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SPC-F005.DWG

REVISIONS

DOC. NO. SPC-F005 \* Effective: 7/8/02 \* DCP No: 1398

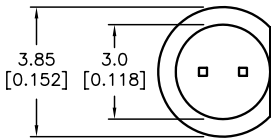
| DCP # | REV | DESCRIPTION | DRAWN | DATE   | CHECKD | DATE    | APPRVD | DATE    |
|-------|-----|-------------|-------|--------|--------|---------|--------|---------|
| 1908  | A   | RELEASED    | EO    | 6/7/06 | YA     | 6/19/06 | HO     | 6/19/06 |



**Features:**

- High intensity
- Standard 3mm T-1 diameter package
- General purpose LED
- Reliable and rugged

| Source Color | Chip Material | Lens Color |
|--------------|---------------|------------|
| Red          | GaAsP         | Diffused   |

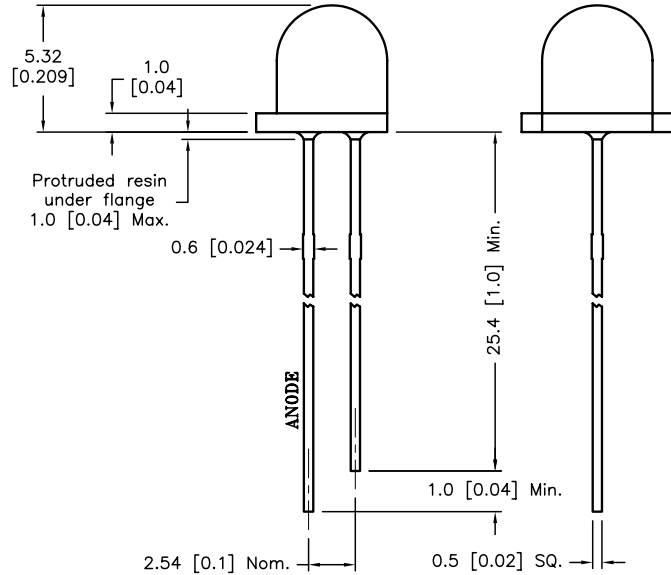


**Specifications:**

- Lead spacing is measured where the leads emerge from the package

**Absolute Maximum Rating at Ta=25°C**

| Parameter   | MAX.                | Unit  |
|---|---------------------|-------|
| Power Dissipation   | 100                 | mW    |
| Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width) | 100                 | mA    |
| Continuous Forward Current                                | 30                  | mA    |
| Derating Linear From 50°C                                 | 0.4                 | mA/°C |
| Reverse Voltage   | 5                   | V     |
| Operating Temperature Range                               | -25°C to +80°C      |       |
| Storage Temperature Range                                 | -40°C to +100°C     |       |
| Lead Soldering Temperature [4mm (0.157) From Body]        | 260°C for 5 seconds |       |



**Electrical Optical Characteristics at Ta=25°C**

| Parameter                | Symbol          | Typ. | Max | Unit    | Test Condition      |
|--------------------------|-----------------|------|-----|---------|---------------------|
| Luminous Intensity       | $I_v$           | 45   |     | mcd     | $I_f=20mA$ (Note 1) |
| Viewing Angle            | $2\theta_{1/2}$ | 60   |     | Deg     | (Note 2)            |
| Peak Emission Wavelength | $\lambda_p$     | 640  |     | nm      | $I_f=20mA$          |
| Dominant Wavelength      | $\lambda_d$     | 635  |     | nm      | $I_f=20mA$ (Note 3) |
| Forward Voltage          | $V_f$           | 1.9  | 2.5 | V       | $I_f=20mA$          |
| Reverse Current          | $I_R$           | ---  | 100 | $\mu A$ | $V_R=5V$            |

