
















Lumileds: Illumination Product Portfolio

High Power LEDs





Product	Description	Features and Benefits
LUXEON MX 	Unmatched performance in a proven package	<ul style="list-style-type: none"> • 1,200 lumens at 150 lm/W enables high performance 120 lm/W fixtures • Ability to meet DLC Premium V4.1 requirements in real world operating conditions • Instant upgrade to LUXEON M (footprint and optically compatible)
LUXEON MZ 	Best combination of brightness, uniformity and luminance, enabling precision light control	<ul style="list-style-type: none"> • Highest lumen density for ideal optical control in a 600–1,000+ lumen package • Tighter beam angles enable higher quality retrofit lamps and higher pole heights for outdoor applications • Increases fixture flexibility when used in combination with LUXEON MX
LUXEON TX 	Extreme efficacy and best performance	<ul style="list-style-type: none"> • 155 lm/W at 700mA, 85°C (4000K 70CRI) • 145 lm/W at 700mA, 85°C (3000K 70CRI) • Design flexibility: low Vf of 2.8V and low Rth at 3K/W; 1.5A max drive current
LUXEON V 	Unmatched flux density with the lowest thermal resistance, enabling never before possible form factors	<ul style="list-style-type: none"> • Low thermal resistance of 0.80°C/W • Over 1,700 lumens from a single, compact source • PSS-CSP Die technology supports 2x the current per mm2
LUXEON Z ES 	Extreme flux density in a micro footprint package for precise optical control	<ul style="list-style-type: none"> • Micro footprint enables close packaging • Undomed design allows precise optical control • Freedom from Binning enables color consistency
LUXEON FlipChip White 	Chip Scale Package (CSP) for maximum design flexibility	<ul style="list-style-type: none"> • Typical performance at 350mA, 85°C for LUXEON FlipChip White 10; 113 lm/W (3000K 80CRI) and 134 lm/W (4000K 70CRI) • Direct Attach—no wire bonds • Up to 300 lumens from a single compact source
LUXEON 5050 	High efficacy and lumens in a multi-die, high power package, enabling low system costs	<ul style="list-style-type: none"> • 625 lumens, 159 lm/W typical for 4000K 70CRI at 160mA, 25°C • Enables highest efficacy (>150 lm/W) system design at effective LED BOM cost • 6V and 24V options compatible with low cost and high efficiency drivers

Mid Power & Low Power LEDs




Product	Description	Feature and Benefits
LUXEON 2835C 	Perfected performance, built on a proven legacy for higher output ranges in a 3V package	<ul style="list-style-type: none"> • 61 lumens at 120mA (4000K 80CRI), 25°C • Maximum drive current of 240mA • Efficacy up to 192 lm/W
	Perfected performance, built on a proven legacy for higher output ranges in a 6V package	<ul style="list-style-type: none"> • 113 lumens at 120mA (4000K 80CRI) • Maximum drive current of 240mA • Hot-color targeted at 85°C and 1/9th ANSI micro-binning for tight color control
LUXEON 2835E 	Perfected performance, built on a proven legacy for lower output ranges in a 3V package	<ul style="list-style-type: none"> • 29 lumens at 60mA • Maximum drive current at 150mA • Efficacy up to 170 lm/W
	Perfected performance, built on a proven legacy for lower output ranges in a 6V package	<ul style="list-style-type: none"> • 54 lumens at 60mA (4000K 80CRI) • Maximum drive current of 120mA • Hot-color targeted at 85°C and 1/9th ANSI micro-binning for tight color control
	Perfected performance, built on a proven legacy for lower output ranges in a 9V package	<ul style="list-style-type: none"> • 75 lumens at 60mA (2700K 80CRI) • Maximum drive current of 120mA • Hot-color targeted at 85°C and 1/9th ANSI micro-binning for tight color control
LUXEON 3014 	Hot color targeted industry standard package for uniform light.	<ul style="list-style-type: none"> • 156 lm/W at 60mA (4000K 80CRI) • 33 lumens at 100mA max drive for superior value • Enables tight color control
LUXEON 3030 2D 	High flux, hot-color targeted 6V package	<ul style="list-style-type: none"> • 210 lm@240mA (6500K 80CRI) • 145 lm/W@120mA (2700K 80CRI) • 160 lm/W@120mA (4000K 80CRI)
LUXEON 3030 2D (with Lumileds Narrow Red Technology) 	The industry's highest flux, hot-color targeted 6V 90CRI package	<ul style="list-style-type: none"> • 124 lm/W typical@120mA, 25°C (2700K 90CRI) • 139 lm/W typical@120mA, 25°C (4000K 90CRI) • Superior reliability affirms long lifetime for end applications in stressful environments
LUXEON 3535L 	Medium flux and efficacy in a 3535 package with a wide range of CCTs and CRIs	<ul style="list-style-type: none"> • 46 lumens at 100mA (4000K 80CRI) • Maximum drive current of 200mA • 1/7th ANSI micro-binning for tight color control
LUXEON 3535L HE 	High flux and efficacy in a 3535 package with a full range of CCTs and CRIs	<ul style="list-style-type: none"> • 52 lumens at 100mA (4000K 80CRI) • Maximum drive current of 300mA • 1/7th ANSI micro-binning for tight color control • Efficacy up to 188 lm/W
LUXEON 3535L HE Plus 	High flux and highest efficacy in a 3535 package with a full range of CCTs and CRIs	<ul style="list-style-type: none"> • 54 lumens at 100mA (4000K 80CRI) • Maximum drive current of 300mA • 1/7th ANSI micro-binning for tight color control • Efficacy up to 195 lm/W

