250 | 0.270 |
|     | 0.275  | 0.250 | 0.200 | 0.225 |
| B3  | 0.290  | 0.290 | 0.270 | 0.270 |
|     | 0.300  | 0.350 | 0.325 | 0.275 |
| B4  | 0.290  | 0.270 | 0.270 | 0.290 |
|     | 0.300  | 0.275 | 0.225 | 0.250 |
| C3  | 0.310  | 0.310 | 0.290 | 0.290 |
|     | 0.325  | 0.375 | 0.350 | 0.300 |
| C4  | 0.310  | 0.290 | 0.290 | 0.310 |
|     | 0.325  | 0.300 | 0.250 | 0.275 |
| D3  | 0.330  | 0.330 | 0.310 | 0.310 |
|     | 0.350  | 0.400 | 0.375 | 0.325 |
| D4  | 0.330  | 0.310 | 0.310 | 0.330 |
|     | 0.350  | 0.325 | 0.275 | 0.300 |



SCALE 2.000



**ATTENTION:**  
OBSERVE PRECAUTIONS FOR  
HANDLING ELECTROSTATIC  
SENSITIVE DEVICES

**NOTES:**

- (FOR ORANGE: LEADS .018 SQ. NOM.), LED BODY  $\varnothing$  .115±.010 AND THE PC BOARD TOLERANCE ON LEAD THICKNESS TO BE ±.003.
- LED LEAD DIMENSIONS SHOWN ARE MEASURED AT HOUSING EXIT.
- LEADS TO FIT INTO HOLES SPACED AS PER PATTERN.
- PIN NUMBERS FOR REFERENCE ONLY, DESIGNATION NON-EXISTENT ON PART.
- DIALIGHT PART NUMBERS: 553-0XXXF.
- THIS ASSEMBLY CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (ESDS). MAINTAIN ALL PRECAUTIONARY MEASURES DURING ASSEMBLY, HANDLING, AND STORAGE IN ACCORDANCE WITH IPC-A-610.



| 553-01XXXF   |        |      |      |      |         |                 |
|--|--------|------|------|------|---------|-----------------|
| OPERATING CHARACTERISTICS AT 25 °C AMBIENT: 10 mA LEDs |        |      |      |      |         |                 |
| LED CHARACTERISTICS                                    | COLOR  | MIN. | TYP. | MAX. | UNITS   | TEST CONDITIONS |
| LUMINOUS INTENSITY                                     | RED    | 2.5  | 8.7  | 18   | mcd     | $I_F = 10$ mA   |
|  | YELLOW | 1.7  | 5.6  | —    |         |                 |
|  | GREEN  | 5.6  | 12.6 | 29   |         |                 |
|  | BLUE   | 11   | 16   | 23   |         |                 |
|  | ORANGE | 3.4  | 7.0  | 10.8 |         |                 |
|  | WHITE  | 400  | 1100 | 1900 |         |                 |
| PEAK WAVELENGTH  | RED    |      | 635  |      | nm      | $I_F = 10$ mA   |
|  | YELLOW |      | 588  |      |         |                 |
|  | GREEN  |      | 565  |      |         |                 |
|  | BLUE   |      | 468  |      |         |                 |
|  | ORANGE |      | 600  |      |         |                 |
|  | WHITE  |      |      |      |         |                 |
| DOMINANT WAVELENGTH                                    | RED    | 615  | 625  | 632  | nm      | $I_F = 10$ mA   |
|  | YELLOW | 585  | 590  | 595  |         |                 |
|  | GREEN  | 564  | 568  | 573  |         |                 |
|  | BLUE   | 460  | 467  | 475  |         |                 |
|  | ORANGE | 597  | 602  | 616  |         |                 |
|  | WHITE  |      |      |      |         |                 |
| FORWARD VOLTAGE  | RED    |      | 2.0  | 2.6  | V       | $I_F = 10$ mA   |
|  | YELLOW |      | 2.1  | 2.6  |         |                 |
|  | GREEN  |      | 2.1  | 2.6  |         |                 |
|  | BLUE   | 2.0  | 2.7  | 4.1  |         |                 |
|  | ORANGE | 1.5  | 1.9  | 3.5  |         |                 |
|  | WHITE  |      | 3.5  | 4.0  |         |                 |
| REVERSE CURRENT  | RED    |      |      | 100  | $\mu$ A | $V_R = 5$ V     |
|  | YELLOW |      |      | 100  |         |                 |
|  | GREEN  |      |      | 100  |         |                 |
|  | BLUE   |      |      | 10   |         |                 |
|  | ORANGE |      |      | 100  |         |                 |
|  | WHITE  |      |      | 100  |         |                 |
| VIEWING ANGLE  | RED    |      | 60   |      | DEGREE  | $I_F = 20$ mA   |
|  | YELLOW |      | 60   |      |         |                 |
|  | GREEN  |      | 60   |      |         |                 |
|  | BLUE   |      | 100  |      |         |                 |
|  | ORANGE |      | 60   |      |         |                 |
|  | WHITE  |      | 45   |      |         |                 |

