

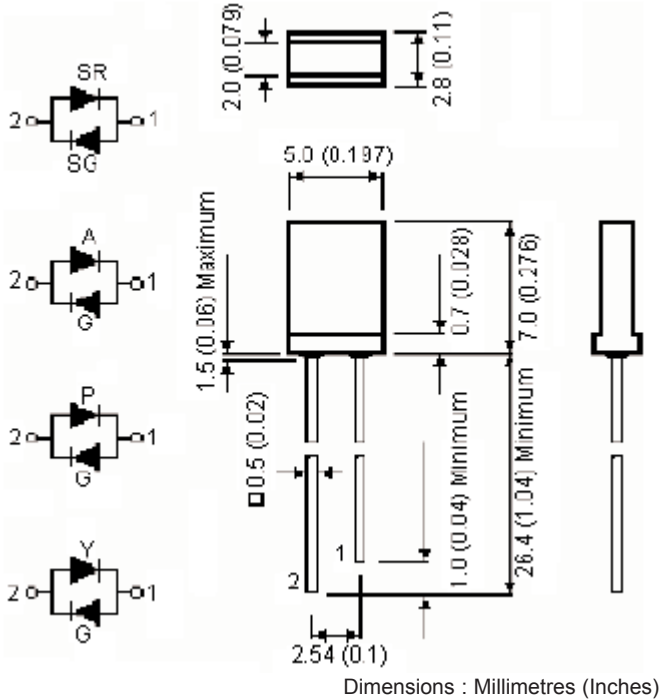


PART NO.

MCL236PURGW

REVISIONS

| ECN # | REV | DESCRIPTION | DRAWN | DATE     | CHECKD  | DATE     | APPRVD  | DATE     |
|-------|-----|-------------|-------|----------|---------|----------|---------|----------|
| -     | A   | RELEASED    | Ramya | 14/10/09 | Sridhar | 14/10/09 | Farnell | 28/10/09 |



Dimensions : Millimetres (Inches)

Specifications:

Dice material : GaAlAs/GaP.  
 Emitted colour : Super red/green.  
 Lens colour : White diffused.  
 Peak wavelength : 660/568nm.  
 Viewing angle : 120 degrees.  
 Luminous intensity (IV) : 12/3.1mcd.



Electrical/Optical Characteristics at T<sub>a</sub> = 25°C

| Parameter                                | Symbol           | Minimum | Typical | Maximum | Unit    | Test      |
|--|------------------|---------|---------|---------|---------|-----------|
| Luminous Intensity                       | IV               | 6.0/1.4 | 12/3.1  | 18/4.9  | mcd     | IF = 20mA |
| Viewing Angle                            | 2θ 1/2           | -       | 120     | -       | degrees |           |
| Peak Emission Wavelength                 | • λ <sub>p</sub> | -       | 660/568 | -       | nm      | -         |
| Dominant Wavelength                      | • λ <sub>d</sub> | -       | 643/570 | -       |         | -         |
| Spectral Line Half-Width                 | Δλ               | -       | 20/30   | -       |         | -         |
| Forward Voltage                          | VF               | 1.5/1.7 | 1.8/2.1 | 2.5/2.6 | V       | IF = 20mA |
| Power Dissipation                        | Pd               | -       | -       | 85      | -       | -         |
| Peak Forward Current (Duty 1/10 at 1KHz) | IF (Peak)        | -       | -       | 100     | -       | -         |
| Recommended Operating Current            | IF (Rec)         | -       | 20      | -       | mA      | -         |

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| <b>DRAWN BY:</b>    | <b>DATE:</b> |
| Ramya               | 14/10/09     |
| <b>CHECKED BY:</b>  | <b>DATE:</b> |
| Sridhar             | 14/10/09     |
| <b>APPROVED BY:</b> | <b>DATE:</b> |
| Farnell             | 28/10/09     |

|   |                |                            |                      |
|---|----------------|----------------------------|----------------------|
| <b>DRAWING TITLE:</b>                                   |                |                            |                      |
| 2.0mm x 5.0mm x 7.0mm Bi-colour LED Lamp - HI Red/Green |                |                            |                      |
| <b>SIZE</b>   | <b>DWG NO.</b> | <b>ELECTRONIC FILE</b>     | <b>REV</b>           |
| A   | M10002406      | 79377_1581210_DWG          | A                    |
| <b>SCALE: NTS</b>                                       |                | <b>U.O.M.: mm (Inches)</b> | <b>SHEET: 1 OF 5</b> |



PART NO.

