



# Outdoor LED Lighting Solutions

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Since 1953, we've built our product  
to a superior standard of quality and craftsmanship.

**PHILIPS**  
**HABCO**



# Made In America

Philips employs over 26,000 employees in the United States, including more than 7,000 workers in 20 lighting manufacturing sites. Philips Hadco, located in Littlestown, Pennsylvania is committed to supporting your organization while building a stronger American economy by:

- Continuing to expand our corporate efforts to create a more sustainable future.
- Furthering our research and development activities to produce the most innovative products available.
- Growing our business through local investment in our communities, workers and their families.



## The Philips Hadco Story

Philips Hadco has been a leader in manufacturing high-performance, exceptional quality lighting products for over 50 years. Philips Hadco serves the Municipal/Utility, Transportation and Commercial lighting markets.

Our lean, made-to-order philosophy and commitment to providing the lighting industry's shortest lead times allows us to consistently meet our customers' needs. Philips Hadco specializes in custom and modified products and utilizes the latest technologies available.

## The Total Philips System

Philips Hadco's vertically integrated processes and capabilities leverage the global strength and resources of Philips. From initial design to final assembly, our One-Philips philosophy ensures that each product is engineered with world class components, exceptional

quality and industry leading durability. By integrating Philips LEDs, optics, drivers and controls into each luminaire, our customers benefit from over a century of lighting experience, firmly backed by Philips Hadco's standard 5 year warranty on all LED products.

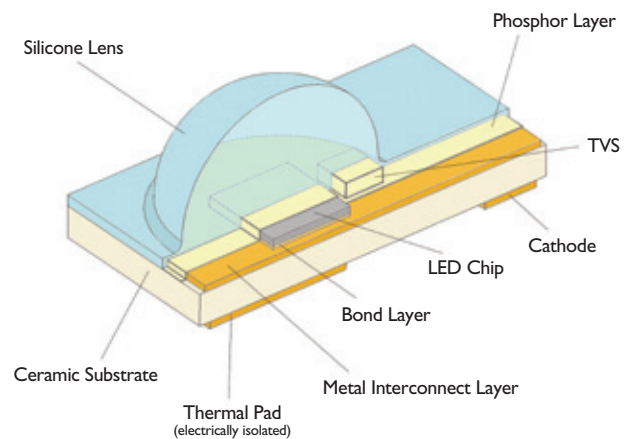
# LED Lighting

## What is an LED?

Simply put, an LED or Light Emitting Diode is an LED chip on a sub-mount that is packaged with electrical connections, a thermally conductive path and a protective lens. When current flows across the junction of the two different materials, light is produced from within the solid crystal chip. Philips Hadco uses high-brightness white LEDs that are created by coating a blue LED chip with a phosphor, which generates a white color.

## LED Basics

LED lighting is a paradigm shift in the outdoor lighting industry. An LED is a digital solid-state lighting component that does not need electrical filaments or gas to produce light. The result is a cool (in the beam), energy-efficient and reliable light source that provides at least 70,000 hours of crisp white illumination without the need for lamp maintenance.



