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| REVISIONS |     |             | DDC. NO. SPC-F004 * Effective: 12/21/98 * DCP No: 680 |         |        |         |        |         |
|-----------|-----|-------------|---|---------|--------|---------|--------|---------|
| DCP #     | REV | DESCRIPTION | DRAWN   | DATE    | CHECKD | DATE    | APPRVD | DATE    |
| 266       | A   | RELEASED    | HYD   | 8/22/00 | JC     | 2/18/01 | DJC    | 2/18/01 |

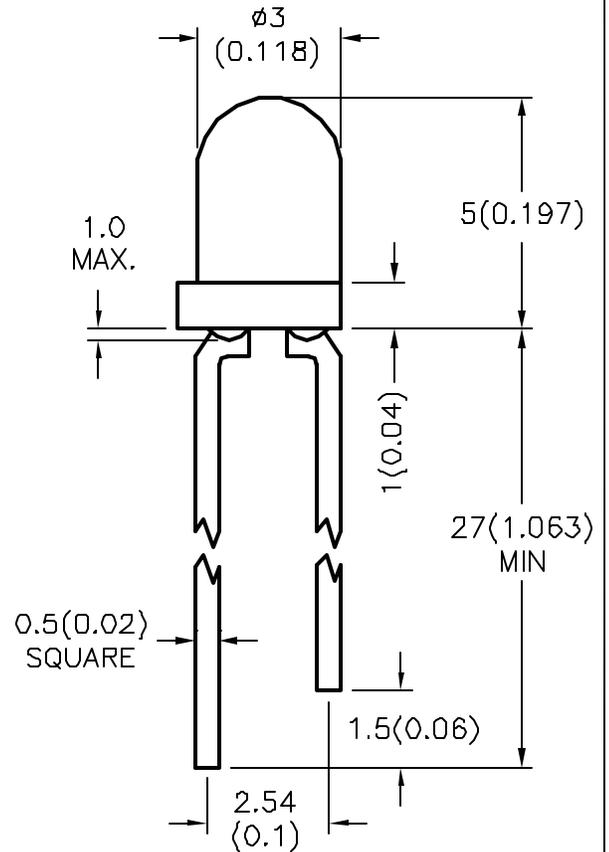
## PACKAGE DIMENSIONS

### FEATURES:

1. With built-in blinking IC.
2. Operation Voltage from 3.5V ~ 13V.
3. Blinking Frequency from 2.5Hz ~ 1.5Hz.

### DESCRIPTION:

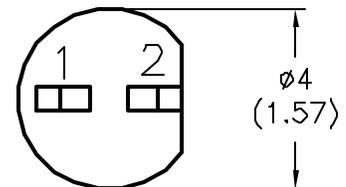
The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.



### Note:

Lead spacing is measured where the lead emerge package.

1 ANODE  
2 CATHODE



| DICE                            | LENS TYPE    | Iv (mcd) @ VF=9 V |     | Viewing Angle<br>2θ1/2 |
|---------------------------------|--------------|-------------------|-----|------------------------|
|                                 |              | MIN               | MAX |                        |
| High Efficiency Red (GaAsP/GaP) | Red Diffused | 12.5              | 32  | 60°                    |

### NOTE:

θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

SPC-F004.DWG

DISCLAIMER:  
ALL STATEMENTS AND TECHNICAL INFORMATION CONTAINED HEREIN ARE BASED UPON INFORMATION AND/OR TESTS WE BELIEVE TO BE ACCURATE AND RELIABLE. SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL, THE USER SHALL DETERMINE THE SUITABILITY OF THE PRODUCT FOR THE INTENDED USE AND ASSUME ALL RISK AND LIABILITY WHATSOEVER IN CONNECTION THEREWITH.

**multicomp**

|   |              |            |  |                     |                 |     |
|---|--------------|------------|--|---------------------|-----------------|-----|
| Tolerance Unless<br>Otherwise Specified<br>.XX ± 0.25 (0.01") | DRAWN BY:    | DATE:      | DRAWING TITLE:                                   |                     |                 |     |
|   | HISHAM QDISH | 8/22/00    | T-1 (3mm) BLINKING LED LAMP, HIGH EFFICIENCY RED |                     |                 |     |
|   | CHECKED BY:  | DATE:      | SIZE   | DWG. NO.            | ELECTRONIC FILE | REV |
|   | JOHN COLE    | 2/19/01    | A  | MCL-36BID           | 92N5378.DWG     | A   |
| APPROVED BY:  | DATE:        | SCALE: NTS |  | U.O.M.: MM [INCHES] |                 |     |
| DANIEL CAREY  | 2/19/01      |            |  | SHEET: 1 OF 3       |                 |     |

## Electrical / Optical Characteristics at $T_A=25^\circ\text{C}$

| SYMBOL                  | PARAMETER               | Min. | TYP.    | Max. | UNITS | TEST CONDITIONS                                |
|-------------------------|-------------------------|------|---------|------|-------|--|
| $\lambda_{\text{peak}}$ | Peak Wavelength         |      | 625     |      | nm    | IF = 20mA                                      |
| $\Delta\lambda_{1/2}$   | Spectral Line Halfwidth |      | 45      |      | nm    | IF = 20mA                                      |
| $V_F$                   | Forward Voltage         | 3.5  | 9-12    | 13.0 | V     | Min. IF=6mA<br>Typ. IF=38-56mA<br>Max. IF=70mA |
| $I_{\text{son}}$        | Supply Current          |      | 6-70    |      | mA    |  |
| f                       | Blink Frequency         |      | 2.5-1.5 |      | Hz    |  |

