



PlanetSun
PHOTOVOLTAIC SYSTEM
Beghelli

Pronto Sole 40 - Bus Stop Kit

Pronto Sole Bus Stop Kit 40W

The 10W lighting kit offers three 3.6W LED, downlights powered by a 40W Solar Panel. The kit can be designed to turn on when the sun goes down and turn off in the morning. Customize the unit by setting the timer to match your local bus schedule - this saves battery cost by shutting the unit off earlier in the night.

Beghelli provides all cables, poles and batteries needed to run your system, freeing you from the grid. The 12V system highlighted in this material will run on batteries for no less than four days in heavily overcast conditions based in South Florida, USA. Beghelli will customize the system design to your city - maximizing efficiency. See your bus stop in a whole new light installing a Pronto Sole Bus Stop Kit today!



www.beghelli.com

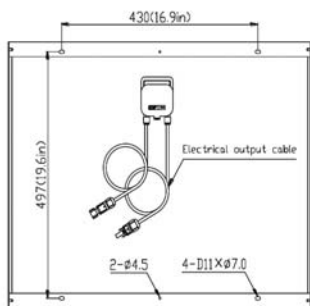
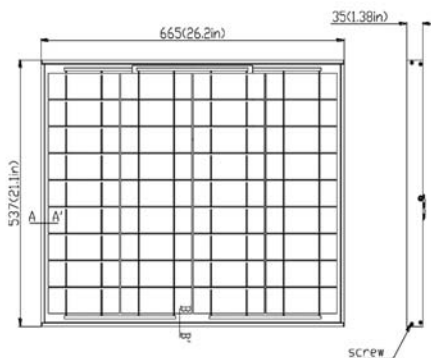
Beghelli PV 40W Solar Module

Features:

- IEC61215, TUV certification
- UL 1703 certification
- Using high efficiency 6" Multicrystalline cells.
- Using low iron tempered glass and an EVA pottant with TPT back sheet to encapsulated cells.
- Anodized aluminum frame protected structural strength.
- 10 years limited warranty of 90% power output and 25 years limited warranty of 80% power output.



Dimensional Drawings



Electrical Characteristics SPM040P

Power at STC(Pm)	40W		
Maximum power voltage(Vpm)	17.3V		
Maximum power current(Ipm)	2.35A		
Open circuit voltage(Voc)	21.8V		
Short circuit current(Isc)	2.57A		
Tolerance	± 5%		
Module efficiency	11.6%		
Standard test conditions	Temperature 25°C, Irradiance 1000W/m ² , AM=1.5		
Maximum system voltage	1000V DC	Series fuse	rating 10A
Temperature coefficient	Isc:0.05%/K	Voc:-0.36%/K	Pmax:-0.46%/K

Specifications

Cell	Multicrystalline silicon solar cell, (156mmx52mm)		
No. of cell and connection	36 (4x9)		
Dimension	665mm(26.2in)x537mm(21.1in)x35mm(1.38in)		
Weight	5.0KG		

Ambient Conditions

Operating Temperature	-40°C to +85°C		
Storage Humidity	<90%		

Output

Type of output terminal	Junction box		
Cable Length	900mm		

Beghelli PV 40W Solar Charge Controller

Key Features and Benefits:

Longer Battery Life

- Advanced PWM charging
- Series design (not shunt) for cool operation
- 4-stage charging: bulk, absorption, float, equalize
- Optimized sealed or flooded battery set points
- Temperature compensated charging
- Low voltage load disconnect on several versions

Designed for Harsh Environments

- Temperature rating of -40°C to $+60^{\circ}\text{C}$
- Epoxy encapsulation for protection against humidity and dust ingress
- Corrosion protection: marine rated terminals and anodized aluminum case
- Certified for use in hazardous locations