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Stylist Series LEDs

Product	Description	Features and Benefits
AtomoSphere Technology 	Creating the ideal ambiance for restaurants and other hospitality venues	<ul style="list-style-type: none"> • Warm color point • Available in 80CRI and 90CRI for great color rendering • Color point on BBL matching halogen
LUXEON CoB with CrispColor Technology 	Fashion retail lighting that makes an impact, highlighting rich colors and increasing contrast	<ul style="list-style-type: none"> • Typical 93CRI with R9 ~95; 105 to 110 lm/W • Color point below BBL matching proposed ANSI "Preference-based Specification" targets • Gamut area index value of ~80 (normal 90CRI LEDs are around 50CRI)
LUXEON CoB with CrispWhite Technology 	Fashion retail lighting that makes an impact, revealing the whitest whites	<ul style="list-style-type: none"> • Double blue peak enabling the CrispWhite effect • All parts <90CRI, >100 lm/W • Color point below BBL matching CDM • Highest flux densities with the smallest LES
LUXEON CoB with FreshFocus Technology 	Accentuating freshness and overall visual appeal, making food irresistible	<ul style="list-style-type: none"> • LED lighting saves energy, reduces stress on the environment, and without IR and UV, it keeps products fresh longer • Spectrum engineered products with focused color points to enable the right lighting for specific merchandise and applications • Several options available: Produce (fruit & vegetables), Fish, Marbled Meat, Red Meat and Bread & Pastries



Chip on Board LEDs

Product	Description	Features and Benefits
LUXEON CoB Core Range-High Density 	Double the flux in the same form factor	<ul style="list-style-type: none"> • 1202HD: 6mm, 2,500 lumens at 95 lm/W, 3000K 80CRI at Tj=85°C • 1204HD: 9mm, 5,000 lumens at 95 lm/W, 3000K 80CRI at Tj=85°C • 1205HD: 11mm, 6,500 lumens at 95 lm/W, 3000K 80CRI at Tj=85°C • 3-step MacAdam ellipse color definition
LUXEON CoB Core Range 	Uniform, high efficacy and easy to design	<ul style="list-style-type: none"> • High efficacy: >160 lm/W, 80CRI and >160 lm/W, 70CRI at Tj=85°C • Reaching 30,000 lumens at >140 lm/W at 85°C • Up to 4x lower thermal resistance than competition, enabling smaller heatsinks and higher lumens
LUXEON CX Plus COB 	Lowest thermal resistance with industry standard footprint	<ul style="list-style-type: none"> • Available in 80CRI and 90CRI • Range of six CoB products between 500 and 7,000 lumens with high efficacies • Lowest thermal resistance, allowing more reliable systems and higher lm/W in the system

