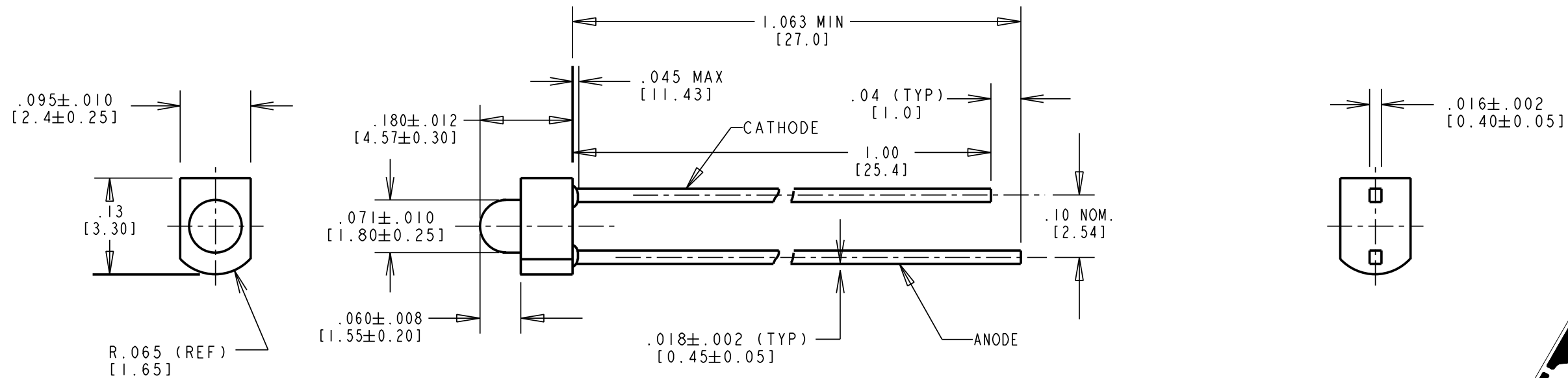


| REV | ECN NO | REVISIONS   | DRN | CKD | APP | DATE |
|-----|--------|-------------|-----|-----|-----|------|
| A   | —      | NEW RELEASE | SM  |     |     |      |

| DIALIGHT P/N | LENS COLOR                        | REVISIONS |        |     |         |
|--------------|-----------------------------------|-----------|--------|-----|---------|
|              |                                   | REV       | ECN NO | DRN | DATE    |
| 521-8052F    | InGaN GREEN<br>WATER CLEAR        | A         | —      | SM  | 6-07-07 |
| 521-8053F    | InGaN BLUE<br>WATER CLEAR         | A         | —      | SM  | 6-07-07 |
| 521-8054F    | TS AlInGaP YELLOW<br>WATER CLEAR  | A         | —      | SM  | 6-07-07 |
| 521-8055F    | H1-EFF. RED<br>RED DIFFUSED       | A         | —      | SM  | 6-07-07 |
| 521-8056F    | AlInGaP GREEN<br>GREEN DIFFUSED   | A         | —      | SM  | 6-07-07 |
| 521-8057F    | YELLOW DIFFUSED                   | A         | —      | SM  | 6-07-07 |
| 521-8058F    | AlInGaP ORANGE<br>ORANGE DIFFUSED | A         | —      | SM  | 6-07-07 |

NOTES:

1. THIS ASSEMBLY CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (ESDS). MAINTAIN ALL PRECAUTIONARY MEASURES DURING ASSEMBLY, HANDLING AND STORAGE IN ACCORDANCE WITH IPC-A-610.



