

VENTO Series

The World's First Smart Off-Grid Hybrid Solar and Wind Lighting Solution

Get utility-grade lighting systems with the brightest luminaires and maximum uptime. Our new, sleek new design utilizes cost-effective lithium-ion batteries to illuminate parking lots, data centers, campuses, pathways or areas prone to flooding and theft plus provides unparalleled:

- **Energy Forecasting & Management**
- **Remote Troubleshooting & Remediation**

VENTO is a configurable lighting solution built to scale across different site types and requirements. It supports flexible fixture/pole configurations and can be outfitted with sail arms for branding/signage plus smart-site add-ons (security, connectivity, sensors). Clear Blue's commissioning and support services simplify deployment and ongoing operations for systems needing:



Maximum Uptime

Our predictive analytics, weather forecasting and individual load control enables management for maximum uptime.



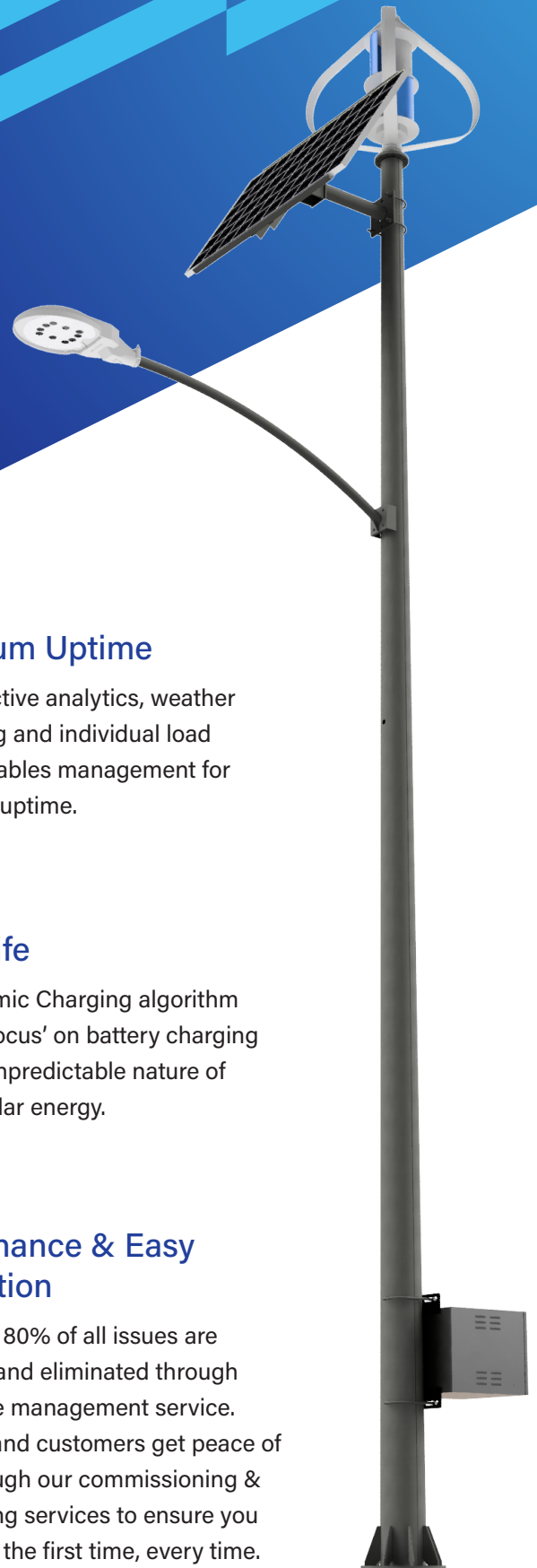
Long Life

Our Dynamic Charging algorithm uniquely focus' on battery charging with the unpredictable nature of off-grid solar energy.



Maintenance & Easy Installation

More than 80% of all issues are managed and eliminated through our remote management service. Installers and customers get peace of mind through our commissioning & provisioning services to ensure you get it right the first time, every time.