Electrical Characteristics

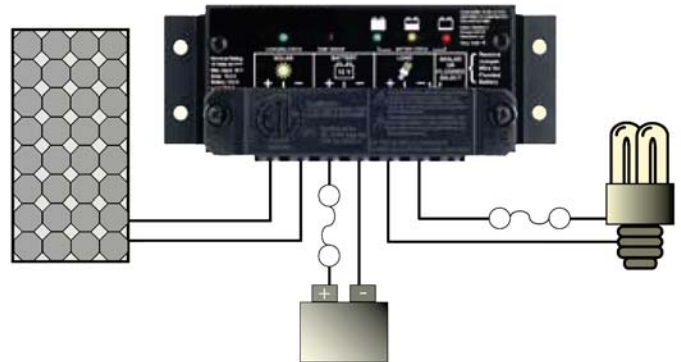
Max. PV & Load Rating	Per Above
System voltage	12
Min. battery voltage	1 Volt
Regulation Voltage	12V
Sealed battery	14.1V
Load Disconnect	11.5V
LVD Reconnect	12.6V
Max. Solar Voltage	12V battery - 30V
Load in-rush capability	65 amps
Self consumption	< 8 mA
Voltage Accuracy	12V: +/-25 mV
Transient Surge Protection	1500W per connection



	Solar Current	Load Current	System Voltage	LVD
SS-10L-12V	10A	10A	12V	yes

Certifications:

- ETL Listed to UL 1741 and CSA C22.2 No. 107.1-01
- Hazardous Locations: Class 1, Division 2, Groups A,B,C,D CSA C22.2#213
- EMC Directives: Immunity, emissions, safety
- FCC: Class B Part 15
- CE
- RoHS
- ISO 9000



Beghelli PV 125 Ah Batteries



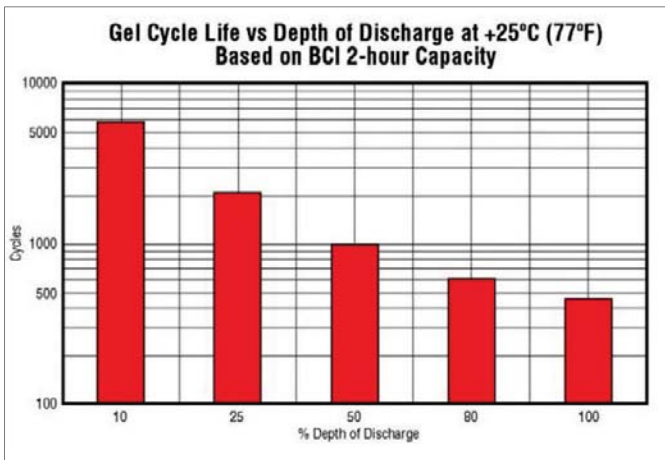
made in usa
L: 13.58" (345mm), W: 6.77" (172mm), H: 11.42" (mm)

Key Features and Benefits:

Valve-Regulated	Sealed construction eliminates periodic watering, corrosive acid fumes, & spills
Gelled Electrolyte	Electrolyte will not stratify
Positive and Negative Plate	Lead calcium
Self-Discharge	Less than 2% per month stand loss means little deterioration during transport & storage
Exclusive IPF® Technology	Optimizes power capacity, cell consistency, and long-term reliability
Rated Non-Spillable by ICAO, IATA, and DOT	Transports easily and safely by air, no special containers needed
Renewable Energy • Water pumping • Residential • Communications • Cathodic protection • Remote monitoring • Refrigeration • Lighting • Aids to navigation • Wind generation	

