

# EnGo Historical

## Solar Street Light

### An ideal solution for:

- universities
- communities
- schools
- historical districts



**Environmental  
Sensors**



**Remote  
Management System**



**Easy Installation  
& Maintenance**



**Smart Sensors**



**High Quality  
Lithium Battery**



**Powered By  
The Sun**

# EnGo Historical 1

## Technical Data Sheet

### HISTORICAL 1 GENERAL SPECIFICATIONS

|                              |   |
|------------------------------|---|
| <b>LED Lamp</b>              | 20 W<br>3400 lm   |
| <b>Solar Power</b>           | 160Wp (4x40Wp), Monocrystalline   |
| <b>Battery System</b>        | GEL Battery***<br>12 V, 60 Ah<br>Lithium Ion Phosphate - LiFePO4<br>12 V, 30 Ah |
| <b>Charge Controller</b>     | MPPT Controller - 12 V  |
| <b>Pole</b>                  | Hot Dip Galvanized + Powder Coated<br>4 m / 13 ft                               |
| <b>Total Weight</b>          | 79 kg / 174 lbs   |
| <b>Environmental Sensors</b> | Available upon request  |

### LED LAMP ELECTRICAL PARAMETERS

|                              |                                   |
|------------------------------|-----------------------------------|
| <b>Rated Power</b>           | 20W                               |
| <b>Operating Temperature</b> | -40 °C ↔ +50 °C / -40 °F ↔ +122°F |
| <b>Power Factor (PF)</b>     | >0.9                              |
| <b>Protection</b>            | Class I (Class II Optional)       |
| <b>Rated Voltage</b>         | 12 VDC                            |

### LED LAMP PHOTOMETRIC CHARACTERISTICS

|   |                 |
|---|-----------------|
| <b>Lumen Output</b>                       | 3400lm (+/-5%)  |
| <b>Correlated Color Temperature (CCT)</b> | 2200 K ↔ 6500 K |

### LED LAMP MECHANICAL CHARACTERISTICS

|                             |   |
|-----------------------------|---|
| <b>Ratings</b>              | IP 66 IK 10                               |
| <b>Lifetime</b>             | > 100,000 hours - L70 @25°C (77 °F)       |
| <b>Body</b>                 | Anodized Aluminum                         |
| <b>Pole Fitter Diameter</b> | 60 mm / 2.4 in (50 mm / 2 in - Optional)  |
| <b>Fixture Dimension</b>    | 431 x 316 x 136 mm / 17 x 12.4 x 5.4 in   |
| <b>Packing Dimension</b>    | 480 x 370 x 200 mm / 18.9 x 14.6 x 7.9 in |
| <b>Fixture Weight</b>       | 5.3 kg / 11.7 lbs                         |
| <b>Packing Weight</b>       | 6.3 kg / 13.9 lbs                         |

### SOLAR PANEL MAIN CHARACTERISTICS

|                                    |                                   |
|------------------------------------|-----------------------------------|
| <b>Maximum Output Power (Pmpp)</b> | 40 Wp                             |
| <b>Power Tolerance</b>             | +/-5%                             |
| <b>Solar Cell Efficiency</b>       | ≥ 20%                             |
| <b>Voltage at Pmpp (Vmpp)</b>      | 17.6 V                            |
| <b>Current at Pmpp (Impp)</b>      | 2.27 A                            |
| <b>Open Circuit Voltage (Voc)</b>  | 20.8 V                            |
| <b>Short Circuit Current (Isc)</b> | 2.45 A                            |
| <b>Operating Temperature</b>       | -40 °C ↔ +85 °C / -40 °F ↔ 185 °F |
| <b>Maximum System Voltage</b>      | 700 V                             |
| <b>Maximum Series Fuse Rating</b>  | 10 A                              |

### SOLAR PANEL MECHANICAL CHARACTERISTICS

|                                      |  |
|--------------------------------------|--|
| <b>Solar Cell Type</b>               | Monocrystalline<br>156.75 x 156.75 mm / 6.17 x 6.17 in |
| <b>Dimensions of Module</b>          | 1335 x 170 x 4.5 mm / 52.6 x 6.7 x 0.2 in              |
| <b>Cables Specialized for PV use</b> | 2.5 mm2 x 1 m  |
| <b>Weight</b>                        | 1.6 kg / 3.5 lbs                                       |
| <b>Environmental Resistances</b>     | 800g steel ball fall down from 1m height<br>60m/s wind |