VENTO Series

Technical Data

| System Components Overview | |
|----------------------------|---|
| Solar Panels | 345 Watt and Higher Panels |
| Batteries | Lithium-Ion Batteries |
| Pole | Steel, aluminum, and concrete poles available from 18'. Direct bury, breakaway poles, and anchor bolts available. |
| Light | Dimmable LED light |
| Wind Turbine | DS-300 Vertical Axis Wind Turbine |
| Controller | Clear Blue's Smart Off-Grid Controller |
| Energy-as-a-Service (EaaS) | 3 years of service included in purchase (includes Clear Blue's extended warranty) |
| Communications | Included in EaaS - Illumient includes 3 years of communications, cellular for single units and mesh/Ethernet or mesh/cellular for multi-pole projects |

| Options | |
|-----------------------|--|
| Solar Panels | Single or Dual 345 Watt and Higher Panels |
| Battery Options | Single or dual lithium-ion batteries, 105Ah configurations |
| IoT Technology Option | <ul style="list-style-type: none"> • Motion sensing (integrated with controller) • Security/CCTV cameras • Pedestrian traffic counters • Smart traffic management • Air quality/pollution & chemical monitoring • Smart parking systems • Wifi hotspots • Sustainable energy/carbon credits • Energy reduction & optimization |
| Communications | Cellular for small quantity installations or, Mesh/Ethernet or Mesh/Cellular for large quantity projects |
| Pole | <ul style="list-style-type: none"> • Galvanized & painted steel poles • Concrete poles • Aluminum poles |
| Communications | Built in WiFi or Cellular |

| Clear Blue Smart Off-Grid Controller Certifications | |
|---|--|
| Health & Safety | IEC/UL/CSA601010-1, CSA C22.2 No.107.1 and UL50E, TUV certified. |
| EMC (EUDirective 2014/30/EU) | ETSI EN301 489-1 V2.1.1, ETSI EN 301 489-17 V3.1.1 (2017-02) & ETSI EN 301 489-52 V1.1.0 |

Other components adhere to their individual manufactures certifications. Please consult your sales representative if you have questions about the certifications of other components such as batteries, lights, poles or solar panels.

VENTO

Technical Data

| Features | |
|-----------------------------------|--|
| Battery Heating & Insulation | With an expertly engineered battery cabinet that can include insulation and heating (depending on need and application location), the system can allow Lithium-ion batteries usage in areas where lighting is needed below freezing temperatures, protecting battery integrity and extending battery life. |
| Smart Battery Charge Profile | Includes patented multi-stage charging and remote software configurable charge profile designed specifically for solar charging and adjustable using Clear Blue's dynamic charging complete with fully customizable temperature compensation. |
| Lithium-Ion Batteries | High-Performance long life Lithium Iron Phosphate battery cells with Clear Blue BMS. Smaller and lighter than lead acid batteries, lithium-ion batteries allow for more versatile designs, allowing the batteries to be installed at the top of the pole for a cleaner aesthetic. |
| Smaller Size & Physical Footprint | Without a base battery cabinet and smaller batteries, the poles can be shorter and battery cabinet hidden under the solar panels, thus the overall physical footprint of the system is smaller, making the CAMMI solution a good fit for a more subtle aesthetic on sidewalks or other applications. |
| Elevated Battery Cabinet | By utilizing lighting Lithium-ion batteries, the design eliminates flooding and vandalism concerns by having the battery and system electronics cabinet installed at the top of the pole, out of reach from rising waters or unauthorized persons. |
| Remote Software Update | New features delivered to all devices via remote software download on an ongoing basis as part of Clear Blue's management service, three years of which is included in upfront price. |
| EaaS | Service provided by Clear Blue to manage issues & protect power system components. This service combines Clear Blue's extended warranty expert power management along and smart forecasting, to ensure the most efficient power systems available. |
| Wind Turbine | Compact 300 W vertical-axis wind turbine with a direct-drive, weather-sealed generator and low cut-in wind speed, providing reliable supplemental power in variable wind conditions for hybrid solar systems. |

| Cloud Management & Service | |
|-------------------------------------|---|
| Illumience Management (Cloud Based) | Illumience Smart Off-Grid provides real-time, 24x7, remote control, management, and proactive servicing of off-grid systems. With Illumience, streetlights, security systems and Internet of Things devices can achieve unprecedented levels of reliability and performance while installation and maintenance costs are drastically reduced. |
| Management Benefits | Clear Blue's predictive analytics, weather forecasting and individual load control enables management for maximum uptime. The Dynamic Charging algorithm uniquely focuses on battery charging with the unpredictable nature of off-grid solar energy. |
| Service Support | Clear Blue's Illumience cloud-based software includes 24/7 monitoring, proactive maintenance, diagnostic testing and fault determination. |
| Security | For full details on Clear Blue's cloud security technology, please visit www.illumient.com or contact sales. |

| Warranty | |
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| Warranty | Extended (3 year) warranty on power components is included as part of the EaaS service contract. |