Electrical Characteristics

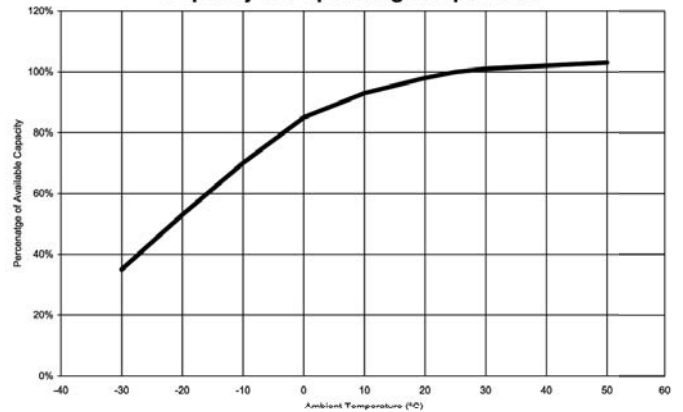
Nominal Voltage (V)	12V
*Capacity at C/100	137Ah
* Capacity at C/20	125 Ah
*Capacity at C/5	110Ah
Weight	85lbs. (39.6 kg)
Plate Alloy	Lead Calcium
Posts	Forged Terminals & Bushings
Container/Cover	Polypropylene
Operating Temperature Range	-76°F, (-60°C) - 140°F (60°C)
Vent	self-sealing
electrolyte	sulfuric acid thixotropic gel
Terminal	(B) T876
Rated UN2794, we filled with acid	



Photovoltaic Charging Parameters		
Bulk Charge	Max Current (amps)	30% of 20 H Rate
Absorption (Regulation) Charge	Constant Voltage	2.35 - 2.4Vpc
Float Charge	Constant Voltage	2.25 vpc ± .01
Equalize Charge	Constant Voltage	2.30 - 2.4Vpc
Temperature Coefficient	0.003 v / °C	

Cut-off parameters per charge & equalize intervals are application specific and will vary dependent upon site specific characteristics such as temperature, days of autonomy, array to load ratio, ect.

Capacity vs. Operating Temperature



Capacity vs. Operating Temperatures: Above are the changes in capacity for wider ambient temperature range, giving the available capacity, as a percentage of the rated capacity, at different ambient temperatures. The curves show the behavior of the battery after a number of cycles.

Key Features and Benefits:

Applications

- Garden lighting
- Boats
- Caravans
- Filament & Fluorescent lamps
- Solar

Features

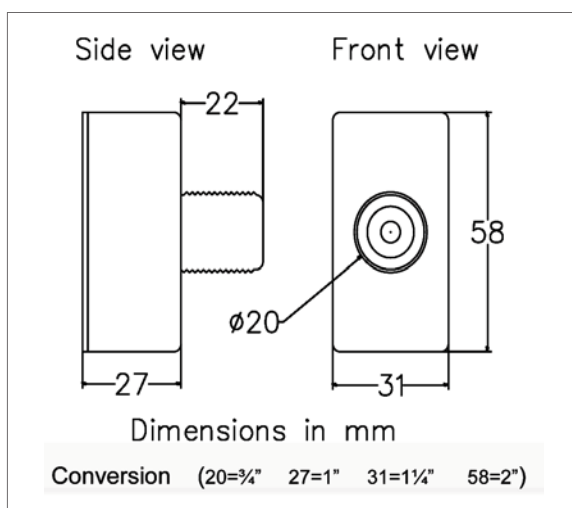
- Compact size (see diagram below)
- Long life contacts made from Silver Oxide
- Defaults to lighting switched off
- RoHS Compliant



Specifications

	Minimum	Typical	Maximum	Unit
Control load	100	*****	5000*	ma
Operating voltage	11	12	14.5	Volts dc
Power consumption (on)	26	28	29	ma
Standby power (off)	2.8	3.2	3.5	ma
Switch On level	40	50	60	Lux
Switch Off level	60	70	80	Lux
Time delay	4.5	5	5.5	Seconds
Operating Temperature	-25	20	+60	°C
Ingress rating (installed)	*****	*IP65	*****	IP
Storage Temperature	-40	*****	+80	°C
Mounting tread	*****	M20	*****	mm

Dimensional Drawings



*"Only when I saw the Earth from space,
in all its ineffable beauty and fragility,
did I realize that humankind's most urgent task is
to cherish and preserve it for future generations."*

*- Sigmund Jahn
German Cosmonaut*



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