MCL236PURGW

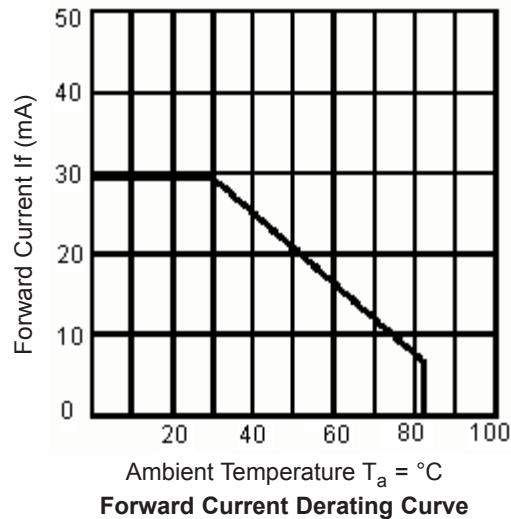
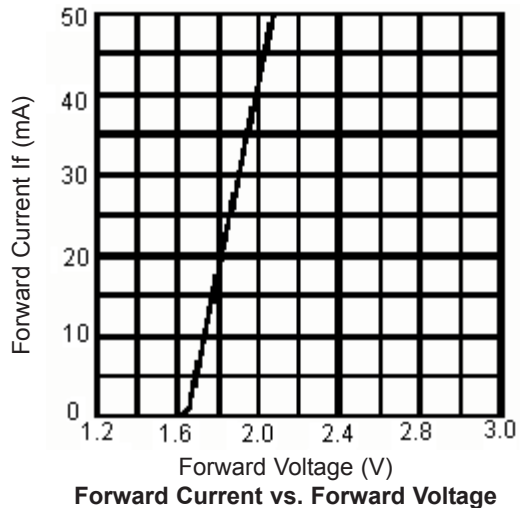
REVISIONS

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|-------|-----|-------------|-------|----------|---------|----------|---------|----------|
| -     | A   | RELEASED    | Ramya | 14/10/09 | Sridhar | 14/10/09 | Farnell | 28/10/09 |

**Absolute Maximum Ratings (T<sub>a</sub> = 25°C)**

|   |                            |
|---|----------------------------|
| Reverse Voltage   | 5 Volt                     |
| Reverse Current   | 10µA (V <sub>R</sub> = 5V) |
| Operating Temperature Range                                     | -40°C to 85°C              |
| Storage Temperature Range                                       | -40°C to 100°C             |
| Lead Soldering Temperature Range<br>1.6mm (1/16 inch) from body | 260°C for 5 Seconds        |

**Super Red (GaAlAs) λP = 660nm**



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| <b>CHECKED BY:</b>  | <b>DATE:</b> |
| Sridhar             | 14/10/09     |
| <b>APPROVED BY:</b> | <b>DATE:</b> |
| Farnell             | 28/10/09     |

|   |                |                            |                      |
|---|----------------|----------------------------|----------------------|
| <b>DRAWING TITLE:</b>                                   |                |                            |                      |
| 2.0mm x 5.0mm x 7.0mm Bi-colour LED Lamp - HI Red/Green |                |                            |                      |
| <b>SIZE</b>   | <b>DWG NO.</b> | <b>ELECTRONIC FILE</b>     | <b>REV</b>           |
| A   |                | 79377_1581210_DWG          | A                    |
| <b>SCALE: NTS</b>                                       |                | <b>U.O.M.: mm (Inches)</b> | <b>SHEET: 2 OF 5</b> |



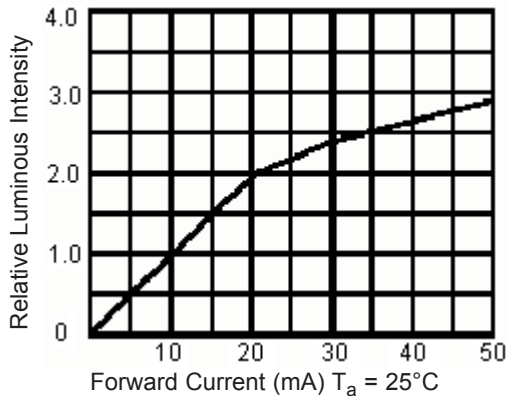
PART NO.