Color LEDs




Product	Description	Features and Benefits
LUXEON 3535L Color Line 	Color LEDs that deliver the perfect amount of color you need. No more. No less.	<ul style="list-style-type: none"> • Same focal length as other LUXEON Color Lines; optically compatible for simpler design cycles • Color palette and 3V white portfolio on the same footprint • Unique phosphor converted Lime and PC Amber colors provide unrivaled maximum performance
LUXEON C Color Line 	Multiple colors, a single focal length	<ul style="list-style-type: none"> • Consistent focal length for ease of color mixing in any system • Lowest thermal resistance, enabling brighter, lower cost, more efficient systems • Completely hot tested, eliminating unwanted surprises in color shift; all colors and whites at Tj=85°C • Broadest color portfolio ensuring largest color gamut • Performance at 350mA, 85°C: Red 48 lumens, Green 116 lumens, Blue 41 lumens
LUXEON Z Color Line 	High power color LEDs in a micro footprint package for ultimate design flexibility	<ul style="list-style-type: none"> • 1.7mm x 1.3mm footprint enables unique arrangements in space constrained applications • Full spectrum of color from 380-670nm, including white and phosphor converted Amber and Lime • The industry's smallest high power color LED • Performance at 500mA, 25°C: Red 52 lumens, Green 120 lumens, Blue 37 lumens

IR LEDs




Product	Description	Features and Benefits
LUXEON IR Compact Line 	Compact package and Ultra-low thermal resistance	<ul style="list-style-type: none"> • 1.9mm x 1.37mm package - 2 pad • Very narrow beams are possible with secondary optics • Rth=2.8°C/W
LUXEON IR Domed Line 	Domed package and Ultra-low thermal resistance	<ul style="list-style-type: none"> • 3.7mm x 3.7mm package - 3 pad (Beam Angles of 60°, 90° and 150°) • To address diverse application needs, such as high punch, long range and high uniformity • Rth=2.5°C/W

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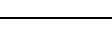


UV LEDs - Ultraviolet LEDs for leading power density performance and superior reliability

Product	Description	Features and Benefits
LUXEON UV FC Line 	Unique LED, enabling limitless design freedom	<ul style="list-style-type: none"> • 400 to 700mW (380 to 420nm); Vf=3.0 to 3.2V typical performance at 25°C, 500mA • Two large pads with 200µ separation for easy die attach and reflow process • 120µm thickness to reduce side wall light
LUXEON UV U Line 	Highest power density, superior efficiency, powered by leading Chip Scale Package (CSP) technology	<ul style="list-style-type: none"> • Smallest footprint (2.2 mm²) SMD enables highest W/cm² system, design flexibility • 1A max drive current allows more flux per LED • AIN package as low as Rth=3.5 K/W for better thermal management
LUXEON Z UV 	Superior flux density, efficiency and design freedom—the industry's only micro-package UV LED	<ul style="list-style-type: none"> • Smallest footprint (2.2mm²) SMD enables highest W/cm² system, design flexibility • 1A max drive current allows more flux per LED • Up to 45% + WPE leading performance

Horticulture - LEDs engineered to deliver the precise wavelengths of light needed to improve crop yield






Product	Description	Feature and Benefits
LUXEON Sun Plus 20 Line 	Delivers the spectra flexibility needed to design a grow light solution to any specification	<ul style="list-style-type: none"> • Tested and binned in PPF (µmol/s) • Fast time to market by leveraging already existing ecosystem • Lowest thermal resistance aiding in thermal management • Direct colors and full spectrum options available
LUXEON Sun Plus 35 Line 	LEDs enabling uniform distribution and optimum output for lighting placed in close proximity to plants	<ul style="list-style-type: none"> • Tested and binned in PPF (µmol/s) • Purple is available in three different recipes (2.5% Blue, 12.5% Blue, and 25% Blue) • Fast time to market by leveraging already existing ecosystem • Addition of LUXEON SunPlus 35 Deep Red and Far Red, enabling customized spectra
LUXEON SunPlus CoB Line 	Ease of Design and High PPF Density for a Deep Penetration into the Plant Canopy	<ul style="list-style-type: none"> • The LUXEON SunPlus CoB line offers an ease of design while providing a high PPF density which is advantageous for a deep penetration into the plant canopy. • Purple (12.5% Blue) provides the right amount of PPF in the blue wavelength (420-480nm) for the application in addition to getting PPF in the red (620-670nm) wavelength. • Fast time to market by leveraging already existing Ecosystem

