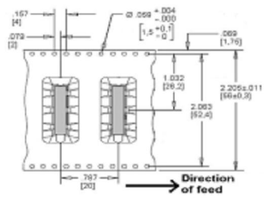
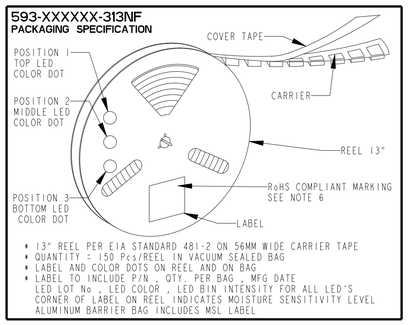
| PART NUMBER | POSITION 1 | POSITION 2 | POSITION 3 | PAD LAYOUT REFERENCE |
|---|---|---|---|---|
| 593-202020-313NF | RED | RED | RED | FIG. 1 |
| 593-202024-313NF | RED | RED | YELLOW | FIG. 1 |
| 593-202324-313NF | RED | GREEN | YELLOW | FIG. 1 |
| 593-202326-313NF | RED | GREEN | BLUE | FIG. 1 |
| 593-203120-313NF | RED | YELLOW GREEN | RED | FIG. 1 & FIG. 2 |
| 593-212121-313NF | AlGaAs RED | AlGaAs RED | AlGaAs RED | FIG. 1 |
| 593-212130-313NF | AlGaAs RED | AlGaAs RED | SUPER RED GREEN | FIG. 1 & FIG. 2 |
| 593-212222-313NF | AlGaAs RED | GREEN | GREEN | FIG. 1 |
| 593-212226-313NF | AlGaAs RED | GREEN | BLUE | FIG. 1 |
| 593-212729-313NF | AlGaAs RED | AlInGaP YELLOW | InGaN GREEN | FIG. 1 |
| 593-212740-313NF | RED | YELLOW | InGaN GREEN | FIG. 1 |
| 593-222221-313NF | GREEN | GREEN | AlGaAs RED | FIG. 1 |
| 593-222721-313NF | GREEN | AlInGaP YELLOW | AlGaAs RED | FIG. 1 |
| 593-223020-313NF | GREEN | RED/GREEN | RED | FIG. 1 & FIG. 2 |
| 593-232323-313NF | GREEN | GREEN | GREEN | FIG. 1 |
| 593-232420-313NF | GREEN | YELLOW | RED | FIG. 1 |
| 593-232424-313NF | GREEN | YELLOW | YELLOW | FIG. 1 |
| 593-232627-313NF | GREEN | BLUE | AlInGaP YELLOW | FIG. 1 |
| 593-242320-313NF | YELLOW | GREEN | RED | FIG. 1 |
| 593-242424-313NF | YELLOW | YELLOW | YELLOW | FIG. 1 |
| 593-272020-313NF | YELLOW | RED | RED | FIG. 1 |
| 593-272129-313NF | AlInGaP YELLOW | AlGaAs RED | InGaN GREEN | FIG. 1 |
| 593-272323-313NF | AlInGaP YELLOW | GREEN | GREEN | FIG. 1 |
| 593-292721-313NF | InGaN GREEN | AlInGaP YELLOW | AlGaAs RED | FIG. 1 |
| 593-312020-313NF | YELLOW GREEN | RED | RED | FIG 1 & 2 |
| 593-353535-313NF | RED GREEN BLUE | RED GREEN BLUE | RED GREEN BLUE | FIG. 2 |

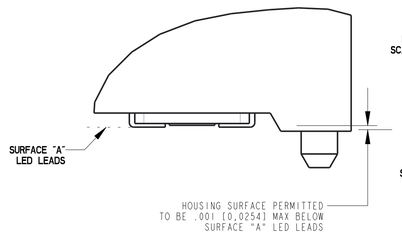
TAPE DIMENSION

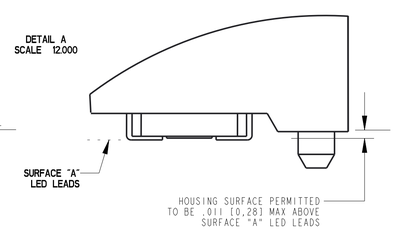



**RoHS COMPLIANT 593-XXXXXX-3XXNF**

Part Numbers with the "F" suffix ending are RoHS Compliant. Packaging is marked with "RoHS Compliant" label or equivalent markings.