MCL236PURGW

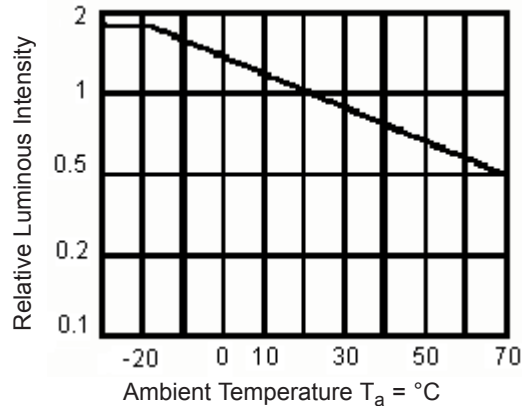
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|-------|-----|-------------|-------|----------|---------|----------|---------|----------|
| -     | A   | RELEASED    | Ramya | 14/10/09 | Sridhar | 14/10/09 | Farnell | 28/10/09 |

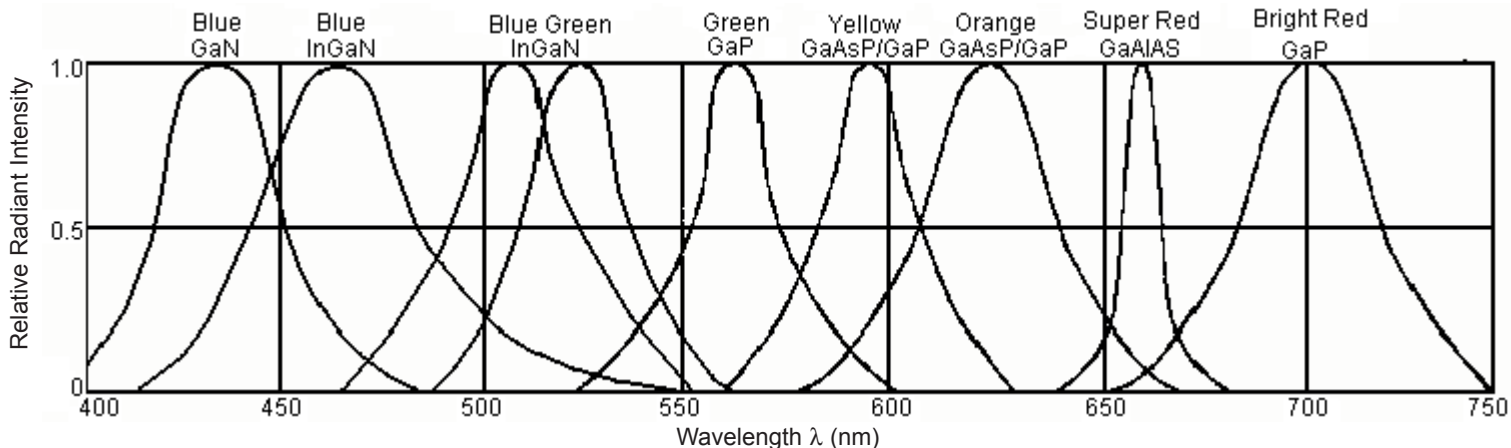
Super Red (GaAlAs)  $\lambda_P = 660\text{nm}$



Luminous Intensity vs. Forward Current



Luminous Intensity vs. Ambient Temperature



Relative Intensity vs. Wavelength

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| Ramya        | 14/10/09 |
| CHECKED BY:  | DATE:    |
| Sridhar      | 14/10/09 |
| APPROVED BY: | DATE:    |
| Farnell      | 28/10/09 |