**Notes:**

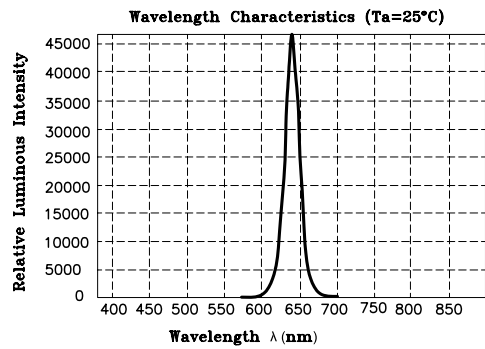
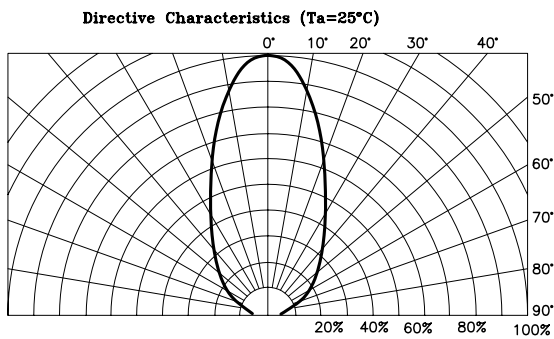
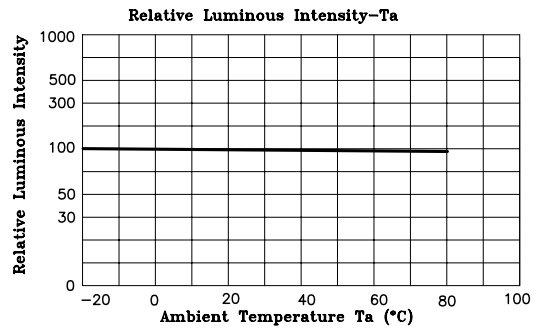
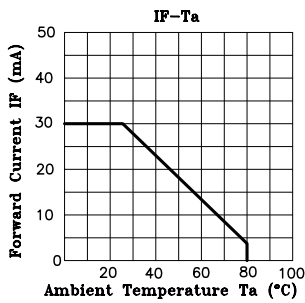
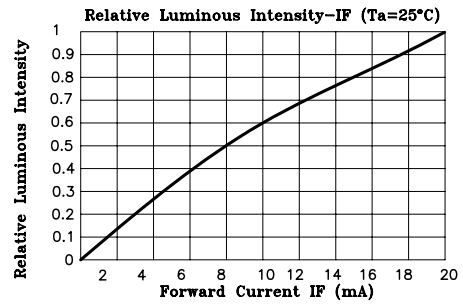
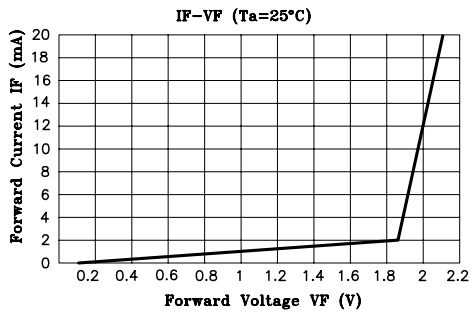
- 1- Luminous intensity is measured with a light sensor and filter combination that approximates the CIE eye-response curve.
- 2-  $\theta_{1/2}$  is the off-axis angle at which the luminous intensity is half the axial luminous intensity
- 3- The x and y parameters correspond to the CIE 1931 Chromaticity

DISCLAIMER:  
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TOLERANCES:  
UNLESS OTHERWISE SPECIFIED,  
 $\pm 0.25$  [ $\pm 0.010$ ]

|                 |         |
|-----------------|---------|
| DRAWN BY:       | DATE:   |
| EKLAS ODISH     | 6/7/06  |
| CHECKED BY:     | DATE:   |
| YILMAZ AKYONDEM | 6/19/06 |
| APPROVED BY:    | DATE:   |
| HISHAM ODISH    | 6/19/06 |

|  |                     |                 |     |
|--|---------------------|-----------------|-----|
| DRAWING TITLE:<br>Standard LED, Round Lens, 3mm (T1), Red Emitting Color |                     |                 |     |
| SIZE   | DWG. NO.            | ELECTRONIC FILE | REV |
| A  | HLMP1301            | 87K6974.DWG     | A   |
| SCALE: NTS   | U.O.M.: mm [INCHES] | SHEET: 1 OF 2   |     |



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|                  |                             |                                       |                 |
|------------------|-----------------------------|---------------------------------------|-----------------|
| SIZE<br><b>A</b> | DWG. NO.<br><b>HLMP1301</b> | ELECTRONIC FILE<br><b>87K6974.DWG</b> | REV<br><b>A</b> |
| SCALE: NTS       | U.O.M.: mm [INCHES]         | SHEET: 2 OF 2                         |                 |