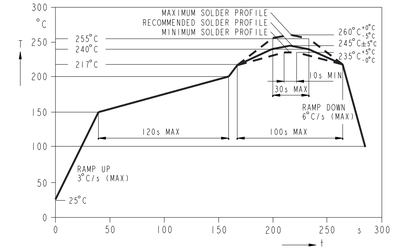



| REV | ECN NO | REVISIONS | DRN | APP | DATE |
|---|---|---|---|---|---|
| A | | NEW RELEASE | LD | NO | 2-23-21 |
| B | 127242 | REMOVED -302NF PART NUMBERS, ADDED 593-212740-313NF | LD | CS | 2-4-25 |

**MULIT-COLOR LED PIN REFERENCES**

| LED COLOR | PIN 1 | PIN 2 | PIN 3 | PIN 4 |
|---|---|---|---|---|
| R/Y BI-COLOR | RED CATHODE | RED ANODE | YELLOW ANODE | YELLOW CATHODE |
| Y/G BI-COLOR | YELLOW CATHODE | YELLOW ANODE | GREEN ANODE | GREEN CATHODE |
| R/G BI-COLOR | RED CATHODE | RED ANODE | GREEN ANODE | GREEN CATHODE |
| R/G/B TRI-COLOR | RED CATHODE | COMMON ANODE | GREEN CATHODE | BLUE CATHODE |




**RECOMMENDED RoHS COMPLIANT REFLOW PROFILE**

| | OPERATING CHARACTERISTICS AT 25°C AMBIENT | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| COLOR CODE | COLOR | | LUMINOUS INTENSITY | FORWARD VOLTAGE (V) | | | DOMINANT WAVELENGTH (nm) | |
| | | | TYP | TEST COND | TYP | MAX | MIN | TYP | MAX |
| 10 | RED 2mA | | 5 mcd @IF=2mA | IF = 2mA | 1.7 | 2.2 | 624 | 630 | 636 |
| 13 | GREEN 2mA | | 4 mcd @IF=2mA | IF = 2mA | 1.7 | 2.2 | 566 | 570 | 575 |
| 14 | YELLOW 2mA | | 4.3 mcd @IF=2mA | IF = 2mA | 1.7 | 2.2 | 580 | 587 | 595 |
| 15 | ORANGE 2mA | | 7 mcd @IF=2mA | IF = 2mA | 1.7 | 2.2 | 600 | 606 | 609 |
| 20 | RED | | 16 mcd @ IF=10mA | IF = 20mA | 2.0 | 2.5 | 627 | 633 | 639 |
| 21 | AlGaAs RED | | 41 mcd @IF=10mA | IF = 20mA | 1.85 | 2.5 | —— | 640 | —— |
| 22 | HI. INT. GREEN | | 66 mcd @IF=10mA | IF = 20mA | 2.0 | 2.5 | 566 | 570 | 575 |
| 23 | GREEN | | 66 mcd @ IF=10mA | IF = 20mA | 2.0 | 2.4 | 566 | 570 | 575 |
| 24 | YELLOW | | 66 mcd @ IF=10mA | IF = 20mA | 2.0 | 2.4 | 580 | 587 | 595 |
| 26 | BLUE | | 10 mcd @IF=20mA | IF = 10mA | 3.1 | 3.7 | 465 | 471 | 477 |
| 27 | AlInGaP YELLOW | | 36 mcd @IF=20mA | IF = 10mA | 2.0 | 2.4 | 580 | 587 | 595 |
| 28 | WHITE | | 62 mcd @IF=20mA | IF = 10mA | 3.1 | 3.4 | —— | X .33 Y .33 | —— |
| 29 | InGaN GREEN | | 213 mcd @IF=20mA | IF = 20mA | 3.7 | 4.3 | —— | 525 | —— |
| 30 | RED/GREEN BI-COLOR | RED | 11 mcd @IF=10mA | IF = 10mA | 2.0 | 2.5 | 622 | 628 | 634 |
| | | GREEN | 6 mcd @IF=10mA | IF = 10mA | 2.0 | 2.5 | 564 | 570 | 576 |
| 31 | YELLOW/GREEN BI-COLOR | YELLOW | 13 mcd @IF=10mA | IF = 10mA | 2.0 | 2.5 | 584 | 590 | 596 |
| | | GREEN | 6 mcd @IF=10mA | IF = 10mA | 2.0 | 2.5 | 564 | 570 | 576 |
| 32 | RED/YELLOW BI-COLOR | RED | 34 mcd @IF=20mA | IF = 20mA | 2.0 | 2.3 | 627 | 633 | 639 |
| | | YELLOW | 26 mcd @IF=20mA | IF = 20mA | 2.0 | 2.4 | 580 | 587 | 595 |
| 35 | RED/GRN/BLUE TRI-COLOR | RED | 45 mcd @IF=20mA | IF = 20mA | 1.9 | 2.4 | —— | 626 | —— |
| | | GREEN | 114 mcd @IF=20mA | IF = 20mA | 3.4 | 4.05 | 515 | 525 | 535 |
| | | BLUE | 25 mcd @IF=20mA | IF = 20mA | 3.4 | 4.05 | 460 | 470 | 480 |
| 40 | TRUE GREEN | | 300 mcd @ IF = 20mA | IF = 20mA | 2.8 | 3.5 | 520 | 525 | 530 |