## Benefits of Good Quality White Light

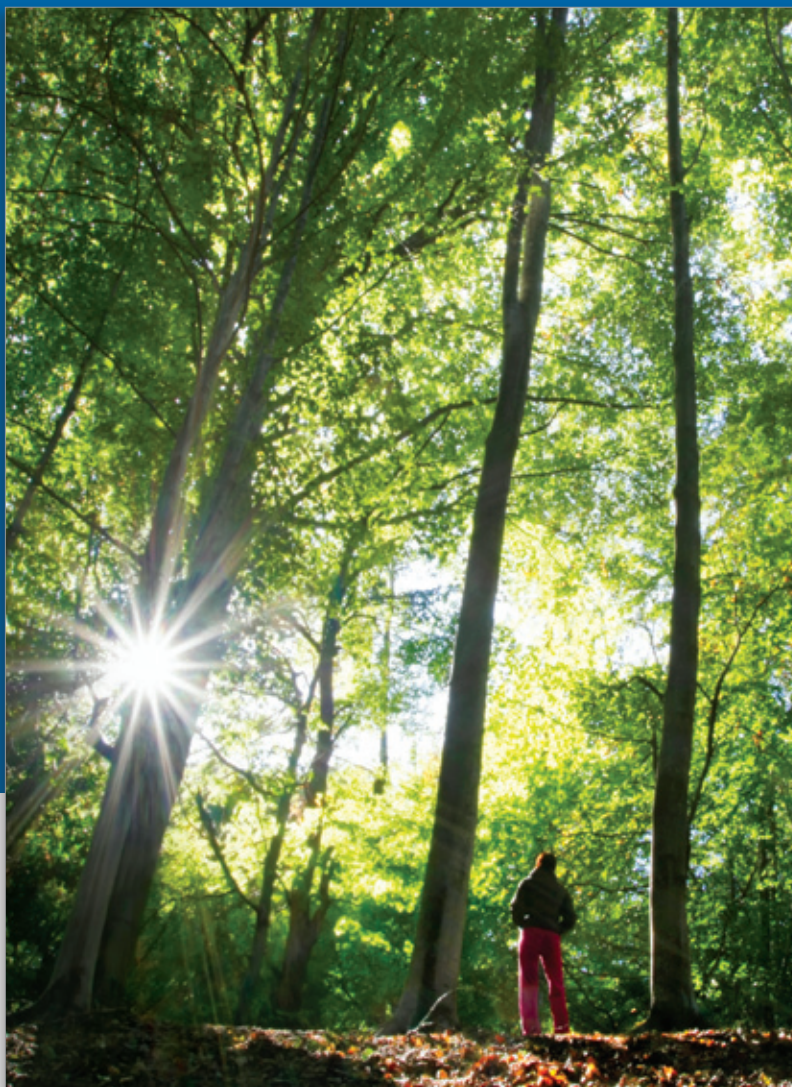


LED technology is proven to be more energy efficient and have a much longer useful life compared to HID. In addition to lower maintenance costs, LEDs provide higher CRI, crisp white light and instant on and off – enhancing roadway vision, safety and security and a friendly atmosphere.



# Sustainability

What does Green really mean? Many think of it in terms of the degree to which we are preserving our planet. One way to accomplish this is to reduce our “carbon footprint”. The carbon footprint is thought of as the amount of carbon dioxide (CO<sup>2</sup>) and green house gases released into the atmosphere by human activity or a product life cycle. By switching to LED, the amount of CO<sup>2</sup> emitted is drastically reduced. In addition, since LEDs are mercury-free and contain no hazardous materials they are environmentally safe and recyclable.



## Long Life/ Maintenance Saving/ Energy Saving

Solid State LED Lighting eliminates moving parts and connections, and therefore significantly enhances the useful service life of our luminaires. The longer useful service life and energy efficiency of our LED luminaires virtually eliminates maintenance and improves payback for a more immediate return on investment.

In most cases, energy and maintenance savings exceed 60%. With Philips Hadco LED Luminaires you can deliver superior lighting performance with superior energy and maintenance savings. Further, our extended LED warranties will give you peace of mind knowing that we will stand behind our product.

### PAYBACK ANALYSIS

#### Project Analysis - LED Roadway (Cobra Head)

##### 1,000 Philips Hadco RX1-40 (LED) replacing 150W HPS

Product and Installation Total Cost	\$515,000	
Payback	2.9 yrs.	
Annual Energy Savings	395,000 kWh	49%
Annual Lighting Cost Savings	\$178,000	69%
Annual Carbon Emissions Eliminated	272 metric tons	

#### Notes:

LED Fixture Useful Life - 18.5 years

Annual Lighting Cost Savings include avoided relamping and rebalasting costs

Installation / Maintenance Labor Rate - \$225.00 per man hour

Assumes clean energy rebate - \$175.00 per fixture

### PAYBACK ANALYSIS

#### Project Analysis - LED Decorative Post Top

##### 250 Philips Hadco RL52 (LED) replacing 175W MH Probe Start

Product and Installation Total Cost	\$337,000	
Payback	4.8 yrs.	
Annual Energy Savings	134,500 kWh	60%
Annual Lighting Cost Savings	\$70,000	80%
Annual Carbon Emissions Eliminated	93 metric tons	

#### Notes:

LED Fixture Useful Life - 13.9 years

Annual Lighting Cost Savings include avoided relamping and rebalasting costs

Installation / Maintenance Labor Rate - \$225.00 per man hour

Assumes clean energy rebate - \$175.00 per fixture

# LED Roadway Lighting

Philips Hadco LED Roadway lighting solutions are ideal for many urban, suburban and rural applications while providing superior performance and improved uniformity of light. Further, our sleek and decorative designs easily integrate into major and minor roadways, city centers, downtown streetscapes and parking facilities. This powerful combination of function and form creates more comfortable roadway lighting – enhancing safety conditions for drivers, pedestrians and bikers.



**LED Roadway**  
*Cobra Head Replacement*  
**RX1**



**LED Roadway**  
*Cobra Head Replacement*  
**RX2**



**LED Roadway**  
*City Centers / Parking Lots*  
**RX3**



**LED Roadway**  
*Residential Roadways*  
**RX4**



# LED Streetscape Lighting

Consider the wide range of information regarding streetscape lighting – lamp life, energy efficiency, lighting efficacy (quality and direction of light), environmental impact, aesthetics and impact on safety and security. Philips Hadco has thought about all these attributes when designing and developing the wide range of LED decorative streetscape line of products. With the One-Philips philosophy standing behind every product, you can be assured that Philips Hadco combines vertically integrated Philips components, years of design experience and superior photometrics to deliver the highest quality solution for all your streetscape lighting needs.