### SOLAR PANEL TEMPERATURE CHARACTERISTICS

|  |              |
|--|--------------|
| <b>Current Temperature Coefficient</b> | 0.05 % / °C  |
| <b>Voltage Temperature Coefficient</b> | -0.35 % / °C |
| <b>Power Temperature Coefficient</b>   | -0.45 % / °C |

### POLE CHARACTERISTICS

|                             |  |
|-----------------------------|--|
| <b>Height</b>               | 4 m / 13 ft                                |
| <b>Pole Wall Thickness</b>  | approx. 4mm / 9 gauge*                     |
| <b>Pole Assembly Weight</b> | 50 kg / 110.2 lbs*                         |
| <b>Finishing Colors</b>     | White - RAL 9003<br>Or<br>Black - RAL 9005 |
| <b>Battery Storage</b>      | LifePO4: Inside Pole / GEL: Underground    |
| <b>Arm - Pole Angle</b>     | 90°  |

### BATTERY MAIN CHARACTERISTICS

|                              |  |
|------------------------------|--|
| <b>Type</b>                  | LiFePO4  |
| <b>Rated Voltage</b>         | 12.8 V   |
| <b>Rated Capacity</b>        | 30.4 Ah  |
| <b>Internal Resistance</b>   | ≤ 45 Ohm   |
| <b>Dimensions</b>            | 936 mm 82 mm 42 mm<br>36.9 in 3.2 in 1.7 in  |
| <b>Weight</b>                | 4.2 kg / 9.25 lbs (with housing)   |
| <b>Shell Material</b>        | Poly Vinyl Chloride (PVC)  |
| <b>Charge Voltage</b>        | 14.4 +/- 0.15 V  |
| <b>Charge Current</b>        | ≤ 5 A  |
| <b>Operating Temperature</b> | -15 °C ↔ +70 °C / 5 °F ↔ +158 °F   |
| <b>Passive Protection</b>    | Over-charge Protection<br>Over-discharge Protection<br>Temperature Protection<br>Balanced Function |

### CHARGER CONTROLLER MODEL CHARACTERISTICS

|                                       |   |
|---------------------------------------|---|
| <b>Model</b>                          | VICTRON ENERGY SmartSolar MPPT 75/15<br>or EnGoPlanet MPPT Controller |
| <b>Battery Voltage (auto select)</b>  | 12 V  |
| <b>Rated Charge Current</b>           | 15 A  |
| <b>Nominal PV Power, 12 V</b>         | 220 W   |
| <b>Max. PV Short Circuit Current</b>  | 15 A  |
| <b>Max. PV Open Circuit Voltage</b>   | 75 V  |
| <b>Peak Efficiency</b>                | 98%   |
| <b>Self-Consumption - Load On/Off</b> | 12 V: 25 mA   |
| <b>Charge Voltage 'Absorption'</b>    | 14.4 V (Adjustable)   |
| <b>Charge Voltage 'Float'</b>         | 13.8 V (Adjustable)   |
| <b>Operating Temperature</b>          | -30°C ↔ +60°C / -22°F ↔ +140°F  |
| <b>Safety Standards</b>               | EN/IEC 62109-1, UL 1741, CSA C22.2                                    |
| <b>Color</b>                          | Blue (RAL 5012)   |
| <b>Protection Category</b>            | IP43 (electronic components), IP22 (connection area)                  |
| <b>Weight</b>                         | 0.5 kg / 1.1 lbs  |
| <b>Dimensions</b>                     | 100 x 113 x 40 mm<br>3.9 x 4.5 x 1.6 in                               |

### MODULE CHARACTERISTICS

|                                 |  |
|---------------------------------|--|
| <b>Module Dimensions</b>        | 280 x 280 x 1350 mm<br>11 x 11 x 53 in                 |
| <b>Module Weight</b>            | 16.5 kg / 36.6 lbs**                                   |
| <b>Total Weight of Module**</b> | GEL: 17.5 kg / 38.6 lbs<br>LiFePO4: 20.5 kg / 45.2 lbs |
| <b>Solar Panels Per Module</b>  | 4 panels   |

### MODULE PACKAGING DETAILS

|                            |   |
|----------------------------|---|
| <b>Packaged Weight</b>     | 24 kg<br>53 lbs                           |
| <b>Packaged Dimensions</b> | 0.35 x 0.35 x 1.4 m<br>1.2 x 1.2 x 4.6 ft |

\*varies based on specific requirements  
\*\*weight does not include pole and light head  
\*\*\*GEL Deep cycle battery option available

