LifeLED™

Taking LED lighting to new levels of efficiency and sustainability
Taking LED lighting to new levels of efficiency and sustainability. Offering unparalleled uniformity and distribution, the LifeLED™ is one of the most advanced light engines available. Precisely collimated optics, optimized heat management, and unsurpassed lifespan ensure it offers a long-lasting, reliable, and comfortable white light. The LifeLED™ is also designed to leave the smallest possible environmental footprint behind, allowing significant energy savings to be made throughout its over 70,000 hours of dependable service.
Efficiency

The LifeLED™ is the most efficient LED engine available on the market.
Its unmatched photometric performances guarantee a better light uniformity and distribution by orienting light where it is needed, with an accuracy that earned the LifeLED™ multiple awards and recognitions. This luminous efficacy also means that no lumens are lost, which helps eliminate glare while lowering energy consumption.

Superior thermal management ensures better performance.
Through advanced simulation and extensive testing, Philips Lumec took heat management to a whole new level with the LifeLED™. Every component used is meant to facilitate the dissipation of heat from the luminaire, thus increasing its reliability, lifespan, and overall performance.

Sustainable Design

From the very beginning, the LifeLED™ has been completely eco-designed to reduce its ecological footprint and maximize energy savings.
Composed almost entirely of recycled material and made to be disassembled for easy recycling, the LifeLED™ leaves the smallest possible footprint behind. Throughout its effective lifespan, it will allow for substantial energy savings while also offering higher-quality lighting than other sources.

Now and in the future.
While the LifeLED™ is the most efficient engine actually available, we will continue innovating to offer even better lighting in the future. The LifeLED™ was therefore designed in a modular way so as to make it upgradable or replaceable, and it can even be retrofitted in other luminaires. This way you can benefit from future LifeLED™ generations without having to replace the entire luminaire. This reduces wastes and helps preserving our environment.
A synergy of beauty and technology

While high technology may sometimes require specifiers to make sacrifices in term of design and aesthetics, the LifeLED™ shatters these limitations and opens the door to unfettered lighting projects. Indeed, because our LED engine is designed to be integrated in a variety of different luminaires, there is no need to make compromises — it casts an efficient white light, is reliable, and is versatile. A complete and detailed list of all LifeLED™-compatible luminaires is available on our website.

Visit [www.lumec.com](http://www.lumec.com) for a complete list of all the luminaires compatible with the LifeLED™

Optimized for your lighting requirements

No matter where it is installed, the LifeLED™ will increase comfort and security thanks to its unrivaled optical controls. Providing ideal intensity and uniformity in a variety of photometric distributions, while also providing better facial recognition and color rendition, the LifeLED™ can meet the requirements of almost any application. Furthermore, it can be combined to our Dynadimmer, a dimming module, to maximize energy savings and adapt light to site activity and human needs.
<table>
<thead>
<tr>
<th>Features</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional even in extreme temperatures ranging from -40C/-40F to +50C/122F</td>
<td>Ensures maximum reliability and safety in almost any environment</td>
</tr>
<tr>
<td>Mounted on a specialized aluminum circuit board and bonded to an advanced aluminum heat sink</td>
<td>Longer lifespan, more reliable operation, higher quality lighting</td>
</tr>
<tr>
<td>Radial thermal design proves to be more efficient and lighter</td>
<td>Longer lifespan, uses less material</td>
</tr>
<tr>
<td>High efficacy LEDs</td>
<td>Energy savings up to 50%, can contribute to obtaining credits and financial incentives for sustainable projects</td>
</tr>
<tr>
<td>70,000 of operational lifespan</td>
<td>Reduced maintenance costs</td>
</tr>
<tr>
<td>Unique adjustable collimators setup allows for precise lighting control for optimal photometric performance</td>
<td>Greater pole spacing and 2 times more lumens in the target lighting zone</td>
</tr>
<tr>
<td>Can be taken apart upon end-of-life for recycling and contains 28% less material than the previous LifeLED™ generation</td>
<td>Reduces end-of-life costs for disposal and recycling of the light engine</td>
</tr>
<tr>
<td>Easily replaceable board</td>
<td>Lets you upgrade and benefit from future technological advancements at a lower cost, without having to replace the entire luminaire</td>
</tr>
<tr>
<td>Dynadimmer-ready</td>
<td>Allows for even greater energy savings by dimming light to IESNA-recommended levels</td>
</tr>
</tbody>
</table>

- **Parks and Recreation**
- **Residential Areas**
- **City Centers**
- **Pedestrian Areas**
- **Public Areas**
- **Streets and Roads**
\Longevity

With approximately 70,000* hours of operational lifespan (16 years at 12 hours per night), LifeLED™ far surpasses HPS typical 24,000 hour lifespan and MH’s 10,000-16,000 hour lifespan. Since they last anywhere between 3 and 7 times longer; luminaires powered by the LifeLED™ need to be replaced less often than HID luminaires, contributing to significantly reduced maintenance and life-cycle costs.

