

Solar-Powered Pole Top Luminaire with VAWT

(Vertical-Axis Wind Turbine)

Description:

A LED streetlight that runs on Wind and Solar Energy.

The turbine has composite blades and springs into action when wind speed reaches 1.3 meters per second. It executes 10-200 revolutions per minute and works with an rpm of 10-60 while creating 200 watts of power in the process. The turbine increases the power generation 24 hours a day. The solar PV is wrapped around the pole, eliminating wind damage and absorbing solar energy from all angles, all times of the day / year.

Available: Samples Q1, Orders Q2 / 2023

General Information	
Pole Height	6,5m
Diameter	180mm
Light Fixture Arm Angle	-10° to 25° degree adjustable
Weight	~160kg (6.5 m)
Number of Days of Autonomy	3 days (luminous efficacy automatically reduced)
LED Lighting	
Power	60W
Lumen output	10365lm
Lumen Efficiency	~173lm / W
Color Temperature (CCT)	3000K / 4000K (standard) / 5000K / 6000K
Lifetime	L80 > 100,000hrs
Dimming	continuously dimmable (0-100%)
ON/OFF control	programmable
Light profile	programmable
Motion Sensor	optional
Warranty	5 years
Solar Module	
Type	vertical, cylindrical (proprietary solar module)
Technology	monocrystalline Silicone, efficiency > 24%

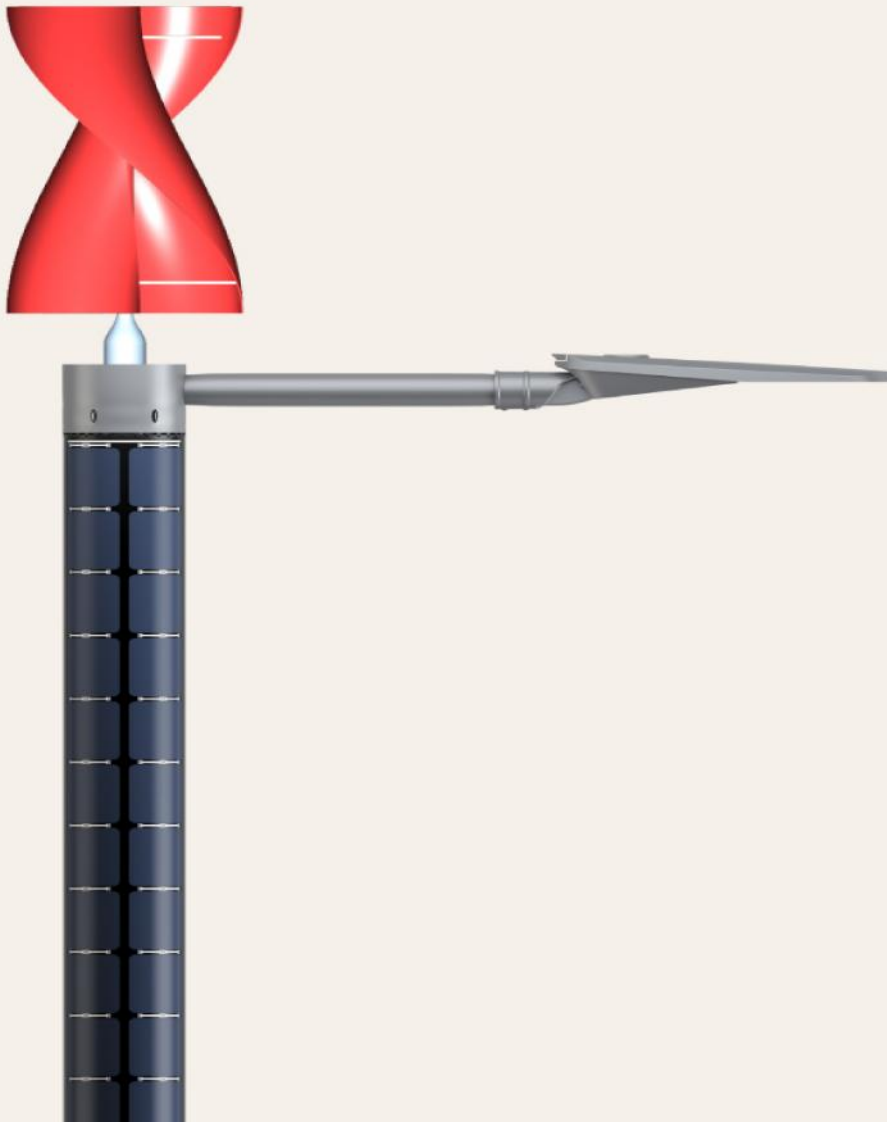
General Information	
Quantity	1 PV - 64 cells, 218Wp
Vertical-Axis Wind Turbine	
Starting wind speed	1,3m/s
Rated voltage	12/24VDC
Rated power	200W
Safe Wind speed	45m/s
Engine	phase permanent magnet generator
Installation height	3 - 12m
Use of the enviroment:	
Altitude: ≤4500m	
Maximum wind speed: ≤35m/s	
Pole	
Material	Steel hot-dip galvanized with powder coating
Wind Load	45m/s (162km/h); higher loads optional
Warranty	20 years anti-corrosion C5m
Battery	
Type	Lithium LiFePO4, High temperature (65°C)
Lifetime	7000 cycles; ~ 19 years
Warranty	3 years (5 or 10 years optional)
Position / Size	Batteries in the pole / Sized per project location
Options	
Camera	Sany POE camera possible; Wi-Fi/4G camera optional
Communication	Remote communication 4G/GPRS or ZigBee/Lora Wan
Protection + Security	
IP 66 Protection; IK09	
Glass cover for LED and PV unit to protect against sand abrasion	

General Information

Reverse polarity protection

Low battery voltage cut-off

Security pole door / vandal protection



We are currently available to discuss new projects. For inquiries, product information and other opportunities, please get in touch at the email below or call us.

Eco-Smart, Inc. (941)376-8484 ph
info@eco-smart.com