Readily Available Solutions

Product	Description	Feature and Benefits
LUXEON XF-3014 CV 	Flexible light source distributing uniform light across user selectable lengths	<ul style="list-style-type: none"> • 112 lumens per 96mm segment with 105 lm/W efficacy at 24V, Tj=50°C • Operates at 10m in length with only 2% light output variation • Complete integrated solution guarantees simplified chain and faster time to market
LUXEON XF-3535L 	Illumination grade, flexible LED strips, enabling high lumen and high efficacy design	<ul style="list-style-type: none"> • 1,000 to 5,000 lumen offerings (36-108 LUXEON 3535L LEDs per strip) • Available with solder terminals or push-in wire connectors for easy electrical connection • Backside adhesive for attachment to heatsink allows for ease of mounting and efficient heat dissipation
LUXEON XR-3020 	Linear LED module on an ultra-slim and rigid substrate, enabling high efficacy designs	<ul style="list-style-type: none"> • 1,100 or 2,200 lumen packages at 100mA/LED and 45°C board temperature • 1ft. (24-up) or 2ft. (48-up) length and Zhaga defined screw hole locations • 160 lm/W for maximum light output and low power consumption • >50k hours LED lifetime (L70)
LUXEON XR-3535I 	Turnkey solution on a rigid substrate, enabling high efficacy designs	<ul style="list-style-type: none"> • 1,400 to 1,500 lumen offerings, enabling efficacies of 152 lm/W • Super CEM3 PCB rigid substrate for mechanical robustness and efficient heat dissipation • Two electrical connector options with snap-together or pushbutton terminal blocks
LUXEON XR-M 	Bright, uniform light source in practical, convenient and easy to configure modules	<ul style="list-style-type: none"> • Typical 3,200–5,300 lumen building blocks with 140 lm/W efficacy at 700mA, Tc=85°C • 3, 4, and 5 LED linear board options and 4 LED square board option for design flexibility and luminaire adaptability • MCPCB for efficient heat dissipation and mechanical robustness
LUXEON XR-TX 	High performance LED modules with extreme efficacy for robust lighting designs	<ul style="list-style-type: none"> • Typical 3,300 lumens at 700mA and 85°C board temperature • 140 lm/W for maximum light output and low power consumption • 150mm x 45mm footprint is designed for use with standard third party optics

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Advanced Technologies

Feature Technology		Technology Overview
	Oberon Intelligent Assembly This proprietary pick-and-place system features the industry's only algorithmic LED mixing technology—guaranteeing consistent characteristics and performance board to board.	Unlike contract manufacturers that mix based on flux or Vf value of a binned LED, Oberon eliminates bins and selects LEDs based on specific test data. This results in higher flux, tighter color control, matched Vf strings and board-to-board consistency for applications where uniformity is important—from outdoor streetlights to indoor retail.
	Integrated Light Guides These advanced components soften high-intensity LED pixels to create a more uniform light surface, an increasingly important end game as luminaire form factors become smaller and smaller.	Based on decades of experience developing technology for progressively thinner LED-based television screens, Lumileds has engineered ultra-thin Integrated Light Guides capable of delivering an unprecedented level of light control. The result is luminaires that minimize pixelation to create more visually pleasing light and enhanced ambiance.
	Integrated Drivers These application-specific topologies are designed to address the trend of incorporating more electronic components—including the all-important power source—into a fully integrated, driver-on-board LED system. Integrated Drivers can also be tailored to unique manufacturer requirements, helping amp up system-level optimization.	Integrated Drivers dramatically simplify fixture design and reduce space requirements, offering manufacturers the flexibility to design more streamlined, elegant luminaires. This technology's benefits extend beyond aesthetics, providing system-level cost savings made possible by smaller form factors.
	Connectivity and Controls This sophisticated functionality allows lighting designers to bring cutting-edge luminaires to market that can be controlled remotely, using an app or other device.	To proactively address connectivity expectations in the IoT (Internet of Things) era, Lumileds has leveraged driver-based integration best practices to pioneer state-of-the-art Connectivity and Controls technology. Thanks to a robust selection of supported wired and wireless protocols intelligently integrated into the electronics of the LED system, manufacturers can count on an accelerated time to market.
	Dimming Electronics This patented circuitry technology allows LEDs to mimic the warm, yellow dimming pattern that is the hallmark of halogen bulbs by controlling both a warm and a cool LED with two drivers that pair seamlessly with simple single channel drivers.	Ideal for interior and accent lighting, this emerging technology allows manufacturers to balance the brightness of each fixture to create a desired warm effect on dimming. By augmenting existing single LED driver fixtures with this incremental functionality, manufacturers can quickly and easily extend product offerings with LED luminaires that achieve previously elusive dim to warm lighting.