| 553-02XXXF  |        |      |      |      |         |                 |
|---|--------|------|------|------|---------|-----------------|
| OPERATING CHARACTERISTICS AT 25 °C AMBIENT: 2 mA LOW CURRENT LEDs |        |      |      |      |         |                 |
| LED CHARACTERISTICS   | COLOR  | MIN. | TYP. | MAX. | UNITS   | TEST CONDITIONS |
| LUMINOUS INTENSITY  | RED    | 0.75 | 2.5  |      | mcd     | $I_F = 2$ mA    |
|   | YELLOW | 0.4  | 4.5  |      |         |                 |
|   | GREEN  | 0.4  | 1.1  |      |         |                 |
| PEAK WAVELENGTH   | RED    |      | 635  |      | nm      | $I_F = 2$ mA    |
|   | YELLOW |      | 585  |      |         |                 |
|   | GREEN  |      | 565  |      |         |                 |
| FORWARD VOLTAGE   | RED    | 1.7  | 2.2  |      | V       | $I_F = 2$ mA    |
|   | YELLOW | 1.8  | 2.2  |      |         |                 |
|   | GREEN  | 1.9  | 2.2  |      |         |                 |
| REVERSE CURRENT   | ALL    |      |      | 10   | $\mu$ A | $V_R = 5$ V     |
| VIEWING ANGLE   | ALL    |      | 60   |      | DEGREE  |                 |

| 553-03XXXF   |        |      |      |      |         |                 |
|--|--------|------|------|------|---------|-----------------|
| OPERATING CHARACTERISTICS AT 25 °C AMBIENT: 5 V INTEGRAL RESISTOR LEDs |        |      |      |      |         |                 |
| LED CHARACTERISTICS  | COLOR  | MIN. | TYP. | MAX. | UNITS   | TEST CONDITIONS |
| LUMINOUS INTENSITY   | RED    | 8.7  | 29.0 |      | mcd     | $V_F = 5$ V     |
|  | YELLOW | 3.7  | 12.6 |      |         |                 |
|  | GREEN  | 5.6  | 19.0 |      |         |                 |
| PEAK WAVELENGTH  | RED    |      | 635  |      | nm      | $I_F = 10$ mA   |
|  | YELLOW |      | 585  |      |         |                 |
|  | GREEN  |      | 565  |      |         |                 |
| FORWARD CURRENT  | RED    | 10   | 20   |      | mA      | $V_F = 5$ V     |
|  | YELLOW | 10   | 20   |      |         |                 |
|  | GREEN  | 10   | 20   |      |         |                 |
| REVERSE CURRENT  | RED    |      |      | 100  | $\mu$ A | $V_R = 5$ V     |
|  | YELLOW |      |      | 100  |         |                 |
|  | GREEN  |      |      | 100  |         |                 |
| VIEWING ANGLE  | ALL    |      | 60   |      | DEGREE  |                 |

| 553-03XXXF  |             |       |        |       |
|---|-------------|-------|--------|-------|
| ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT                       |             |       |        |       |
|   | RED         | GREEN | YELLOW | UNITS |
| 5 V INTEGRAL RESISTOR LEDs                                      |             |       |        |       |
| CONTINUOUS FORWARD VOLTAGE                                      | 7.5         |       |        | V     |
| REVERSE VOLTAGE   | 5           |       |        | V     |
| LINEAR DERATING FROM 50 °C                                      | 0.071       |       |        | V/°C  |
| LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC. | 260         |       |        | °C    |
| OPERATING TEMPERATURE   | -40 TO +85  |       |        | °C    |
| STORAGE TEMPERATURE   | -55 TO +100 |       |        | °C    |

| 553-01XXXF  |             |        |             |      |             |       |       |
|---|-------------|--------|-------------|------|-------------|-------|-------|
| ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT   |             |        |             |      |             |       |       |
|   | RED         | YELLOW | GREEN       | BLUE | ORANGE      | WHITE | UNITS |
| POWER DISSIPATION   | 100         | 60     | 120         | 120  | 135         | 120   | mW    |
| PEAK FORWARD CURRENT (1/5 DUTY CYCLE, 1 ms PULSE WIDTH) (1/10, .1ms FOR BLUE) ( $t_c < 10 \mu$ s D=.005 FOR ORANGE) | 90          | 60     | 90          | 100  | 500         | 100   | mA    |
| CONTINUOUS FORWARD CURRENT  | 30          | 20     | 30          | 30   | 30          | 30    | mA    |
| LINEAR DERATING FROM 50 °C (30 °C FOR BLUE, 30 °C FOR WHITE)  | 0.40        | 0.25   | 0.40        | .5   | 0.50        | .45   | mA/°C |
| REVERSE VOLTAGE   | 5           |        |             |      |             |       | V     |
| LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC.   | 260         |        |             |      |             |       | °C    |
| OPERATING TEMPERATURE   | -55 TO +100 |        | -40 TO +85  |      | -55 TO +100 |       | °C    |
| STORAGE TEMPERATURE   | -55 TO +100 |        | -55 TO +100 |      | -40 TO +100 |       | °C    |

| 553-02XXXF  |             |       |        |       |
|---|-------------|-------|--------|-------|
| ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT:                      |             |       |        |       |
|   | RED         | GREEN | YELLOW |       |
| 2 mA LOW CURRENT LEDs   |             |       |        |       |
| POWER DISSIPATION   | 20          |       |        | mW    |
| PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 0.1ms PULSE WIDTH)       | 500         |       |        | mA    |
| CONTINUOUS FORWARD CURRENT                                      | 7           |       |        | mA    |
| LINEAR DERATING FROM 95 °C                                      | 0.7         |       |        | mA/°C |
| REVERSE VOLTAGE   | 5           |       |        | V     |
| LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC. | 260         |       |        | °C    |
| OPERATING TEMPERATURE   | -55 TO +100 |       |        | °C    |
| STORAGE TEMPERATURE   | -55 TO +100 |       |        | °C    |

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SCALE: 6.000

DRAWING NUMBER: **C-17277**

REV: **K**

TOLERANCES: UNLESS OTHERWISE SPECIFIED

FRACTIONS: ±1/64

DECIMALS (XX): ±.02

DECIMALS (XXX): ±.015

ANGLES: ±3°

FINISH

FSCM 83330

SHEET 1 OF 1

FAMILY TABLES:

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