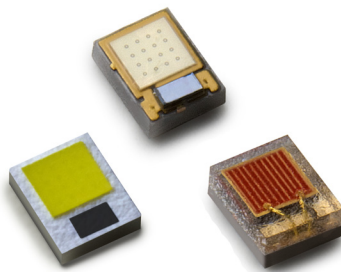


# LUXEON Z Color Line

High power color LEDs in a micro footprint package for ultimate design flexibility



LUXEON Z Color Line comprises a broad portfolio of LEDs that enable never before seen lumen density, flexibility and freedom of design. Available in the full spectrum of colors from 440nm to 670nm, including Lime, enabling highly efficient color mixing with a convenient above-blackbody color point. The LUXEON Z Color Line is ideal for entertainment and stage lighting, indoor and outdoor architectural lighting, emergency vehicle lighting, remote phosphor applications and a wide spectrum of specialty lighting applications.

## FEATURES AND BENEFITS

- Broad selection spanning 440–670nm, including a unique Lime color
- 2.2mm<sup>2</sup> footprint enables unique arrangements in space constrained applications
- 4-up RGBW pixel in 9.5mm<sup>2</sup> — four colors in less area than one regular high power color emitter
- Undomed design allows better optical management
- Enables customizable light sources: linear, rectangular, circular

## PRIMARY APPLICATIONS

- Architectural
- Lamps
  - Remote Phosphor
- Specialty Lighting

Product performance of LUXEON Z Colors tested at 500mA, 25°C.

| COLOR      | DOMINANT <sup>[1]</sup> or PEAK WAVELENGTH <sup>[2]</sup> (nm) |         | LUMINOUS FLUX <sup>[1]</sup> (lm) or RADIOMETRIC POWER <sup>[3]</sup> (mW) |         | PART NUMBER |
|------------|--|---------|--|---------|-------------|
|            | MINIMUM  | MAXIMUM | MINIMUM  | TYPICAL |             |
| Deep Red   | 650  | 670     | 250  | 275     | LXZ1-PA01   |
|            | 650  | 670     | 300  | 325     | LXZ1-PA01   |
|            | 650  | 670     | 350  | 375     | LXZ1-PA01   |
| Red        | 620  | 645     | 40   | 44      | LXZ1-PD01   |
|            | 620  | 645     | 48   | 52      | LXZ1-PD01   |
|            | 620  | 645     | 56   | 60      | LXZ1-PD01   |
| Red-Orange | 610  | 620     | 56   | 60      | LXZ1-PH01   |
|            | 610  | 620     | 64   | 68      | LXZ1-PH01   |
|            | 610  | 620     | 72   | 76      | LXZ1-PH01   |
| Amber      | 585  | 590     | 48   | 52      | LXZ1-PL01   |
|            | 585  | 595     | 56   | 60      | LXZ1-PL01   |
|            | 585  | 595     | 64   | 68      | LXZ1-PL01   |
| Green      | 520  | 540     | 80   | 84      | LXZ1-PM01   |
|            | 520  | 540     | 88   | 92      | LXZ1-PM01   |
|            | 520  | 540     | 96   | 100     | LXZ1-PM01   |
|            | 520  | 540     | 104  | 108     | LXZ1-PM01   |
| Cyan       | 490  | 510     | 48   | 52      | LXZ1-PE01   |
|            | 490  | 510     | 56   | 60      | LXZ1-PE01   |
|            | 490  | 510     | 64   | 68      | LXZ1-PE01   |
| Blue       | 460  | 480     | 24   | 28      | LXZ1-PB01   |
|            | 460  | 480     | 32   | 36      | LXZ1-PB01   |
|            | 460  | 480     | 40   | 44      | LXZ1-PB01   |
| Royal Blue | 440  | 460     | 500  | 525     | LXZ1-PR01   |
|            | 440  | 460     | 550  | 575     | LXZ1-PR01   |
|            | 440  | 460     | 600  | 625     | LXZ1-PR01   |

Product performance of LUXEON Z Colors tested at 500mA, 85°C.

| COLOR      | DOMINANT WAVELENGTH <sup>[1]</sup> (nm) |         | LUMINOUS FLUX <sup>[1]</sup> (lm) |         | PART NUMBER |
|------------|---|---------|-----------------------------------|---------|-------------|
|            | MINIMUM                                 | MAXIMUM | MINIMUM                           | TYPICAL |             |
| Red        | 624                                     | 634     | 24                                | 28      | LXZ1-PD02   |
|            | 624                                     | 634     | 32                                | 36      | LXZ1-PD02   |
|            | 624                                     | 634     | 40                                | 44      | LXZ1-PD02   |
|            | 624                                     | 634     | 48                                | 52      | LXZ1-PD02   |
| Red-Orange | 614                                     | 624     | 40                                | 44      | LXZ1-PH02   |
|            | 614                                     | 624     | 48                                | 52      | LXZ1-PH02   |
|            | 614                                     | 624     | 56                                | 60      | LXZ1-PH02   |
| Amber      | 594                                     | 604     | 16                                | 20      | LXZ1-PL03   |
|            | 594                                     | 604     | 24                                | 28      | LXZ1-PL03   |
|            | 594                                     | 604     | 32                                | 36      | LXZ1-PL03   |
| PC Amber   | 588                                     | 592     | 72                                | 76      | LXZ1-PL02   |
|            | 588                                     | 592     | 80                                | 84      | LXZ1-PL02   |
|            | 588                                     | 592     | 88                                | 92      | LXZ1-PL02   |
|            | 588                                     | 592     | 96                                | 100     | LXZ1-PL02   |
|            | 588                                     | 592     | 104                               | 110     | LXZ1-PL02   |
| Lime       | 566                                     | 569     | 144                               | 149     | LXZ1-PX01   |
|            | 566                                     | 569     | 154                               | 159     | LXZ1-PX01   |
|            | 566                                     | 569     | 164                               | 169     | LXZ1-PX01   |
|            | 566                                     | 569     | 174                               | 179     | LXZ1-PX01   |
|            | 566                                     | 569     | 184                               | 189     | LXZ1-PX01   |
|            | 566                                     | 569     | 194                               | 199     | LXZ1-PX01   |

Notes for Tables:

1. Lumileds maintains a tolerance of ±0.5nm for dominant wavelength and ±6.5% on luminous flux measurements.
2. Deep Red and Royal Blue are binned by peak wavelength. All other colors are binned by dominant wavelength.
3. Deep Red and Royal Blue are binned by radiometric power. All other colors are binned by luminous flux.

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