



Brillia Fact Sheet

About Brillia:

- Brillia™ is a brand of Permlight that has been collaborating with original equipment manufacturers for four years to bring LED-based luminaires to market, including over 100 individual LED-based fixtures currently in production.
 - Brillia was born from Permlight's numerous successes partnering with customers to integrate bright, efficient, long-lasting light engines into fixtures designed for both residential and commercial use.
- Brillia creates efficient light engines using its patented LED technology, which is tested and proven through Permlight's 13 years of experience.
- Brillia engineers help manufacturers rethink the possibilities of lighting design, with cost-effective and environmentally friendly LED technology that is also aesthetically pleasing.
- Brillia works with OEM lighting manufacturers to bring solid-state lighting applications to market quickly and effectively.

About Brillia's Technology Patents:

- As part of Permlight Products, Inc., Brillia's team of inventive engineers have discovered and improved upon a variety of applications for LED technology throughout the years. Since its inception, Permlight has developed a portfolio of patents to help guide the industry and the advancement of solid-state lighting.
- Permlight now has a broad intellectual property including the following issued patents:
 - Modular Mounting Arrangement and Method of LEDs – U.S. Patent 7,108,396
 - Mounting Arrangement for Light Emitting Diodes – U.S. Patent 7,114,831
 - LED Luminaire – U.S. Patent 7,102,172
 - Modular Mounting Arrangement and Method for LEDs – U.S. Patent 6,846,093
 - Certificate of Correction - US Patent 6,712,486
 - Mounting Arrangement for Light Emitting Diodes – U.S. Patent 6,712,486
 - Tread Area and Step Edge Lighting System – U.S. Patent 6,076,936
 - Tread Area and Step Edge Lighting System – U.S. Patent 6,082,870
 - Surface Lighting System – U.S. Patent 6,416,200
 - Modular Mounting Arrangement and Mounting of LEDs – U.S. Patent 6,578,986
 - Aisle Lighting System – U.S. Patent 6,116,748

- Permlight has been a leader in the development and adoption of LED technology with several industry-leading initiatives, including:
 - Permlight was an innovator of thermally managed LED-based light engine.
 - Permlight has sold ten million light engines.

About Brillia's Partnerships:

Brillia partners with world-leading lighting brands to offer uniquely designed, cost-effective and environmentally friendly LED-based lighting solutions. Manufacturers using Brillia technology include:

- Progress Lighting
- Kim Lighting
- Cole lighting
- Architectural Area Lighting
- Chloride Systems
- Rocky Mountain Hardware
- Lucifer

About the LED Industry:

LEDs, or light emitting diodes, are tiny semiconductor "chips" mounted in a package to protect their components and help focus the light.

- Whereas incandescent bulbs create light using a filament that generates heat, LEDs create light by stimulating the movement of electrons. By applying power to semiconductors, photons are created – making the light visible at about 20-30 percent of input power. The result is the creation of visible light without unwanted infrared light.
- LEDs can be packaged in unique designs and layouts, projecting light in specific directions as opposed to projecting light in every direction.
- LEDs are extremely energy efficient, converting 30-40 percent of energy to visible light, versus eight percent of energy with a filament bulb.
- LEDs already have reached and exceeded the brightness levels of incandescent and compact fluorescent sources, and have potential to replace other high output sources such as linear fluorescent and HID. Department of Energy projections are that LEDs can exceed the efficacy levels of all traditional sources in less than 10 years.

The LED Advantage:

- Most LEDs operating under normal conditions are longer lasting, consume less energy and require minimal maintenance. It is this efficiency, and the potential for reduced cost, that continues to drive the market for LEDs.
- LEDs offer the following advantages in lighting applications:
 - Lower Operating Life
 - Lower Maintenance Life Cycle Cost
 - Safety Improvements (Uses Class 2 Power Supply)
 - Mercury Reduction
 - Reduced Installation Time
 - Small Mass (less space required for shipping and installation)

These benefits, when combined, result in a lower overall carbon footprint than any other light source available in the market.

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