**GENERAL DESCRIPTION**

Neptun’s 80W LED Solar Street Lighting System includes a Polycrystalline Solar Panel, LED Street Light Fixture, and long-life LFP Battery System with Charge Controller. This off grid operation eliminates many of the high costs associated with standard lighting installations. No expensive trenching, transformers or meters required. The Solar Panel and Charge Controller system allows for dusk-to-dawn operation with no monitoring needed. Neptun’s exceptional LFP battery storage system allows for over 30 hours of use without a single recharge.

**APPLICATION**
- Street Lighting
- Parking Lot Lighting
- Security Lighting
- Pathway Lighting

**SOLAR SYSTEM CONFIGURATION** (ORDERING INFORMATION)

<table>
<thead>
<tr>
<th>Induction Fixture</th>
<th>Battery System</th>
<th>Solar Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED-451080-24VDC</td>
<td>NE-VLFP-100Ah-24VDC</td>
<td>NE-PPV-190W</td>
</tr>
</tbody>
</table>

**Incredible OFF GRID Operation**
SOLAR LIGHTING SYSTEM
24VDC LED STREET LIGHT FIXTURE

PRODUCT INFORMATION

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Rated Watts</th>
<th>Input Watts</th>
<th>Initial Lumens</th>
<th>Input Line Voltage (VDC)</th>
<th>Max Line Current (Amp)</th>
<th>Power Factor</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED-451080-24VDC</td>
<td>LED Mini Street Light</td>
<td>80</td>
<td>82</td>
<td>6,400</td>
<td>24</td>
<td>3.49</td>
<td>&gt;0.98</td>
<td>26 lbs</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

- LED Driver: Constant Current
- Power Supply: 350mA
- Start Method: InstantON
- Hot Re-start: InstantON
- Input Line Voltage: 24 VDC
- Input Line Frequency: 50/60 Hz
- Driver Off-State Draw: 0 Watts
- Sound Rating: Class A
- LED / Driver System Life: 70,000 Hrs.
- Lumen Maintenance @50,000Hrs: > 70%
- Color Temperature: 5000°K
- Color Rendering Index (CRI): > 70
- Minimum Starting Temperature: -40°C
- Maximum Starting Temperature: 50°C
- Lumens per Watt: > 70
- Power Factor: > 0.98
- Shock / Vibration Resistant: Yes
- FCC Compliance: Part 18, Subp. C
- EPA Rating: 0.71
- Housing IP Rating: IP65
- Optics IP Rating: IP66
- Warranty: 5 Year

MOUNTING OPTIONS

Accepts 1-1/4" - 2-3/8" O.D. Tenon or Pipe
(2) 5-16" Stainless Steel Bolts

PHOTOMETRICS (See Complete IES File)

TYPE III ASYMMETRICAL

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Spec. Rev. 1-2013
PRODUCT INFORMATION - LFP 24V Battery

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Typical Capacity</th>
<th>Nominal Voltage</th>
<th>Discharge Cutoff</th>
<th>Max Charge Voltage</th>
<th>Max Discharge Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE-VLFP-100Ah-24VDC</td>
<td>100 Ah</td>
<td>24V</td>
<td>AUTO @ 20% CAPACITY</td>
<td>40V</td>
<td>20A</td>
</tr>
</tbody>
</table>

PRODUCT INFORMATION - PWM Solar Charge Controller

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Total Rated Charge Current (Max)</th>
<th>Total Rated Load Current (Max)</th>
<th>System Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE-CL10-20-24VDC</td>
<td>20A</td>
<td>20A</td>
<td>24V/12V AUTO</td>
</tr>
</tbody>
</table>

SPECIFICATIONS

- Battery Type: Lithium Iron Phosphate
- System Voltage: 24 VDC
- Charge Operating Temperature: 0°C - 45°C
- Discharge Operating Temperature: -20°C - 60°C
- Storage Temperature: -20°C - 60°C
- Storage Humidity: < 85%
- Weight: 75 lbs
- EPA Rating: 2.0 ft²
- FCC Compliance: Part 18, Subp. C
- UL Standard 1703: Yes
- Warranty: 5 Year

MOUNTING OPTIONS

Round Pole Mount (RPM)
Square Pole Mount (SQPM)

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SOLAR LIGHTING SYSTEM
190W POLYCRYSTALLINE PANELS

DATA - AT STANDARD TEST CONDITIONS (STC)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Nominal Power (WP)</th>
<th>Voltage @ Nominal Power (V)</th>
<th>Current @ Nominal Power (A)</th>
<th>Open-Circuit Voltage (V)</th>
<th>Short-Circuit Voltage (A)</th>
<th>Module Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE-PPV-190W</td>
<td>≥ 190</td>
<td>30.2</td>
<td>7.78</td>
<td>37.1</td>
<td>8.42</td>
<td>14.0</td>
</tr>
</tbody>
</table>

* STC (1,000 W/m², AM 1.5 cell temperature 25°C)
* Power sorting tolerance (as measured by flasher): -0 Watts / +4.99 Watts

DATA - AT NORMAL OPERATING CELL TEMPERATURE (NOCT)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Nominal Power (WP)</th>
<th>Voltage @ Nominal Power (V)</th>
<th>Current @ Nominal Power (A)</th>
<th>Open-Circuit Voltage (V)</th>
<th>Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE-PPV-190W</td>
<td>≥ 149</td>
<td>27.2</td>
<td>6.75</td>
<td>33.9</td>
<td>45.5</td>
</tr>
</tbody>
</table>

* NOCT (800 W/m², AM 1.5, windspeed 1 m/s, ambient temperature 20°C

DATA - TEMPERATURE COEFFICIENTS

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Power (% / °C)</th>
<th>Open-Circuit Voltage (% / °C)</th>
<th>Short-Circuit Current (% / °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE-PPV-190W</td>
<td>-0.44</td>
<td>-0.32</td>
<td>+0.04</td>
</tr>
</tbody>
</table>

DATA - AT LOW IRRADIATION

* At a low irradiation intensity of 200 W/m² (AM 1.5 and cell temperature 25°C) 97% of the STC module efficiency (1000 W/m²) will be achieved

SPECIFICATIONS

- Cell Type: Poly-crystalline
- Cell Arrangement: 60 (6 x 10)
- System Voltage: 600 VDC
- Maximum Reverse Current: 15 A
- Operating Module Temperature: -40°C to +85°C
- Maximum Load: 75 lbs/ft²
- Total Harmonic Distortion: < 15%
- Weight: 58 lbs
- EPA Rating: 16.8 ft²
- FCC Compliance: Part 18, Subp. C
- UL Standard 1703: Yes
- Warranty: 5 Year
Polycrystalline Solar Panel w/
Adjustable Slip Fitter Mount
Accepts 2-3/8 O.D. Tenon

LED Fixture
Accepts 1-1/4" - 2-3/8 O.D. Pipe

LFP Battery and
Charge Controller
(mounting hardware included)

Round Pole Mount (RPM)
Square Pole Mount (SQPM)

32.00"

Pole Not Included

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