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

| PART NUMBER | PEAK EMISSION WAVELENGTH (nm) | DOMINANT WAVELENGTH (nm) |     |     | VIEWING ANGLE (°) | CAPACITANCE (pF)*V <sub>F</sub> =0V f=1MHz | LUMINOUS INTENSITY (mcd)*I <sub>F</sub> =20 mA, 25°C |      |     | FORWARD VOLTAGE (V)*I <sub>F</sub> =20 mA, 25°C |     |
|-------------|-------------------------------|--------------------------|-----|-----|-------------------|--|--|------|-----|---|-----|
|             |                               | MIN                      | TYP | MAX |                   |  | TYP  | MIN  | TYP | TYP   | MAX |
| 521-8052F   | 518                           | 520                      | 525 | 530 | 30                | 40   | 1500   | 3200 | 3.5 | 4.2   |     |
| 521-8053F   | 468                           | 465                      | 470 | 475 | 30                | 40   | 240  | 600  | 3.5 | 4.2   |     |
| 521-8054F   | 591                           | 587                      | 590 | 593 | 30                | 40   | 680  | 1500 | 2.0 | 2.7   |     |
| 521-8055F   | 635                           | 620                      | 625 | 630 | 50±5              | 40   | 5.0  | 15   | 2.0 | 2.6   |     |
| 521-8056F   | 575                           | 565                      | 568 | 571 | 50±5              | 40   | 6.5  | 40   | 2.0 | 2.4   |     |
| 521-8057F   | 585                           | 585                      | 588 | 591 | 50±5              | 15   | 5.0  | 15   | 2.0 | 2.6   |     |
| 521-8058F   | 615                           | 607                      | 610 | 613 | 50±5              | 40   | 8.5  | 29   | 2.1 | 2.6   |     |

RoHS Compliant 521-805XF  
Part Numbers with the "F" suffix ending are RoHS Compliant.  
Example: 521-8056F  
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.

| ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT                   | 521-                |                 |                 |                |                 |                 |                 | UNITS |
|--|---------------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-------|
|  | -8052F              | -8053F          | -8054F          | -8055F         | -8056F          | -8057F          | -8058F          |       |
| POWER DISSIPATION  | 126                 | 135             | 130             | 100            | 75              | 60              | 60              | mW    |
| CONTINUOUS FORWARD CURRENT                                 | 30                  | 30              | 50              | 30             | 30              | 20              | 20              | mA    |
| PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 0.1 ms PULSE WIDTH) | 100                 | 100             | 100             | 120            | 60              | 80              | 60              | mA    |
| DERATING LINEAR FROM 40°C                                  | 0.40                | 0.50            | 0.60            | 0.40           | 0.40            | 0.25            | 0.25            | mA/°C |
| REVERSE VOLTAGE  | 5                   | 5               | 5               | 5              | 5               | 5               | 5               | V     |
| SOLDERING TEMPERATURE (.157 in FROM BODY)                  | 260°C FOR 5 SECONDS |                 |                 |                |                 |                 |                 | °C    |
| OPERATING TEMPERATURE                                      | -20°C TO +80°C      | -40°C TO +80°C  | -55°C TO +100°C | -40°C TO +80°C | -55°C TO +100°C | -55°C TO +100°C | -55°C TO +100°C | °C    |
| STORAGE TEMPERATURE  | -30°C TO +100°C     | -55°C TO +100°C |                 |                |                 |                 |                 | °C    |

|   |   |          |
|---|---|----------|
| THIS DRAWING AND THE CONTENTS HEREIN ARE CONFIDENTIAL AND THE SOLE PROPERTY OF DIALIGHT. REPRODUCTION OF THIS DRAWING OR CONSTRUCTION OF ANY PARTS WITHIN THIS DRAWING ARE FORBIDDEN WITHOUT THE WRITTEN CONSENT OF DIALIGHT. |   |          |
| SCALE: DRAWING SCALE<br>ALL DIM'S IN: INCHES (MM)   | DRAWING NUMBER<br>C-17502                             | REV<br>A |
| TOLERANCES:<br>UNLESS OTHERWISE SPECIFIED   | TITLE<br>1.8 mm LED                                   |          |
| FRACTIONS: ±1/64<br>DECIMALS (.XX): ±.01<br>DECIMALS (.XXX): ±.005<br>DECIMALS (.XXXX): ±.0005<br>ANGLES: ±1°   | MATERIAL  |          |
| FINISH:   | Dialight 1501 ROUTE 34 SOUTH<br>FARMINGDALE, NJ 07727 |          |
| FSCM 83330  | SHEET 1 OF 1 FAMILY TABLE:                            |          |