**LED Streetscape**  
LumiLock LED Decorative Post Top  
**RL52**



**LED Streetscape**  
LumiLock LED Decorative Post Top  
**TX03**



**LED Streetscape**  
LEDGINE LED Decorative Pendant  
**TXF9**



**LED Streetscape**  
LumiLock LED Decorative Post Top  
**CL52**

# LED Campus and Park Lighting

Campus and park lighting may seem simple to the person enjoying the park for a jog, bike ride or hike. Philips Hadco knows that lighting specifications are anything but simple. Campuses and parks typically have multiple uses – from high impact entrances, landscape highlights and recreational areas to pedestrian walkways and jogging/riding trails. Often, these multiple uses are happening simultaneously and require different lighting solutions. Let Philips Hadco's experience and wide array of LED luminaires guide you toward creating custom lighting solutions that will provide a safe environment and lasting memories for years to come.



**LED Campus / Park**  
*LEDGINE LED  
Decorative Pendant*  
**CXF6**



**LED Campus / Park**  
*LEDGINE LED  
Decorative Pendant*  
**CXF14**



**LED Campus / Park**  
*LumiLock LED  
Decorative Post Top*  
**VL151**



**LED Campus / Park**  
*LumiLock LED  
Decorative Post Top*  
**RL34**



# LED Flood and Security Lighting

Safety and security should not involve compromise on performance or value. The utility and versatility of flood lighting has been significantly enhanced with Philips Hadco's FX series LED luminaires. Combining sleek contemporary styling, precision optics, energy efficiency and multiple mounting options, this is an ideal solution to a wide range of new and retro-fit applications. With a compact size and simplicity of design, the Philips Hadco RX4 LED luminaire understates its ability to provide pedestrian and off road areas with brilliant white light.



**LED Flood Light**  
*Commercial Applications*  
**FX1**



**LED Flood Light**  
*Commercial Applications*  
**FX2**



**LED Security**  
*Commercial Applications*  
**RX4**



# LED Solar Lighting

Efficiency, ease of installation and reduced impact on the surrounding environment are all reasons to consider an integrated Solar/LED solution from Philips Hadco. Our traditional Pendant and Post-Top series provide “off grid” lighting, so there is no need to trench for electrical lines.



**LED Solar Post-Top**  
*Commercial Applications*  
**TX03**

# LED Bollard Lighting

Designed for public courtyards, shopping centers, corporate and university campuses, you'll find bollards for all types of applications with LED performance and durability. Philips Hadco's variety of styles ensure that our walkway fixtures will blend into your environment ... or stand out and make a statement.



**LED Bollard**  
*Commercial Applications*  
**DB30**



**LED Bollard**  
*Commercial Applications*  
**RD8**



**LED Bollard**  
*Commercial Applications*  
**OB361**

# American Recovery and Reinvestment Act



We are pleased to confirm that our products are commercially available off-the-shelf (COTS) products assembled in the United States and are, therefore, domestic end products or domestic construction material available for purchase in full compliance with the 1933 Buy American Act (41 U.S.C. § 10a-10d) and the Buy American provision of the American Recovery and Reinvestment Act of 2009.

Philips employs over 26,000 employees in the United States including more than 7,000 employees in 20 manufacturing sites focused on lighting. Philips Hadco is located in Littlestown, Pennsylvania.

Visit our website at **hadco.com**  
for more product information.

Contact your local representative  
for all your local project needs.



## Benefits of Financing Your Lighting Project

Financing your lighting project makes sense. Here are some important reasons why:

### Net Positive Cash Flow

It is possible that your monthly energy savings will exceed your monthly finance payment – this is how the Philips Hadco Finance Program is designed. As a result, you could possibly realize a positive monthly cash flow from your lighting upgrade beginning immediately.

### Conservation of Cash and Credit Lines

Since neither capital funds nor your bank line of credit are tied up in project costs, you maintain the financial flexibility to continue utilizing these funds as you see fit.

### 100% Financing

Your lighting equipment, recycling and installation costs are all included in one convenient, fixed monthly payment.

### Convenience

When you work with Philips Hadco, the design, production and financing of the entire lighting system are all handled by one trusted source.

**PHILIPS**  
**LIGHTING CAPITAL**

**PHILIPS**  
**HADCO**









**DAVE MURPHY  
& ASSOCIATES**



DAVE MURPHY & ASSOCIATES, LLC  
114 Essex Street  
Rochelle Park, NJ 07662  
Tel: 201-501-8336  
[www.davemurphy.com](http://www.davemurphy.com)

**PHILIPS**  
**HADCO**

[www.hadco.com](http://www.hadco.com)  
100 Craftway Drive, P.O. Box 128, Littlestown, PA 17340  
Phone: 1-866-423-2658 • Fax: 717-359-0618  
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