DRAWING TITLE:

2.0mm x 5.0mm x 7.0mm Bi-colour LED Lamp - HI Red/Green

|            |                     |                   |     |
|------------|---------------------|-------------------|-----|
| SIZE       | DWG NO.             | ELECTRONIC FILE   | REV |
| A          |                     | 79377_1581210_DWG | A   |
| SCALE: NTS | U.O.M.: mm (Inches) | SHEET: 3 OF 5     |     |



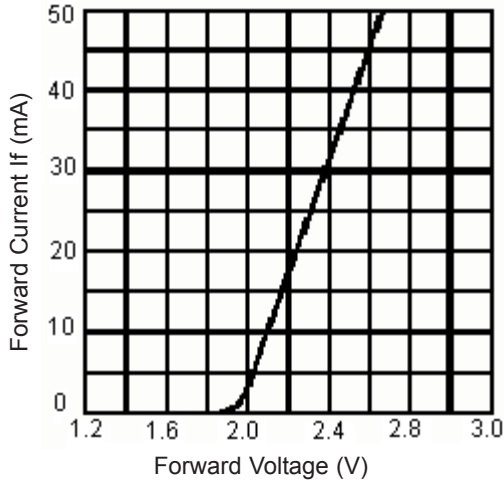
PART NO.

MCL236PURGW

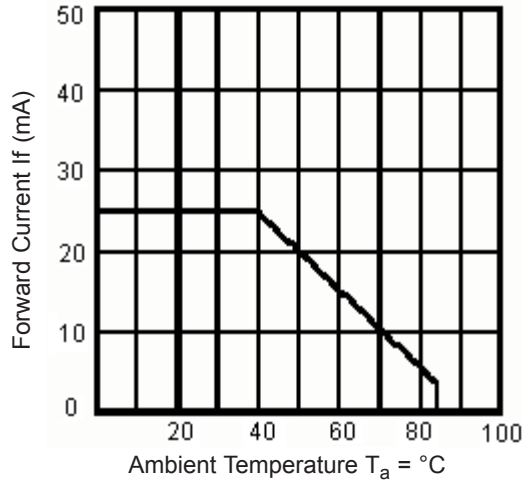
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|-------|-----|-------------|-------|----------|---------|----------|---------|----------|
| -     | A   | RELEASED    | Ramya | 14/10/09 | Sridhar | 14/10/09 | Farnell | 28/10/09 |

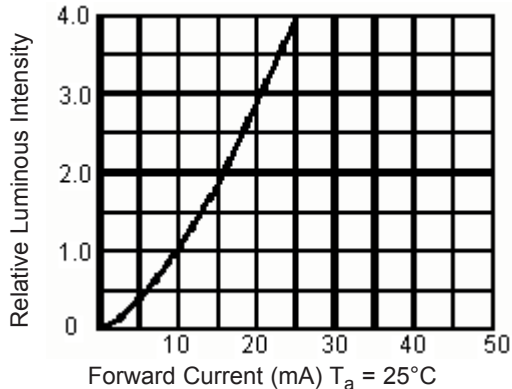
Green (GaP  $\lambda_P = 568\text{nm}$ )



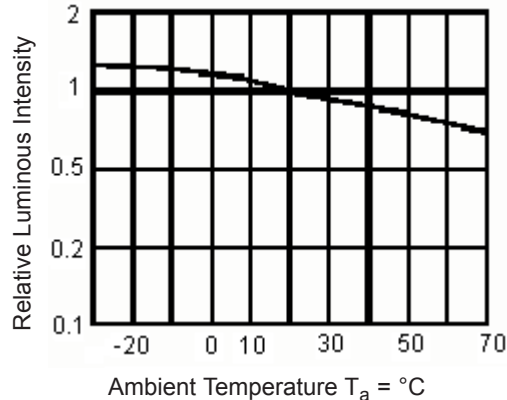
Forward Current vs. Forward Voltage



Forward Current Derating Curve



Luminous Intensity vs. Forward Current



Luminous Intensity vs. Ambient Temperature

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| Ramya        | 14/10/09 |
| CHECKED BY:  | DATE:    |
| Sridhar      | 14/10/09 |
| APPROVED BY: | DATE:    |
| Farnell      | 28/10/09 |

