

ILLUMIENT

Intelligent Solar and Wind Off-Grid Lighting Solutions

Illumient advances off-grid lighting solutions, with groundbreaking smart technology to achieve the lowest TCO

Lower total cost of ownership than traditional grid-powered street lights

With Illumient, you eliminate the cost of trenching and cabling. Installation takes less than a day. Our LED lights require less power and significantly reduce ongoing maintenance.

Monitor and control over the Web

Our cloud-based service, Horizon, continuously monitors our streetlights and lets you manage them from any web-enabled device, including modern smartphones.

Highly reliable and powerful, fully-engineered

Our lighting solutions have been fully tested and are field-proven. With our remote monitoring and management you can be sure to meet the highest service level demands.

Just beautiful

Choose from a variety of architectural and decorative poles manufactured by Stresscrete, North America's oldest and most reliable manufacturer of spun concrete poles. Their King Luminaire division is the leading manufacturer of quality ornamental light fixtures. Steel poles are also available.



eSolar.ca
The Solar & Wind Power Experts
EfstonScience

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Solar & Wind Power

Batteries in the base of the pole store enough power to illuminate the LED luminaire year round even through periods of no wind or sun. It works in all weather conditions including snow, ice and rain.



Solar PV Panel converts sun energy into electricity

The 250 watt crystalline-silicon photovoltaic module allows for easy installation with flexible orientation, allowing the installer to face the panel south ensuring minimized shading all year round.

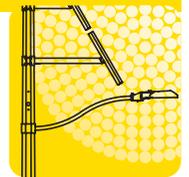
Whisper Quiet Daisy 300 Watt Vertical Axis Wind Turbine (VAWT)

- Efficient – Operates in low or high winds, day and night
- Rugged – All aluminum construction is vibration free and built to last
- Environmentally friendly – People, bat and bird friendly

Poles, LED Luminaires & Photometrics

High-Efficiency LED Luminaires and Custom Photometrics

A number of GE, King Luminaire or customer-selected LED light options are available including Cobra heads, decorative lantern or pendant lights. These LED lights emit as much light on the street as traditional HID luminaires at significantly less power and last up to 4 times longer. Customers have remote control of dimming and light schedules via the Internet.



Attractive, Aesthetics and Efficient Design

Take the 'ugly' out of off-grid lighting! As organizations embrace Green Energy, they struggle to find aesthetic solutions. Illumient is an attractive solution that integrates well with its environment. Our customers consider it the most beautiful off-grid streetlight in the market today. The classic design of the Alexander concrete spun pole and decorative arm as well as wind turbine are available in a wide selection of colours – to match corporate logos.

Intelligent, Remote Monitoring & Control

Unique in the market, real-time remote monitoring and data collection software tracks performance to ensure maximum reliability and performance – all accessible via the Internet. This is included in the cost of the system.



Benefits of Real-Time Remote Monitoring and Control

- All poles connect to the Internet via low-cost cellular or Zigbee communications
- Controls all power and load functions to optimize performance, set lighting profile and dimming easily
- Automatically identifies and diagnoses issues for fast and convenient troubleshooting, sending you alarms when needed
- Software runs in the cloud, requiring no installation or specialized training to use.

SYSTEM COMPONENTS

Power generation

Photovoltaic Solar Panel Converts Sun Energy Into Electricity

This crystalline-silicon module has an aluminum frame and an advanced textured glass surface on the front that increases light absorption and efficiency.

Daisy Vertical Axis Wind Turbine: The VAWT Converts Wind Energy Into Electricity

The Daisy wind turbine is an efficient and reliable way to produce pollution-free, renewable power. The self powered system costs nothing to operate, saving money in electricity costs every year.

Load

High Efficiency LED Luminaire

From 20 -100 watts, yet throws the same amount of light on the street as HID lights at significantly lower power consumption. The long lasting LED effectively eliminates normal maintenance required for HID lighting.

Construction

Luminaire & PV Arm

Aesthetically designed and engineered for strength, the arms are made of galvanized steel and painted your choice of colour with a protective coating guaranteed to never rust or fade.

Spun Concrete or Steel Pole

The Alexander pole is a centrifugally cast reinforced concrete pole, commonly referred to as a "spun pole". It combines elegance with durability and surpasses most other materials in the economy at the same time forming a hollow raceway inside the pole, thereby providing a smooth conduit for electrical and communication cables. Alternatively, our sectional steel pole series also includes batteries in the base. Both come "drill and drop" style, cutting your installation cost in half.

Control & monitoring

Horizon Control and Monitoring from Clear Blue Technologies

Unique to our system is the Horizon hybrid smart controller combined with wireless communications that transmits data to Clear Blue's real-time monitoring software via the Cloud, which ensures peak performance and convenient troubleshooting.

