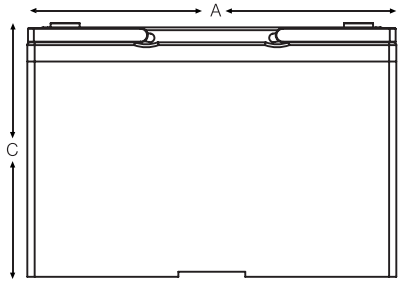
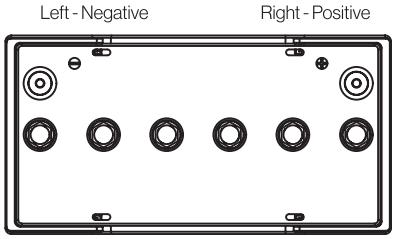
S06-12-90

Gel Solar Bloc Battery





Electrical Specifications

Voltage	12V
Self Discharge	Less than 3% per month (20°C/68°F)
Charge Temperature	Min: -10°C (14°F) / Max: 50°C (122°F)
Discharge Temperature**	Min: -40°C (-40°F) / Max: 50°C (122°F)
Storage	Min: -20°C (-4°F) / Max: 60°C (140°F)
Charge Methods	Float Voltage: 2.25 @ 25°C / 77°F Boost Voltage: 2.35 to 2.40VPC @ 25°C / 77°F
Temperature Compensation	±3.5mV/°C/Cell

Cell Type Ue (100%) / VPC Ref Temp	**C120 1.80 25°C**	**C100 1.80 25°C**	**C72 1.80 25°C**	**C20 1.75 25°C**	**C10 1.75 25°C**	**C5 1.70 25°C**
S06 12 90	103	100	96	94	88	85

** CAUTION: Depths of discharge, operating voltages and currents, when designing systems for use at maximum temperatures, will vary.

Mechanical Specifications

Industry Reference	BCI 31	
Length (A)	13 in	329 mm
Width (B)	6.7 in	170 mm
Height (C)	8.1 in	205 mm
Weight	65 lbs	29.5 kgs
Terminal (Opt'l)*	M8	
Cell(s)	6	
Electrolyte	Gel	
Terminal Torque Nm	8	

NOTE: There is a tolerance of ± 5%.

Terminal Options Available:

M8
A-Pole
Dual
Stud

Features

- Maintenance-free bloc batteries in Gel technology (no topping up during lifetime)
- Good high current performance for extreme operating conditions
- High-class patented safety valve
- 1200 cycles (IEC 61427 / 60896-21/22)
- Capacity: 12V 55Ah-220Ah(C_{20})
- Valve-regulated lead-acid battery
- Recyclable
- Long cycle life
- Low self discharge rate allows for up to 2 years shelf life
- Classified as a non-spillable battery is not restricted for transportation by:
  - Air (IATA/ICAO provision 67)
  - Ground (STB, DOT-CFR-HMR49)
  - Water (IMDG amendment 27)