DRAWING TITLE:

2.0mm x 5.0mm x 7.0mm Bi-colour LED Lamp - HI Red/Green

|            |                     |                   |     |
|------------|---------------------|-------------------|-----|
| SIZE       | DWG NO.             | ELECTRONIC FILE   | REV |
| A          |                     | 79377_1581210_DWG | A   |
| SCALE: NTS | U.O.M.: mm (Inches) | SHEET: 4 OF 5     |     |

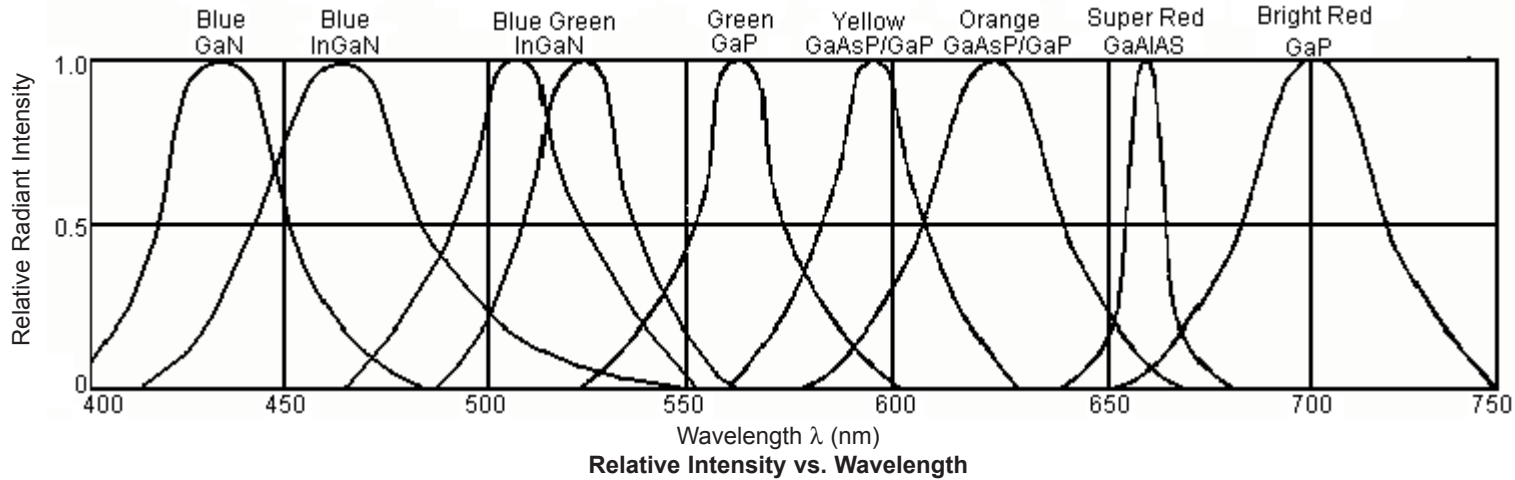


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| -     | A   | RELEASED    | Ramya | 14/10/09 | Sridhar | 14/10/09 | Farnell | 28/10/09 |



Part Number Table

| Description                  | Part Number |
|------------------------------|-------------|
| LED, 2mm x 5mm, Hi-Red/Green | MCL236PURGW |

<http://www.farnell.com>

<http://www.newark.com>

<http://www.cpc.co.uk>

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DRAWING TITLE:

2.0mm x 5.0mm x 7.0mm Bi-colour LED Lamp - HI Red/Green

|                  |                     |                                      |                 |
|------------------|---------------------|--------------------------------------|-----------------|
| SIZE<br><b>A</b> | DWG NO.             | ELECTRONIC FILE<br>79377_1581210_DWG | REV<br><b>A</b> |
| SCALE: NTS       | U.O.M.: mm (Inches) | SHEET: 5 OF 5                        |                 |