* Calculated with an ambient temperature of 25°C / 77°F.

\Photometric Efficiency

To obtain a better light control, the LifeLED™ combines the use of bilateral and medium beam lens control. These precise optical collimators generate more lumens in the target zone, consequently increasing pole spacing up to 8 times the mounting height while also reducing glare and energy consumption in type 2, 3, 4 and 5 distributions.

\Energy savings

The high luminous efficacy of the LifeLED™ allows it to substitute 175W MH or 150W HPS sources while consuming much less energy to provide a better quality of light. It is a direct and highly visible way to show citizens that public money is well spend and that a city is committed to lower its expenses and improve global environmental conditions. For Designers, Landscape Architects, and other Project Managers, the LifeLED™ opens the door to numerous opportunities by meeting new energy efficiency requirements.
\textbf{Thermal Management}

As with all LED products, heat is a major issue when it comes to performance. The state-of-the-art LEDs of LifeLED™ are mounted on a specialized aluminum circuit board and bonded to an advanced aluminum heat sink to keep the thermal junction of each LED as cool as possible. This allows the LifeLED™ engine to function at peak performance levels in extreme environments and also substantially increases its reliability and lifespan.

* For some regions, restrictions may apply. Please contact Philips Lumec.

\textbf{Retrofit existing luminaires}

Keep the current infrastructure and simply replace the light source by the LifeLED™*. With other LEDs, it is impossible to keep an existing infrastructure because their light does not stretch as far as the existing HID lighting already in place. LifeLED™ is the only light engine that uses LEDs and permits to keep existing infrastructure because it spreads out the light twice as far while delivering equal if not better photometric performance.

* Available on Philips Lumec luminaires. Please contact us for more information.

\textbf{Sustainable Design}

The LifeLED™ is made of 93% recycled aluminum alloys and its design makes it possible to take it apart for recycling when it reaches the end of its useful life. Its modular design makes it possible to replace the board or to upgrade for a newer generation in the future without having to change the entire luminaire. Contrary to other light sources, it does not use hazardous substances and consumes much less energy. The LifeLED™ is simply the most efficient lighting solution with the lowest environmental impact.

To know more about the tests conducted third parties and the certifications achieved by Philips Lumec, please visit our website.
The most advanced, reliable, and sustainable solution

The LifeLED™ is the most advanced outdoor lighting engine available on the market. It embodies thousands of hours spent in research and development to achieve superior light distribution and intensity while keeping energy consumption to the lowest possible level. It is the only LED engine that uses adjustable collimators to guarantee the most precise lighting in any photometric distribution.

The LifeLED™ is also an awarded icon of environmental responsibility, going way beyond what an average LED engine is capable of. Completely eco-designed, it makes it possible to use fewer poles, less material, less energy, and it requires less maintenance. The LifeLED™ leaves a negligible ecological footprint behind and is versatile enough for many different situations.
The ideal partner for your outdoor lighting projects

Philips Lumec is a leader in outdoor lighting innovations, constantly developing high-end, sustainable solutions that respect the environment and meet the needs of a rapidly changing industry thanks to its thorough expertise and know-how. Philips Lumec offers an exceptionally vast array of exterior luminaire styles compatible with the LifeLED™, whether classic, contemporary, architectural or high-tech.
Technical Information

Lens Types

Flat lens
- Ancestra / Optima / Transit / Domus / Domus Small / Domus 55 / Renaissance

Sag lens
- Ancestra / Optima / Transit / Domus / Domus Small / Domus 55 / Renaissance

Prismatic Globe
- Ancestra / Optima / Transit / Domus / Domus Small / Domus 55

Prismatic Globe
- Renaissance

Some luminaires (Serenade DSX, Square Lantern, Leonis, Contemporary Lantern) use other lens types.

Visit www.lumec.com for more information.

Optical System

<table>
<thead>
<tr>
<th>DISTRIBUTION</th>
<th>DISTRIBUTION</th>
<th>DISTRIBUTION</th>
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<td>R</td>
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<td>LE2S</td>
<td>LE2A</td>
<td>LE2R</td>
</tr>
<tr>
<td>LE3F</td>
<td>LE3S</td>
<td>LE3A</td>
<td>LE3R</td>
</tr>
<tr>
<td>LE4F</td>
<td>LE4S</td>
<td>LE4A</td>
<td>LE4R</td>
</tr>
<tr>
<td>LE5F</td>
<td>LE5S</td>
<td>N/A</td>
<td>LE5R</td>
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LED Lamp Details