# EnGo Historical 2

## Technical Data Sheet

| HISTORICAL 2 GENERAL SPECIFICATIONS       |   | POLE CHARACTERISTICS                               |  |
|---|---|--|--|
| <b>LED Lamp</b>                           | 40-60 W<br>6600-9300 lm   | <b>Height</b>                                      | 6 m / 20 ft  |
| <b>Solar Power</b>                        | 320Wp (8x40Wp), Monocrystalline   | <b>Pole Wall Thickness</b>                         | approx. 4mm / 9 gauge*   |
| <b>Battery System</b>                     | GEL Battery<br>24 V, 100 Ah<br>Lithium Ion Phosphate - LiFePO4<br>24 V, 60 Ah | <b>Pole Assembly Weight</b>                        | 71 kg / 156.5 lbs*   |
| <b>Charge Controller</b>                  | MPPT Controller - 24 V  | <b>Finishing Colors</b>                            | White - RAL 9003<br>OR<br>Black - RAL 9005   |
| <b>Pole</b>                               | Hot Dip Galvanized + Powder Coated<br>6 m / 20 ft                             | <b>Battery Storage</b>                             | LifePO4: Inside Pole / GEL: Underground  |
| <b>Total Weight</b>                       | 134 KG / 295.4 lbs  | <b>Arm - Pole Angle</b>                            | 90°  |
| <b>Environmental Sensors</b>              | Available upon request  | <b>GEL Deep Cycle BATTERY MAIN CHARACTERISTICS</b> |  |
| LED LAMP ELECTRICAL PARAMETERS            |   | <b>Type</b>  | GEL Deep Cycle Battery   |
| <b>Rated Power</b>                        | 60W   | <b>Rated Voltage</b>                               | 12 V   |
| <b>Operating Temperature</b>              | -40 °C ↔ +50 °C / -40 °F ↔ +122°F   | <b>Nominal Capacity</b>                            | 100 Ah   |
| <b>Power Factor (PF)</b>                  | >0.9  | <b>Internal Resistance</b>                         | 5 mOhm   |
| <b>Protection</b>                         | Class I (Class II Optional)   | <b>Dimensions</b>                                  | 330 x 171 x 214 mm / 13 x 6.7 x 8.4 in   |
| <b>Rated Voltage</b>                      | 24 VDC  | <b>Weight</b>                                      | 30.5 kg / 67.2 lbs   |
| LED LAMP PHOTOMETRIC CHARACTERISTICS      |   | <b>Cycle Life</b>                                  | Approx. 1100 cycles 50% DOD  |
| <b>Lumen Output</b>                       | 9300 lm (+/-5%)   | <b>Maximum Charging Current</b>                    | 25 A   |
| <b>Correlated Color Temperature (CCT)</b> | 2200 K ↔ 6500 K   | <b>Operating Temperature</b>                       | -10 °C ↔ +60 °C / 14 °F ↔ +140 °F  |
| LED LAMP MECHANICAL CHARACTERISTICS       |   | <b>LiFePO4 BATTERY MAIN CHARACTERISTICS</b>        |  |
| <b>Ratings</b>                            | IP 66 IK 10   | <b>Type</b>  | LiFePO4  |
| <b>Lifetime</b>                           | > 100.000 hours - L70 @25°C (77 °F)   | <b>Rated Voltage</b>                               | 12.8 V   |
| <b>Body</b>                               | Anodized Aluminum   | <b>Rated Capacity</b>                              | 30.4 Ah  |
| <b>Pole Fitter Diameter</b>               | 60 mm / 2.4 in (50 mm / 2 in - Optional)                                      | <b>Internal Resistance</b>                         | ≤ 45 Ohm   |
| <b>Fixture Dimension</b>                  | 431 x 316 x 136 mm / 17 x 12.4 x 5.4 in                                       | <b>Dimensions</b>                                  | 936 mm 82 mm 42 mm<br>36.9 in 3.2 in 1.7 in  |
| <b>Packing Dimension</b>                  | 480 x 370 x 200 mm / 18.9 x 14.6 x 7.9 in                                     | <b>Weight</b>                                      | 4.2 kg / 9.25 lbs (with housing)   |
| <b>Fixture Weight</b>                     | 5.3 kg / 11.7 lbs   | <b>Shell Material</b>                              | Poly Vinyl Chloride (PVC)  |