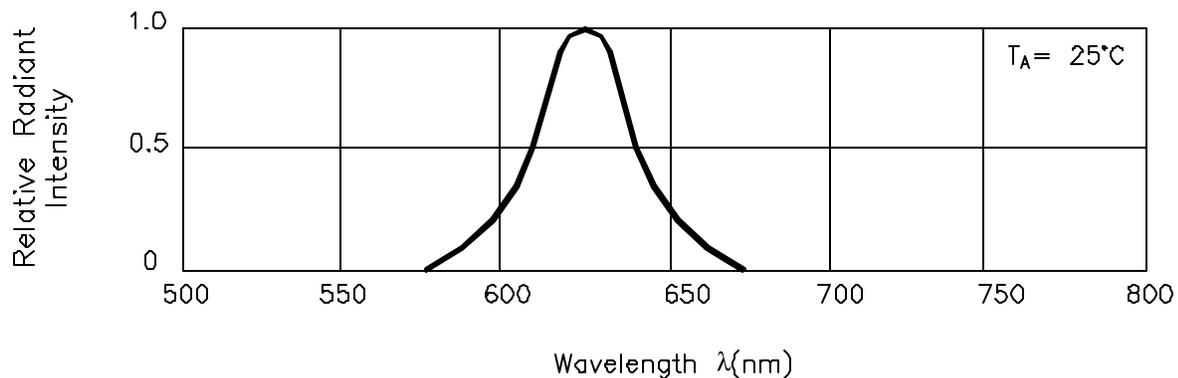
## Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

| Power dissipation (mW) | DC Forward Current (mA) | Reverse Voltage (V) | Operating/Storage Temperature ( $^\circ\text{C}$ ) | Storage Temperature ( $^\circ\text{C}$ )    | Lead Soldering Temperature [1] ( $^\circ\text{C}$ ) |
|------------------------|-------------------------|---------------------|--|---|---|
| 200                    | 38-56                   | 0.5                 | $-40^\circ\text{C} \sim +70^\circ\text{C}$         | $-40^\circ\text{C} \sim +100^\circ\text{C}$ | $260^\circ\text{C}$ for 5 sec                       |

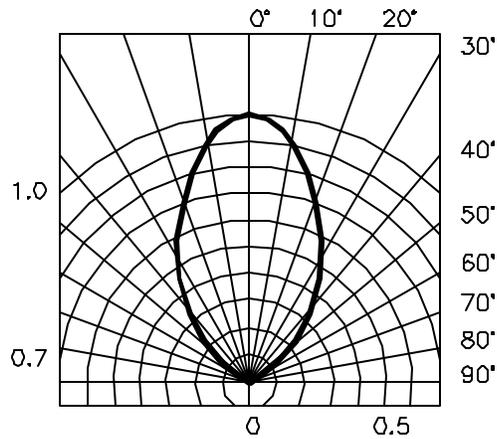
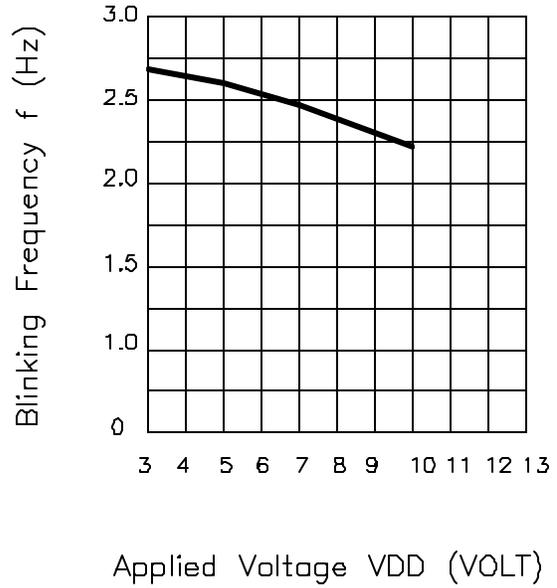
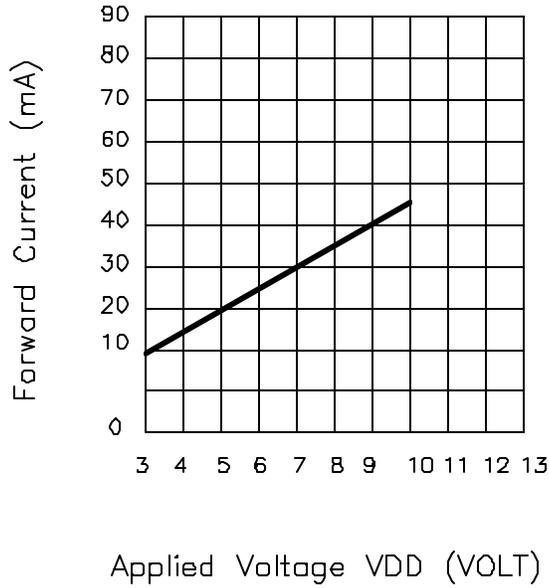
**Note:**

4mm below package base.

### RELATIVE INTENSITY Vs. WAVELENGTH



|        |           |                     |               |
|--------|-----------|---------------------|---------------|
| SIZE   | DWG. NO.  | ELECTRONIC FILE     | REV           |
| A      | MCL-36BID | 92N5378.DWG         | A             |
| SCALE: | NTS       | U.O.M.: MM [INCHES] | SHEET: 2 OF 3 |



**SPATIAL DISTRIBUTION**

|                  |                              |                                       |                 |
|------------------|------------------------------|---------------------------------------|-----------------|
| SIZE<br><b>A</b> | DWG. NO.<br><b>MCL-36BID</b> | ELECTRONIC FILE<br><b>92N5378.DWG</b> | REV<br><b>A</b> |
| SCALE: NTS       |                              | U.O.M.: MM [INCHES]                   | SHEET: 3 OF 3   |