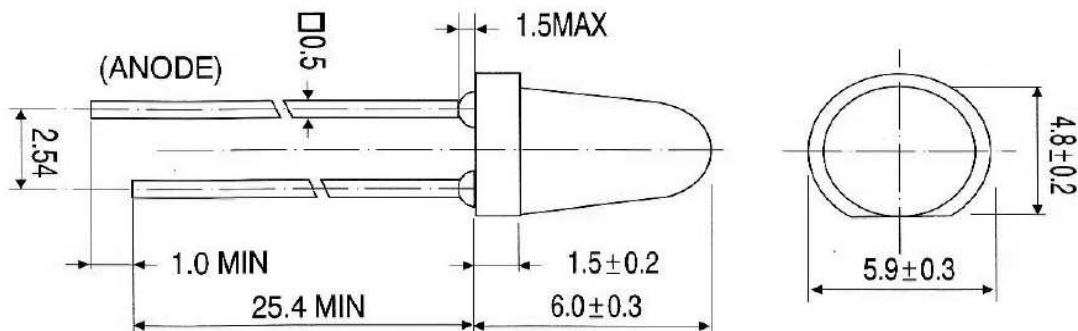




Applications

- Electronic Signs and Signals
- Small Area Illuminations
- Back Lighting
- Other Lighting

Technical Drawing



Notes :

All dimensions in mm tolerance is $\pm 0.1\text{mm}$ unless otherwise noted.

Round LED
Red

Part No.: **M13C2002**

Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 1 from 6 |



Absolute Maximum Ratings

Ta=25°C

| Item | Symbol | GaAsP / GaP | Unit |
|------------------------|-------------------|-------------|------|
| Power Dissipation | P _D | --- | mW |
| DC Forward Current | I _F | 20 | mA |
| Pulsed Forward Current | I _{FP} * | --- | mA |
| Reverse Voltage | V _R | --- | V |
| Operating Temperature | T _{OP} | --- | °C |
| Storage Temperature | T _{ST} | -55 to 100 | °C |

* 0.1 msec pulse, 10% duty cycle

Electrical / Optical Characteristics

I_F=20mA Ta=25°C

| Ermitting Color | Red | | |
|----------------------|-------------------|-----|----------------|
| Material | GaAsP / GaP | | |
| Forward Voltage | typ. | 1.7 | V _F |
| | max. | 2.4 | V _F |
| Wavelength typ. | λ _D | 660 | nm |
| | λ _P | --- | nm |
| | Δλ | --- | nm |
| Color Temperature | min. | --- | K |
| | max. | --- | K |
| Luminous Intensity * | min. | 80 | mcd |
| | typ. | 230 | mcd |
| Reverse Current | max. | --- | μA |
| Viewing Angle | 2Θ _{1/2} | 60 | |

* Per NIST standards

Round LED
Red

Part No.: **M13C2002**

Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 2 from 6 |



Directive Characteristics

**Round LED
Red**

Part No.: **M13C2002**

Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
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Curve

**Round LED
Red**

Part No.: **M13C2002**

Customer:

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 4 from 6 |

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Solder Condition

Lead Free Solder

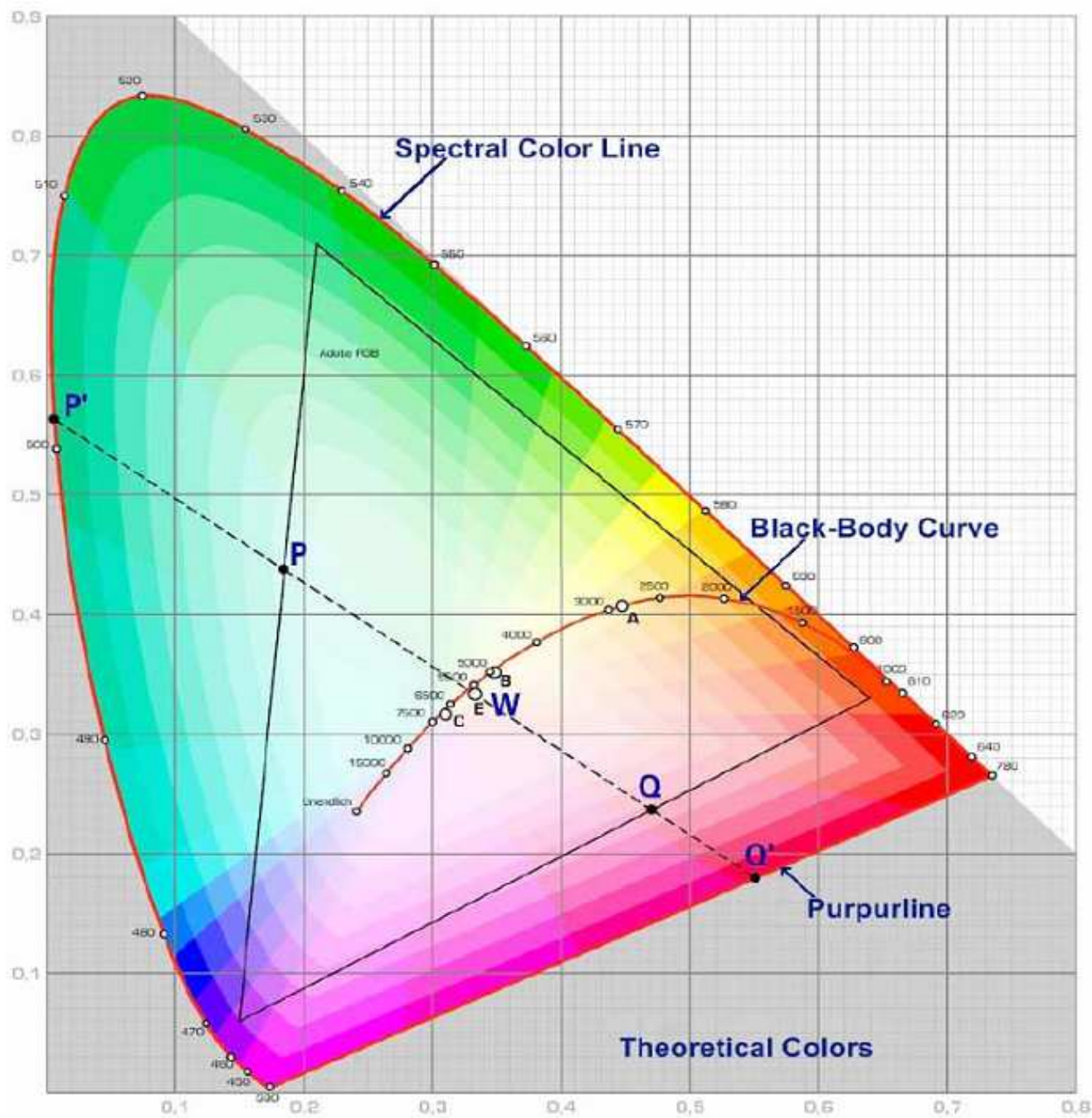


| | |
|--------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13C2002 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 5 from 6 |



Color table curve



| | |
|--------------------------|-----------------|
| Round LED Red | |
| Part No.: | M13C2002 |
| Customer: | |

| | | | | | | | |
|-------|------|------|-------|--------|------|-------|------------|
| DRW: | Dong | CHKD | Chang | MATL: | Chui | DATE | 05.12.2009 |
| APPD: | Ping | | | FINISH | Hui | Sheet | 6 from 6 |