| <b>Packing Weight</b>                     | 6.3 kg / 13.9 lbs   | <b>Charge Voltage</b>                              | 14.4 +/- 0.15 V  |
| SOLAR PANEL MAIN CHARACTERISTICS          |   | <b>Charge Current</b>                              | ≤ 5 A  |
| <b>Maximum Output Power (Pmpp)</b>        | 40 Wp   | <b>Operating Temperature</b>                       | -15 °C ↔ +70 °C / 5 °F ↔ +158 °F   |
| <b>Power Tolerance</b>                    | +/-5%   | <b>Passive Protection</b>                          | Over-charge Protection<br>Over-discharge Protection<br>Temperature Protection<br>Balanced Function |
| <b>Solar Cell Efficiency</b>              | ≥ 20%   | CHARGER CONTROLLER MODEL CHARACTERISTICS           |  |
| <b>Voltage at Pmpp (Vmpp)</b>             | 17.6 V  | <b>Model</b>                                       | VICTRON ENERGY SmartSolar MPPT 75/15<br>or EnGoPlanet MPPT Controller                              |
| <b>Current at Pmpp (Impp)</b>             | 2.27 A  | <b>Battery Voltage (auto select)</b>               | 24 V   |
| <b>Open Circuit Voltage (Voc)</b>         | 20.8 V  | <b>Rated Charge Current</b>                        | 15 A   |
| <b>Short Circuit Current (Isc)</b>        | 2.45 A  | <b>Nominal PV Power, 12 V</b>                      | 440 W  |
| <b>Operating Temperature</b>              | -40 °C ↔ +85 °C / -40 °F ↔ 185 °F   | <b>Max. PV Short Circuit Current</b>               | 15 A   |
| <b>Maximum System Voltage</b>             | 700 V   | <b>Max. PV Open Circuit Voltage</b>                | 75 V   |
| <b>Maximum Series Fuse Rating</b>         | 10 A  | <b>Peak Efficiency</b>                             | 98%  |
| SOLAR PANEL MECHANICAL CHARACTERISTICS    |   | <b>Self-Consumption - Load On/Off</b>              | 24 V: 15 mA  |
| <b>Solar Cell Type</b>                    | Monocrystalline<br>156.75 x 156.75 mm / 6.17 x 6.17 in                        | <b>Charge Voltage 'Absorption'</b>                 | 28.8 V (Adjustable)  |
| <b>Dimensions of Module</b>               | 1335 x 170 x 3.3 mm<br>52.6 x 6.7 x 0.2 in                                    | <b>Charge Voltage 'Float'</b>                      | 27.6 V (Adjustable)  |
| <b>Cables Specialized for PV use</b>      | 2.5 mm2 x 1 m   | <b>Operating Temperature</b>                       | -30°C ↔ +60°C / -22°F ↔ +140°F   |
| <b>Weight</b>                             | 1.6 kg / 3.5 lbs  | <b>Safety Standards</b>                            | EN/IEC 62109-1, UL 1741, CSA C22.2   |
| <b>Environmental Resistances</b>          | 800g steel ball fall down from 1m height<br>60m/s wind                        | <b>Color</b>                                       | Blue (RAL 5012)  |
| SOLAR PANEL TEMPERATURE CHARACTERISTICS   |   | <b>Protection Category</b>                         | IP43 (electronic components), IP22 (connection area)   |
| <b>Current Temperature Coefficient</b>    | 0.05 % / °C   | <b>Weight</b>                                      | 0.5 kg / 1.1 lbs   |
| <b>Voltage Temperature Coefficient</b>    | -0.35 % / °C  | <b>Dimensions</b>                                  | 100 x 113 x 40 mm / 3.9 x 4.5 x 1.6 in   |
| <b>Power Temperature Coefficient</b>      | -0.45 % / °C  | MODULE CHARACTERISTICS                             |  |
|   |   | <b>Module Dimensions</b>                           | 280 x 280 x 1350 x mm / 11 x 11 x 53 in  |
|   |   | <b>Module Weight</b>                               | 16.5 kg / 36.4 lbs**   |
|   |   | <b>Total Weight of Two Modules**</b>               | GEL: 34 kg / 75 lbs<br>LiFePO4: 48.4 kg / 106.7 lbs  |
|   |   | <b>Solar Panels Per Module</b>                     | 4 panels   |
|   |   | MODULE PACKAGING DETAILS                           |  |
|   |   | <b>Packaged Weight</b>                             | 54 kg<br>119 lbs   |
|   |   | <b>Packaged Dimensions</b>                         | 0.7 x 0.35 x 1.4 m<br>2.3 x 1.2 x 4.6 ft   |