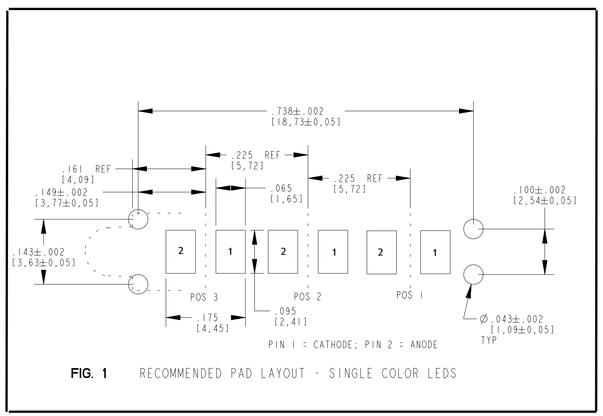



**FIG. 1** RECOMMENDED PAD LAYOUT - SINGLE COLOR LEDS

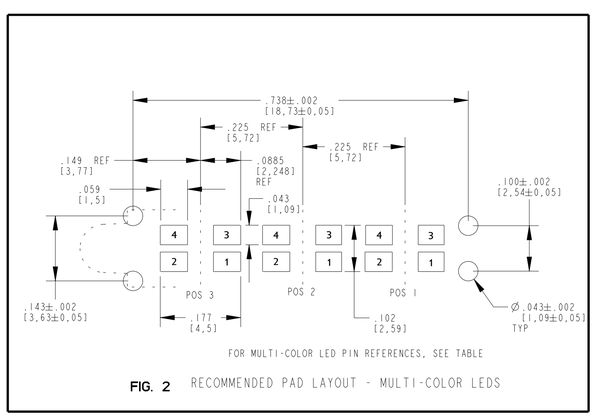
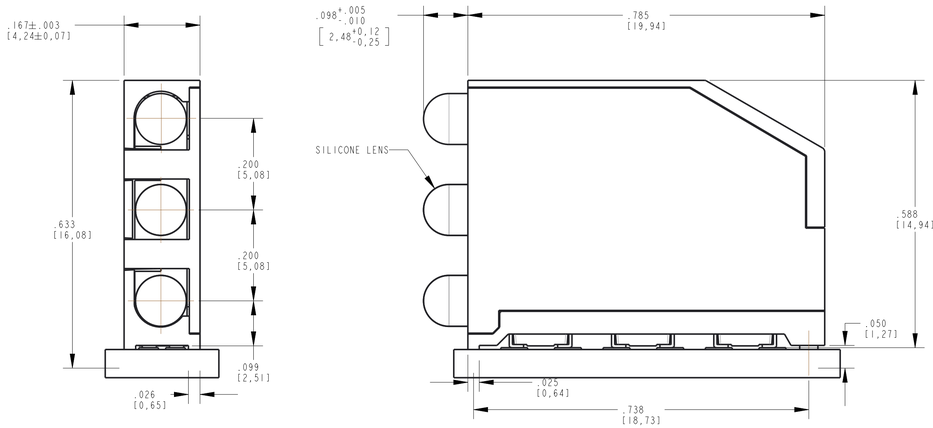
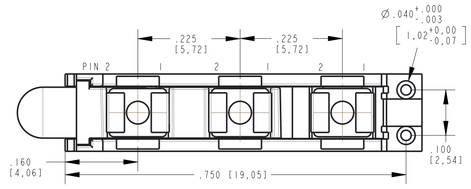



**FIG. 2** RECOMMENDED PAD LAYOUT - MULTI-COLOR LEDS

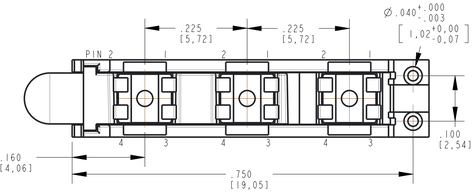





NOTES:
1. PRODUCT P/N'S WITH "F" SUFFIX ENDING ARE RoHS COMPLIANT. LED LEADS ARE PLATED TIN (Sn) WITH NICKEL (Ni) UNDERPLATE ON COPPER (Cu) LEADS.
2. STORAGE OF TAPED PARTS SHALL NOT EXCEED TWELVE [12] MONTHS AFTER WHICH RE-PACKAGING IS REQUIRED.
3. FRONT AND REAR TERMINALS [OF EACH LED] OF THE ASSEMBLY TO BE WITHIN .005 COPLANARITY.
4. REFER TO CHART FOR PROPER MOISTURE SENSITIVITY LEVEL.
5. *** CAUTION ***
