

Omniflow®

SMART IoT PLATFORM

USE
YOUR
ENERGY

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OMNILED SMART IoT PLATFORM



OMNILED is a smart energy platform powered by sun and wind energy. It turns renewable energy into IoT services. All functionalities are remotely accessible via Omniflow's web based Monitor and Control platform.

OMNILED 07 SMART ENERGY PLATFORM

Model		General	
OMNILED Smart Hybrid	Wind & Solar generation with built in battery, optional lighting (see Smart Lighting for options)	Dimensions	0.3m height, 1.2m diameter
Wind Turbine		Weight	40Kg (500Wh batteries & without optionals)
Generator	Permanent magnet generator – Axial flux type	Nominal Voltage	12VDC
Diffuser	Single-element flatback shroud	Ingress Protection	IP55
Rotor	6 blades, reinforced polyamide PAG Dimension: 0.70m diameter	Impact Protection	IK08
Controller	12VDC Programmable PWM	Mounting	Mounts on 80mm tube 2 (Two) crossed stainless steel M10 bolts for fixing
Noise	<28 db(A) at 25m @ 8m/s (very low)	Transportation	Package dimensions: 1.3m x 1.3m x 0.35m Foam protected Up to 5 units stackable 20 units on 20" container 45 Units on 40" container
Power	100W rated power (@11 m/s, steady)	Approvals and Standards	CE and UKCA Marking UL/CSA Listed – UL 6142, CSA 22.2, UL 1004-1, UL 1004-4, UL1598 Eye Safety IEC 62471 Safety IEC 60598, IEC/EN 60529, IEC 62031, UL 8750 CAN/CSA No. 250.13 IEC 61400-2 Small wind design 2005/88/EC Noise limits ISO 2394:1998(E) Reliability for structures EMC Directive 2014/30/EU – EN 61000-3-2, EN 61000-3-3, EN55015, EN61547-1 Low Voltage Directive (LVD) 2016/95/EC
Regulation	Turbine stops rotating when system is fully charged, wind is too high or by remote manual shutdown	Grid-Tie*	Input Voltage: 230VAC/50Hz or 110VAC/60Hz Isolation Class: Class II Ingress Protection: IP 67
Solar		Operating conditions	Temperature: -20 to 55 °C Max wind speed: 45m/s
Solar Cell	n-type, monocrystalline Si, >22%Eff @STC	Protection	20A 32V fuse
Controller	MPPT Solar Charge Controller	Optional Accessories	IoT integration inside Body Shell for multi-application: - Wifi Ethernet Router AP - Wifi Ethernet Fiberoptic Router AP - LoRA Gateway (under consultation) - Transmission - 4G/ 5G Modem, ethernet, fiber, P2P, P2MP - Small Cell integration (under consultation) - Weather station - Environmental sensors (under consultation) - Surveillance cameras: IP modular camera (single dual or quad lens) integrated 1080p WDR Forensic Capture IP PTZ Camera (mast mounted) IP Thermal Camera (mast mounted) Video analytics: Smart parking, perimeter security, smoke and fire detection, audio processing, people counting, heat map... **only use approved accessories
Power	60Wp, 0 degrees Optional: 70Wp, Additional Mast Integrated Panels from 70Wp to 150Wp	Monitoring Software	Remote web management cloud based Open API for Smart City platform integration Realtime reporting and control of device subsystems and accessories AI and machine learning capability User and Administrator Level control Configuration and reading of 92 telemetry parameters Alarms settings Maintenance triggers by proprietary algorithm Single unit and group configuration Multi-unit light synchronization by Time Control function Real time unit test (Shows actual program being used by blinking code on lighting system) Day, Week, Month, Year data report
Battery		Warranty	2-year warranty, Extended EOL support option
Battery Bank	500Wh (3x 12V 14Ah C10 Lead Crystal) Optional: Lithium Battery Pack		
Charging	Initial Charging Current 4.2A14.7V/ (25°C)		
Cycle Life	Typical 3,392 cycles (@40% DOD, 25°C), Max 6,000+ cycles		
Smart Lighting			
Luminaire	15, 30 or 60 LED array Lens: Optical Grade PMMA 5100 lm (30W) 6960 lm (45W) 12630 lm (90W) 18600 lm (120W) 25260 lm (180W) Efficiency 170 lm/W at 350mA (30W) Efficiency 196 lm/W at 125mA (10W) Light Pattern: Type III & Type V Optional: from 2700K - 6000K Light Temperatures		
Control	OmniConnect IoT Platform Remote On/Off/Dim with Timer, Time control, Auto Night/Day Operation mode defined by 3 battery voltage levels Auto DIM via integrated infrared motion sensor 2 (Two) additional functionalities independently programmed and triggered by night/day, Time or Sensors events		
Lighting Spacing	Recommended spacing (simulation recommended): 35-40m (12m mast) 25-30m (8m mast) 20-25m (6m mast)		
Mast			
Height	6m, 8m, 10m or 12m		
Material	Galvanized Steel		
Paint	C3 or C4 paint scheme (optional) Color: RAL 9010 *only use approved mast designs		
Body Shell			
Material	Composite Fiberglass/Resin Transparent to radio waves		
Finishing	Marine grade gel coat		
Color	RAL 9010 Optional: Other colours available by request.		
Space inside	Can fit 3 (Three) objects up to: 270 x 400 x 50mm Antennas or other electronics. See Optional accessories		
OmniBrain			
Energy	AI energy and functionalities management system Connection to: Wind, Solar, Battery, Sensors, LED drivers and extra functionalities.		
Light functions	PWM for LED driver control 2 (Two) motion sensor control (infrared*; optical or radar) *1 (One) infrared motion sensor included		
Accessory Ports	2 (Two), 12VDC/5A (Max) each		
Communications	Communication link via integrated industrial 2G/ 4G modem with included Global SIM card		
Built in memory	Stores 5 days hourly based vital data. Voltage (V) Current (A) Rotor Speed (RPM) Temperature (°C)		

* ALL UNITS ARE READY TO GRID CONNECT. FOR OFF-GRID PROJECTS, SITE ENERGY EVALUATION IS NECESSARY, PLEASE CONTACT OMNIFLOW

A. OMNIFLOW® IS REGISTERED TRADEMARK IN VARIOUS JURISDICTIONS

B. OMNIFLOW® PRODUCTS ARE PROTECTED BY INDUSTRIAL PATENT AND DESIGN PATENT IN VARIOUS JURISDICTIONS