



EXCEED PERSEVERANCE ELECTRONIC INDUSTRY CO., LTD.

深圳市超毅光电子有限公司

φ 5.0mm Ultra Brightness Type LEDS

Part Number:

RL50-PR343

RL50-UY543

RL50-CB744D

RL50-GH744D

RL50-WH744D

RL50-UV744D

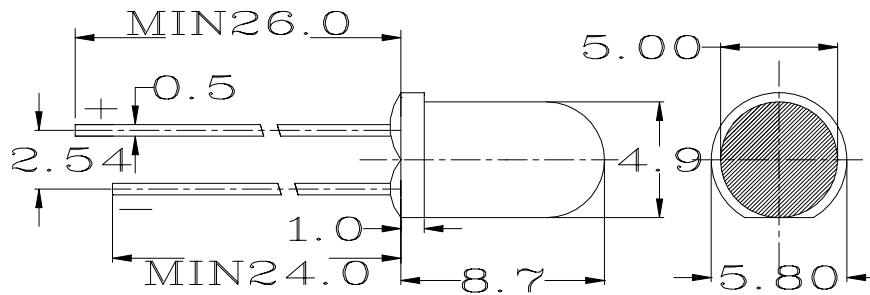
Features

1. LOW POWER CONSUMPTION.
2. RELIABLE AND RUGGED.
3. EXCELLENT UNIFORMITY OF LIGHT OUTPUT.
4. SUITABLE FOR LEVEL INDICATOR.
5. I.C COMPATIBLE.
6. LONG LIFE-SOLIDSTATE RELIABILTY.

Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is $\pm 0.25(0.01'')$ unless otherwise niter
3. Lead spacing is measured where the lead emerge package
4. Specifications are subject to change without notice

Package Dimensions



Selection Guide

| Part NO. | Lens Type | Chip | | | |
|-------------|--------------------------|--------------|-------------------------|------|------------------|
| | | Material | IV (mcd) @10mA *20mA | | Viewing Angle |
| | | | Min. | Typ. | |
| RL50-PR343 | Ultra Red Water Clear | GaAlAs/GaAs | 2000 | 3000 | 25° |
| RL50-UY543 | Ultra Yellow Water Clear | InGaAlP/GaAs | 2000 | 3000 | 25° |
| RL50-CB744D | Ultra Blue Water Clear | InGaN/GaN | 3500 | 6000 | 25° |
| RL50-GH744D | Ultra Green Water Clear | InGaN/GaN | 3500 | 6000 | 25° |
| RL50-WH744D | Ultra White Water Clear | InGaN/GaN | 5000 | 8000 | 25° |
| RL50-UV744D | Ultra Purple Water Clear | InGaN/GaN | 150 | 250 | 25° |

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

2. *Luminous intensity with measured at 20mA.



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Electrical/Optical characteristics at TA=25°C.

| Symbol | Parameter | Device | Type. | Max. | Units | Test Conditions |
|---------|-----------------------|--------------------------|-------|------|-------|-----------------|
| λ peak | Peak Wavelength | Ultra Red Water Clear | 660 | | nm | IF-20mA |
| | | Ultra Yellow Water Clear | 590 | | | |
| | | Ultra Blue Water65 Clear | 475 | | | |
| | | Ultra Green Water Clear | 525 | | | |
| | | Ultra White Water Clear | / | | | |
| | | Ultra Purple Water Clear | 430 | | | |
| λ D | Dominate Wavelength | Ultra Red Water Clear | 640 | | nm | IF-20mA |
| | | Ultra Yellow Water Clear | 585 | | | |
| | | Ultra Blue Water65 Clear | 465 | | | |
| | | Ultra Green Water Clear | 505 | | | |
| | | Ultra White Water Clear | / | | | |
| | | Ultra Purple Water Clear | 400 | | | |
| Δ λ 1/2 | Spectral Line Halfwit | Ultra Red Water Clear | 45 | | nm | IF-20mA |
| | | Ultra Yellow Water Clear | 35 | | | |
| | | Ultra Blue Water65 Clear | 25 | | | |
| | | Ultra Green Water Clear | 25 | | | |
| | | Ultra White Water Clear | 25 | | | |
| | | Ultra Purple Water Clear | 25 | | | |
| C | Capacitance | Ultra Red Water Clear | 45 | | pF | VF=0V; f=1MHZ |
| | | Ultra Yellow Water Clear | 20 | | | |
| | | Ultra Blue Water65 Clear | 65 | | | |
| | | Ultra Green Water Clear | 65 | | | |
| | | Ultra White Water Clear | 65 | | | |
| | | Ultra Purple Water Clear | 65 | | | |
| VF | Forward Voltage | Ultra Red Water Clear | 1.8 | 2.4 | V | IF-20mA |
| | | Ultra Yellow Water Clear | 2.1 | 2.8 | | |
| | | Ultra Blue Water65 Clear | 2.8 | 4.0 | | |
| | | Ultra Green Water Clear | 2.8 | 4.0 | | |
| | | Ultra White Water Clear | 2.8 | 4.0 | | |
| | | Ultra Purple Water Clear | 2.8 | 4.0 | | |
| IR | Reverse Current | All | | 10 | uA | VR=5V |

Absolute Maximum Ratings at TA=25°C.

| Parameter | Ultra Red Water Clear | Ultra Yellow Water Clear | Ultra Blue Water65 Clea | Ultra Green Water Clear | Ultra White Water Clear | Ultra Purple Water Clear | Units |
|----------------------|-----------------------|--------------------------|-------------------------|-------------------------|-------------------------|--------------------------|-------|
| Power dissipation | 110 | 100 | 170 | 170 | 170 | 170 | mW |
| DC Forward Current | 25 | 25 | 25 | 25 | 25 | 25 | mA |
| Peak Forward Current | 200 | 160 | 100 | 100 | 100 | 100 | mA |
| Reverse Voltage | 5 | 5 | 5 | 5 | 5 | 5 | V |

NOTES:

1. Operating temperature: 40°C. TO 80°C.
2. Lead soldering: 260°C for 5 seconds.