   FOR PRODUCTS THAT ARE ESD SENSITIVE, OBSERVE PRECAUTIONS IN HANDLING ELECTROSTATIC SENSITIVE DEVICES. FOR EYE SAFETY DO NOT STARE DIRECTLY INTO THE LIGHT BEAM OF THESE LED DEVICES AT CLOSE RANGE.
6. THIS PRODUCT IS RoHS COMPLIANT. EACH BAG IS MARKED WITH RoHS COMPLIANT LABEL OR EQUIVALENT MARKINGS. LED MUST BE Pb FREE (RoHS COMPLIANT).
7. DIALIGHT PART NUMBERS: 593-XXXXXX-313NF (REEL)




SINGLE COLOR LED




SCALE 6.000

BI-COLOR LED & TRI-COLOR LED

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

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SCALE: 6.000

TOLERANCES: UNLESS OTHERWISE SPECIFIED
FRACTIONS: ±1/64
DECIMALS (.XX): ±.01
DECIMALS (.XXX): ±.005
DECIMALS (.XXXX): ±.0005
ANGLES: ±2°
FINISH: -

FSCM 83330

DRAWING NUMBER: C-18504 REV: B

TITLE: TRI-LEVEL PRISM

MATERIAL: RoHS COMPLIANT

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SHEET 1 OF

FAMILY TABLE: