

EnGo Tower

Solar Street Light

An ideal solution for:

- Retrofitting existing poles
- City Centers
- Highways
- HOA's



**Environmental
Sensors**



**Remote
Management System**



**Easy Installation
& Maintenance**



Smart Sensors



**High Quality
Lithium Battery**



**Powered By
The Sun**

EnGo Tower 1

Technical Data Sheet



TOWER 1 GENERAL SPECIFICATIONS	
LED Lamp	20 W 3400 lm
Solar Power	160Wp (4×40Wp), Monocrystalline
Battery System	GEL Battery*** 12 V, 60 Ah Lithium Ion Phosphate – LiFePO4 12 V, 30 Ah
Charge Controller	MPPT Controller - 12 V
Pole	Hot Dip Galvanized + Powder Coated 4 m / 13 ft
Total Weight	79 kg / 174 lbs
Environmental Sensors	Available upon request
LED LAMP ELECTRICAL PARAMETERS	
Rated Power	20W
Operating Temperature	-40 °C ↔ +50 °C / -40 °F ↔ +122°F
Power Factor (PF)	>0.9
Protection	Class I (Class II Optional)
Rated Voltage	12 VDC
LED LAMP PHOTOMETRIC CHARACTERISTICS	
Lumen Output	3400lm (+5%)
Correlated Color Temperature (CCT)	2200 K ↔ 6500 K
LED LAMP MECHANICAL CHARACTERISTICS	
Ratings	IP 66 IK 10
Lifetime	> 100.000 hours – L70 @25°C (77 °F)
Body	Anodized Aluminum
Pole Fitter Diameter	60 mm / 2.4 in (50 mm / 2 in - Optional)
Fixture Dimension	431 × 316 × 136 mm / 17 x 12.4 x 5.4 in
Packing Dimension	480 × 370 × 200 mm / 18.9 x 14.6 x 7.9 in
Fixture Weight	5.3 kg / 11.7 lbs
Packing Weight	6.3 kg / 13.9 lbs
SOLAR PANEL MAIN CHARACTERISTICS	
Maximum Output Power (Pmpp)	40 Wp
Power Tolerance	+/-5%
Solar Cell Efficiency	≥ 20%
Voltage at Pmpp (Vmpp)	17.6 V
Current at Pmpp (Impp)	2.27 A
Open Circuit Voltage (Voc)	20.8 V
Short Circuit Current (Isc)	2.45 A
Operating Temperature	-40 °C ↔ +85 °C / -40 °F ↔ 185 °F
Maximum System Voltage	700 V
Maximum Series Fuse Rating	10 A
SOLAR PANEL MECHANICAL CHARACTERISTICS	
Solar Cell Type	Monocrystalline 156.75 × 156.75 mm / 6.17 × 6.17 in
Dimensions of Module	1335 × 170 × 4.5 mm / 52.6 × 6.7 × 0.2 in
Cables Specialized for PV use	2.5 mm2 × 1 m
Weight	1.6 kg / 3.5 lbs
Environmental Resistances	800g steel ball fall down from 1m height 60m/s wind
SOLAR PANEL TEMPERATURE CHARACTERISTICS	
Current Temperature Coefficient	0.05 % / °C
Voltage Temperature Coefficient	-0.35 % / °C
Power Temperature Coefficient	-0.45 % / °C
POLE CHARACTERISTICS	
Height	4 m / 13 ft
Pole Wall Thickness	approx. 4mm / 9 gauge*
Pole Assembly Weight	50 kg / 110.2 lbs*
Finishing Colors	White – RAL 9003 or Black – RAL 9005
Battery Storage	LifePO4: Inside Pole / GEL: Underground
Arm - Pole Angle	90°
BATTERY MAIN CHARACTERISTICS	
Type	LiFePO4
Rated Voltage	12.8 V
Rated Capacity	30.4 Ah
Internal Resistance	≤ 45 Ohm
Dimensions	936 mm 82 mm 42 mm 36.9 in 3.2 in 1.7 in
Weight	4.2 kg / 9.25 lbs (with housing)
Shell Material	Poly Vinyl Chloride (PVC)
Charge Voltage	14.4 +/- 0.15 V
Charge Current	≤ 5 A
Operating Temperature	-15 °C ↔ +70 °C / 5 °F ↔ +158 °F
Passive Protection	Over-charge Protection Over-discharge Protection Temperature Protection Balanced Function
CHARGER CONTROLLER MODEL CHARACTERISTICS	
Model	VICTRON ENERGY SmartSolar MPPT 75/15 or EnGoPlanet MPPT Controller
Battery Voltage (auto select)	12 V
Rated Charge Current	15 A
Nominal PV Power, 12 V	220 W
Max. PV Short Circuit Current	15 A
Max. PV Open Circuit Voltage	75 V
Peak Efficiency	98%
Self-Consumption - Load On/Off	12 V: 25 mA
Charge Voltage 'Absorption'	14,4 V (Adjustable)
Charge Voltage 'Float'	13,8 V (Adjustable)
Operating Temperature	-30°C ↔ + 60°C / -22°F ↔ + 140°F
Safety Standards	EN/IEC 62109-1, UL 1741, CSA C22.2
Color	Blue (RAL 5012)
Protection Category	IP43 (electronic components), IP22 (connection area)
Weight	0.5 kg / 1.1 lbs
Dimensions	100 x 113 x 40 mm 3.9 x 4.5 x 1.6 in
MODULE CHARACTERISTICS	
Module Dimensions	280 x 280 x 1350 mm 11 x 11 x 53 in
Module Weight	16.5 kg / 36.6 lbs**
Total Weight of Module**	GEL: 17.5 kg / 38.6 lbs LiFePO4: 20.5 kg / 45.2 lbs
Solar Panels Per Module	4 panels
MODULE PACKAGING DETAILS	
Packaged Weight	24 kg 53 lbs
Packaged Dimensions	0.35 x 0.35 x 1.4 m 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 Tower 2

Technical Data Sheet



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

*varies based on specific requirements

**weight does not include pole and light head

EnGo Tower 3

Technical Data Sheet



Tower 3 General Specifications		Pole Characteristics	
LED Lamp	80 W 13200 lm	Height	8 - 10m / 26 - 33ft
Solar Power	480Wp (12x40Wp), Monocrystalline	Pole Wall Thickness	approx. 4mm / 9 gauge*
Battery System	GEL Battery	Pole Assembly Weight	105 kg / 231.5 lbs*
	24 V, 150 Ah Lithium Ion Phosphate - LiFePO4 24 V, 90 Ah	Finishing Colors	White - RAL 9003 OR Black - RAL 9005
Charge Controller	MPPT Controller - 24 V	Battery Storage	LifePO4: Inside Pole / GEL: Underground
Pole	Hot Dip Galvanized + Powder Coated 8 - 10m / 26 - 33ft	Arm - Pole Angle	90°
Total Weight	193 kg / 425.5 lbs	GEL Deep Cycle BATTERY MAIN CHARACTERISTICS	
Environmental Sensors	Available upon request	Type	GEL Deep Cycle Battery
LED Lamp Electrical Parameters		Rated Voltage	12 V
Rated Power	80W	Nominal Capacity	150 Ah
Operating Temperature	-40 °C ↔ +50 °C / -40 °F ↔ +122°F	Internal Resistance	3.9 mOhm
Power Factor (PF)	>0.9	Dimensions	485 x 172 x 240 mm / 19 x 6.8 x 9.5 in
Protection	Class I (Class II Optional)	Weight	43 kg / 94.8 lbs
Rated Voltage	24 VDC	Cycle Life	Approx. 1100 cycles 50% DOD
LED Lamp Photometric Characteristics		Maximum Charging Current	37.5 A
Lumen Output	13200lm (+/-5%)	Operating Temperature	-10 °C ↔ +60 °C / 14 °F ↔ +140 °F
Correlated Color Temperature (CCT)	2200 K ↔ 6500 K	LiFePO4 BATTERY MAIN CHARACTERISTICS	
LED Lamp Mechanical Characteristics		Type	LiFePO4
Ratings	IP 66 IK 10	Rated Voltage	12.8 V
Lifetime	> 100.000 hours - L70 @25°C (77 °F)	Rated Capacity	30.4 Ah
Body	Anodized Aluminum	Internal Resistance	≤ 45 Ohm
Pole Fitter Diameter	60 mm / 2.4 in (50 mm / 2 in - Optional)	Dimensions	936 mm 82 mm 42 mm 36.9 in 3.2 in 1.7 in
Fixture Dimension	504 x 316 x 136 mm / 19.8 x 12.4 x 5.4 in	Weight	4.2 kg / 9.25 lbs (with housing)
Packing Dimension	555 x 370 x 200 mm / 21.9 x 14.6 x 7.9 in	Shell Material	Poly Vinyl Chloride (PVC)
Fixture Weight	6.1 kg / 13.5 lbs	Charge Voltage	14.4 +/- 0.15 V
Packing Weight	7.3 kg / 16 lbs	Charge Current	≤ 5 A
Solar Panel Main Characteristics		Operating Temperature	-15 °C ↔ +70 °C / 5 °F ↔ +158 °F
Maximum Output Power (Pmpp)	40 Wp	Passive Protection	Over-charge Protection Over-discharge Protection Temperature Protection Balanced Function
Power Tolerance	+/-5%		
Solar Cell Efficiency	≥ 20%	Charger Controller Model Characteristics	
Voltage at Pmpp (Vmpp)	17.6 V	Model	VICTRON ENERGY SmartSolar MPPT 75/15 or EnGoPlanet MPPT Controller
Current at Pmpp (Impp)	2.27 A	Battery Voltage (auto select)	24 V
Open Circuit Voltage (Voc)	20.8 V	Rated Charge Current	15 A
Short Circuit Current (Isc)	2.45 A	Nominal PV Power, 12 V	440 W
Operating Temperature	-40 °C ↔ +85 °C / -40 °F ↔ 185 °F	Max. PV Short Circuit Current	15 A
Maximum System Voltage	700 V	Max. PV Open Circuit Voltage	75 V
Maximum Series Fuse Rating	10 A	Peak Efficiency	98%
Solar Panel Mechanical Characteristics		Self-Consumption - Load On/Off	24 V: 15 mA
Solar Cell Type	Monocrystalline 156.75 x 156.75 mm / 6.17 x 6.17 in	Charge Voltage 'Absorption'	28.8 V (Adjustable)
Dimensions of Module	1335 x 170 x 3.3 mm 52.6 x 6.7 x 0.2 in	Charge Voltage 'Float'	27.6 V (Adjustable)
Cables Specialized for PV use	2.5 mm2 x 1 m	Operating Temperature	-30°C ↔ +60°C / -22°F ↔ +140°F
Weight	1.6 kg / 3.5 lbs	Safety Standards	EN/IEC 62109-1, UL 1741, CSA C22.2
Environmental Resistances	800g steel ball fall down from 1m height 60m/s wind	Color	Blue (RAL 5012)
Solar Panel Temperature Characteristics		Protection Category	IP43 (electronic components), IP22 (connection area)
Current Temperature Coefficient	0.05 % / °C	Weight	0.5 kg / 1.1 lbs
Voltage Temperature Coefficient	-0.35 % / °C	Dimensions	100 x 113 x 40 mm / 3.9 x 4.5 x 1.6 in
Power Temperature Coefficient	-0.45 % / °C	Module Characteristics	
		Module Dimensions	280 x 280 x 1350 x mm / 11 x 11 x 53 in
		Module Weight	16.5 kg / 36.4 lbs**
		Total Weight of Three Modules**	GEL: 50.5 kg / 111.3 lbs LiFePO4: 72 kg / 158.7 lbs
		Solar Panels Per Module	4 panels
		Module Packaging Details	
		Packaged Weight	80 kg / 176.4 lbs
		Packaged Dimensions	1.05 x 0.35 x 1.4 m / 3.5 x 1.2 x 4.6 ft

*varies based on specific requirements

**weight does not include pole and light head

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EnGo Tower 4

Technical Data Sheet



TOWER 4 GENERAL SPECIFICATIONS		POLE CHARACTERISTICS	
LED Lamp	100 W or 2x60 W 16000 lm	Height	10 - 12m / 33 - 40ft
Solar Power	640Wp (16x40Wp), Monocrystalline	Pole Wall Thickness	approx. 4mm / 9 gauge*
Battery System	GEL Battery 24 V, 175 Ah Lithium Ion Phosphate - LiFePO4 24 V, 120 Ah	Pole Assembly Weight	172 kg / 379.2 lbs *
Charge Controller	MPPT Controller - 24 V	Finishing Colors	White - RAL 9003 or Black - RAL 9005
Pole	Hot Dip Galvanized + Powder Coated 10 - 12m / 33 - 40ft	Battery Storage	LifePO4: Inside Pole / GEL: Underground
Total Weight	284 kg / 626 lbs	Arm - Pole Angle	90°
Environmental Sensors	Available upon request	GEL Deep Cycle BATTERY MAIN CHARACTERISTICS	
LED LAMP ELECTRICAL PARAMETERS		Type	GEL Deep Cycle Battery
Rated Power	100W	Rated Voltage	12 V
Operating Temperature	-40 °C ↔ +50 °C / -40 °F ↔ +122°F	Nominal Capacity	175 Ah
Power Factor (PF)	>0.9	Internal Resistance	3.5 mOhm
Protection	Class I (Class II Optional)	Dimensions	485 x 172 x 240 mm / 19 x 6.8 x 9.5 in
Rated Voltage	24 VDC	Weight	42.8 kg / 94.4 lbs
LED LAMP PHOTOMETRIC CHARACTERISTICS		Cycle Life	Approx. 800 cycles 50% DOD
Lumen Output	16000lm (+/-5%)	Maximum Charging Current	45 A
Correlated Color Temperature (CCT)	2200 K ↔ 6500 K	Operating Temperature	-10 °C ↔ +60 °C / 14 °F ↔ +140 °F
LED LAMP MECHANICAL CHARACTERISTICS		LiFePO4 BATTERY MAIN CHARACTERISTICS	
Ratings	IP 66 IK 10	Type	LiFePO4
Lifetime	> 100.000 hours - L70 @25°C (77 °F)	Rated Voltage	12.8 V
Body	Anodized Aluminum	Rated Capacity	30.4 Ah
Pole Fitter Diameter	60 mm / 2.4 in (50 mm / 2 in - Optional)	Internal Resistance	≤ 45 Ohm
Fixture Dimension	504 x 316 x 136 mm / 19.8 x 12.4 x 5.4 in	Dimensions	936 mm 82 mm 42 mm 36.9 in 3.2 in 1.7 in
Packing Dimension	555 x 370 x 200 mm / 21.9 x 14.6 x 7.9 in	Weight	4.2 kg / 9.25 lbs (with housing)
Fixture Weight	6.1 kg / 13.5 lbs	Shell Material	Poly Vinyl Chloride (PVC)
Packing Weight	7.3 kg / 16 lbs	Charge Voltage	14.4 +/- 0.15 V
SOLAR PANEL MAIN CHARACTERISTICS		Charge Current	≤ 5 A
Maximum Output Power (Pmpp)	40 Wp	Operating Temperature	-15 °C ↔ +70 °C / 5 °F ↔ +158 °F
Power Tolerance	+/-5%	Passive Protection	Over-charge Protection Over-discharge Protection Temperature Protection Balanced Function
Solar Cell Efficiency	≥ 20%	CHARGER CONTROLLER MODEL CHARACTERISTICS	
Voltage at Pmpp (Vmpp)	17.6 V	Model	VICTRON ENERGY SmartSolar MPPT 75/15 or EnGoPlanet MPPT Controller
Current at Pmpp (Impp)	2.27 A	Battery Voltage (auto select)	24 V
Open Circuit Voltage (Voc)	20.8 V	Rated Charge Current	15 A
Short Circuit Current (Isc)	2.45 A	Nominal PV Power, 12 V	440 W
Operating Temperature	-40 °C ↔ +85 °C / -40 °F ↔ 185 °F	Max. PV Short Circuit Current	15 A
Maximum System Voltage	700 V	Max. PV Open Circuit Voltage	75 V
Maximum Series Fuse Rating	10 A	Peak Efficiency	98%
SOLAR PANEL MECHANICAL CHARACTERISTICS		Self-Consumption - Load On/Off	24 V: 15 mA
Solar Cell Type	Monocrystalline 156.75 x 156.75 mm / 6.17 x 6.17 in	Charge Voltage 'Absorption'	28.8 V (Adjustable)
Dimensions of Module	1335 x 170 x 3.3 mm 52.6 x 6.7 x 0.2 in	Charge Voltage 'Float'	27.6 V (Adjustable)
Cables Specialized for PV use	2.5 mm2 x 1 m	Operating Temperature	-30°C ↔ +60°C / -22°F ↔ +140°F
Weight	1.6 kg / 3.5 lbs	Safety Standards	EN/IEC 62109-1, UL 1741, CSA C22.2
Environmental Resistances	800g steel ball fall down from 1m height 60m/s wind	Color	Blue (RAL 5012)
SOLAR PANEL TEMPERATURE CHARACTERISTICS		Protection Category	IP43 (electronic components), IP22 (connection area)
Current Temperature Coefficient	0.05 % / °C	Weight	0.5 kg / 1.1 lbs
Voltage Temperature Coefficient	-0.35 % / °C	Dimensions	100 x 113 x 40 mm / 3.9 x 4.5 x 1.6 in
Power Temperature Coefficient	-0.45 % / °C	MODULE CHARACTERISTICS	
		Module Dimensions	280 x 280 x 1350 x mm / 11 x 11 x 53 in
		Module Weight	16.5 kg / 36.4 lbs**
		Total Weight of Four Modules**	GEL: 67 kg / 147.7 lbs LiFePO4: 96 kg / 211.6 lbs
		Solar Panels Per Module	4 panels
		MODULE PACKAGING DETAILS	
		Packaged Weight	106 kg / 233.7 lbs
		Packaged Dimensions	1.4 x 0.35 x 1.4 m / 4.6 x 1.2 x 4.6 ft