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<thead>
<tr>
<th>Lamps #</th>
<th>Rated life hrs.</th>
<th>LED Model</th>
<th>CRI</th>
<th>Color Temperature</th>
<th>Initial Lumens</th>
<th>Wattage</th>
<th>Max System AC current:</th>
<th>LED mA</th>
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<tbody>
<tr>
<td>40W30LED4K</td>
<td>70,000</td>
<td>Philips Lumileds Rebel</td>
<td>70</td>
<td>4000K</td>
<td>3290</td>
<td>40W</td>
<td>45W</td>
<td>0.48A</td>
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<td>4400</td>
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<td>Philips Lumileds Rebel</td>
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<td>4000K</td>
<td>5620</td>
<td>65W</td>
<td>72W</td>
<td>0.72A</td>
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<td>70,000</td>
<td>Philips Lumileds Rebel</td>
<td>70</td>
<td>4000K</td>
<td>6550</td>
<td>90W</td>
<td>102W</td>
<td>0.95A</td>
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<tr>
<td>105W79LED4K</td>
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<td>10680</td>
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<td>180W98LED4K</td>
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<td>4000K</td>
<td>13100</td>
<td>180W</td>
<td>204W</td>
<td>1.9A</td>
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</table>

1. Rated life represents the time it takes for the LED system to reach 70% of initial lumen output.
2. On average.
3. System wattage includes the lamp and the LED driver.

How to calculate the lamp lumen per watt ratio: In the above table and according to your choice of lamp, please note the initial lamp lumen value and divide this value by the lamp wattage. (Example: 40W30LED4K : 3290/40=82.25)

How to calculate the system lumen per watt ratio (LER): First, visit our website at www.lumec.com and download the IES file (photometric file) of your selected Philips Lumec product. Then, use a photometric software to get the absolute system lumens value and divide by the system wattage. (Example: 40W30LED4K : Absolute system lumens / 45W = LER)

Voltages

120 / 208 / 240 / 277 / 347* / 480*

* Requires a transformer; if no transformer, not available.

FB A R

FS AR

LE5F LE5S N/A LE5R

LE4F LE4S LE4A LE4R

LE3F LE3S LE3A LE3R

LE2F LE2S LE2A LE2R

LE1F LE1S LE1A LE1R

LE0F LE0S LE0A LE0R

OPTICS

FS AR

LE5F LE5S N/A LE5R

LE4F LE4S LE4A LE4R

LE3F LE3S LE3A LE3R

LE2F LE2S LE2A LE2R

LE1F LE1S LE1A LE1R

LE0F LE0S LE0A LE0R

OPTICS
## Typical street lighting application

### HID Optic / with flat lens

**Domus Series**  
DM550-150PSM1-HG3  
LLF .72  
Lumens: 13000  
Arm length: 2 ft  
Mounting height: 18 ft  
Spacing: 120 ft  
Roadway width: 30 ft  
Setback: 2 ft

<table>
<thead>
<tr>
<th>Wattage</th>
<th>Lamp</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 W</td>
<td></td>
<td>190 W</td>
</tr>
</tbody>
</table>

### LED Optic / with flat lens

**Domus Series**  
DM550-90W49LED4K-LE3F  
LLF .85  
Lumens: 6300  
Arm length: 2 ft  
Mounting height: 18 ft  
Spacing: 120 ft  
Roadway width: 30 ft  
Setback: 2 ft

<table>
<thead>
<tr>
<th>Wattage</th>
<th>Lamp</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 W</td>
<td></td>
<td>102 W</td>
</tr>
</tbody>
</table>

### Energy Saving

- **HID Optic / with flat lens**  
  **Domus Series**  
  DM550-150PSM1-HG3  
  LLF .72  
  Lumens: 13000  
  Arm length: 2 ft  
  Mounting height: 18 ft  
  Spacing: 120 ft  
  Roadway width: 30 ft  
  Setback: 2 ft  
  **Energy Savings:** 50%

### Table

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<thead>
<tr>
<th></th>
<th>Avg/min</th>
<th>Max/min</th>
<th></th>
<th>Avg/min</th>
<th>Max/min</th>
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<tbody>
<tr>
<td><strong>Lux</strong></td>
<td>8.33</td>
<td>27.27</td>
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<td>7.06</td>
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<tr>
<td><strong>Fc</strong></td>
<td>0.77</td>
<td>2.53</td>
<td>0.11</td>
<td>7.00</td>
<td>23.00</td>
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<tr>
<td><strong>Lux</strong></td>
<td>7.33</td>
<td>18.47</td>
<td>1.25</td>
<td>5.86</td>
<td>14.78</td>
</tr>
<tr>
<td><strong>Fc</strong></td>
<td>0.68</td>
<td>1.72</td>
<td>0.12</td>
<td>5.67</td>
<td>14.33</td>
</tr>
</tbody>
</table>

### Diagram

- Street view with typical street lighting setup.