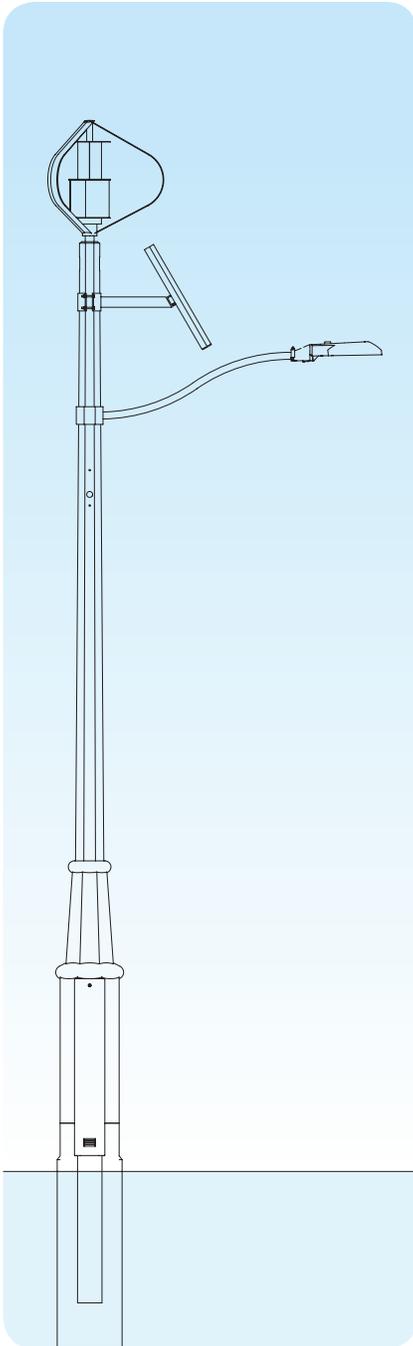
Easy Maintainability & Reliability

Because of Horizon's full remote management capabilities, ongoing maintenance and troubleshooting is done remotely, eliminating the cost for specialized service crews and reducing the number of site visits by up to 90%.

Power storage

Sealed Absorbed Glass Mat Batteries

These batteries are specifically designed for renewable energy applications with higher freeze resistance, excellent high-rate power discharge and a quick recharge rate.

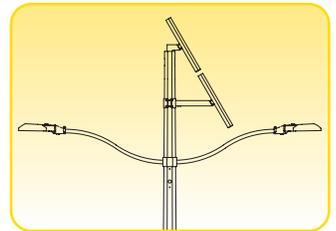
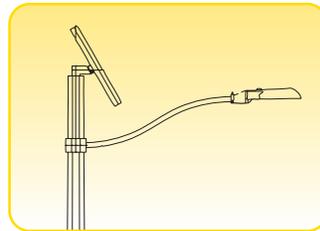
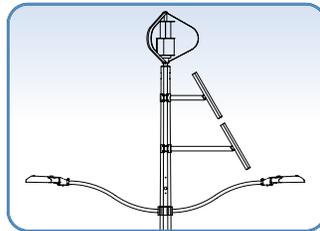
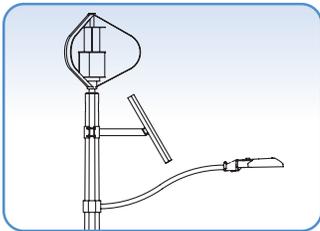


Product Configurations

Depending on the light and power requirements of the project, one VAWT, one or two solar PV panels and/or LED luminaires are combined.

Illumient Hybrid		Illumient Solar	
Illumient Hybrid combines a vertical axis wind turbine (VAWT) with solar photovoltaics to take advantage of weather conditions.		Illumient Solar uses only the sun to generate electricity in low wind areas.	
<i>Illumient Hybrid</i>	<i>Illumient Hybrid Duo</i>	<i>Illumient Solar</i>	<i>Illumient Solar Duo</i>
1 Turbine + 1 Solar PV Panel powers 1 LED luminaire	1 Turbine + 2 Solar PV Panels powers 2 LED luminaires	1 Solar PV Panel powers 1 LED luminaire	2 Solar PV Panels powers 2 LED luminaires

Optional Pole and Power Packages



With thousands of LED light fixtures to choose from, customers can select Illumient Pole and Power systems to marry a green solution with their preferred light fixture and supplier. Illumient Power and Pole systems are also perfect for powering and monitoring environmental controls, traffic systems and other devices.

Security Camera Monitoring Package

Illumient's Security Package provides the option of a security camera and monitoring system for any Illumient pole.



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