Applications

- Solar
- Home Inverter
- Renewable Energy
- Deep Cycle Applications

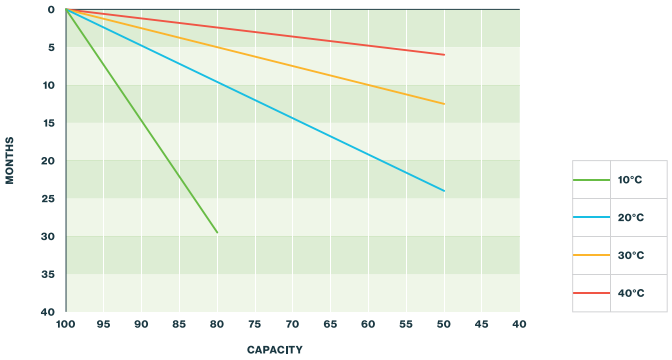
Compliant with IEC 61427 / 60896-21/22

Charging profile

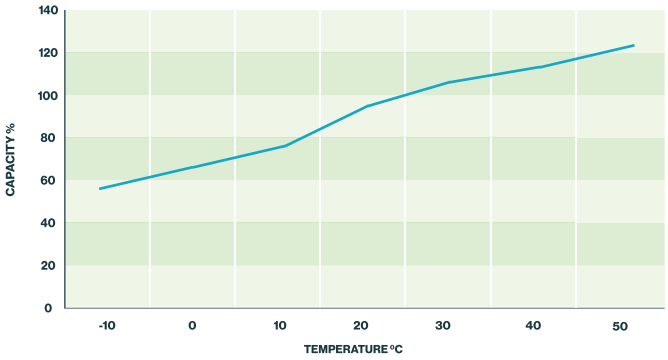
IU Charging
I = min. 12% C_5 max. 18% C_5
U = 2.4 V per cell

IUI Charging
I_1 = min. 12% C_5 max. 18% C_5
U = 2.35 V per cell
I_2 = 1.5 % C_5 for max. 4 hours

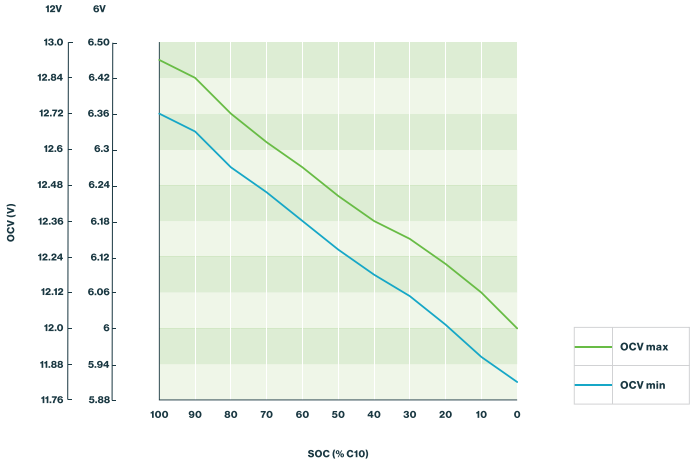
Self discharge at different temperatures



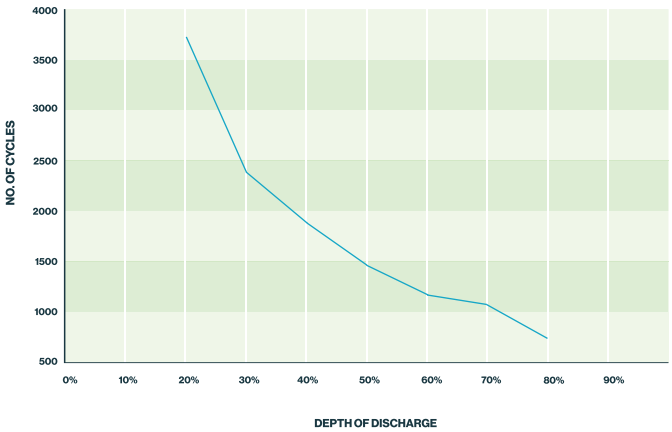
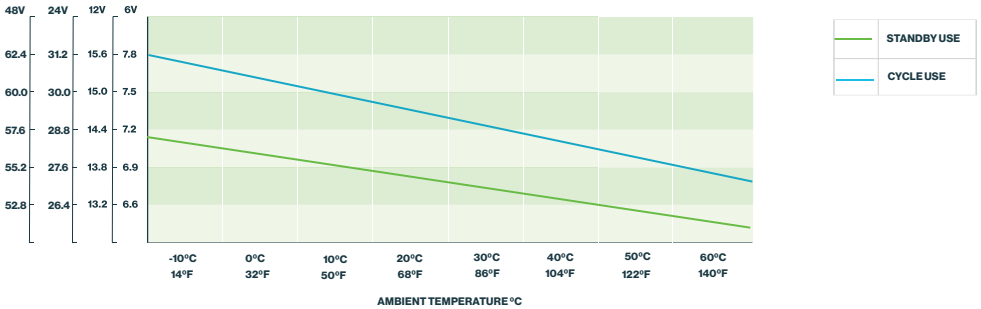
Capacity vs. temperature



Storage: Determine the state of charge



Cycle life vs. depth of discharge (25°C)



Relation between charging, voltage and temperature