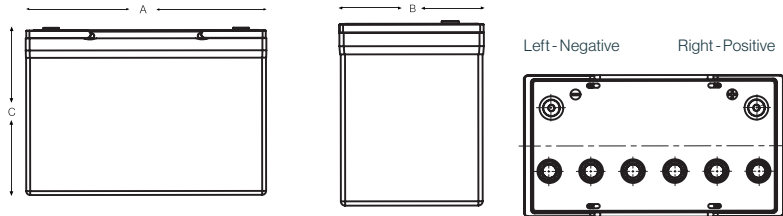
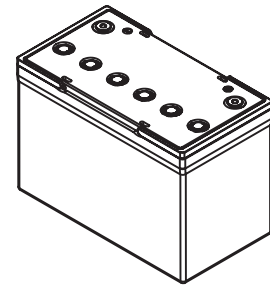


# EQM-27

## Carbon Nano Gel Battery



### Benefits:

- Cost savings due to increased efficiency in charging
- Reduced Temperature gives longer life
- Long life, high reliability
- Reduces drying out – extends life
- Sulphation reduction, less need to top charge
- Can be installed in tight spaces
- Almost Totally Green – recycled – scrap value
- Reduced premature failure, extended life
- Suitable for extreme temperature variants

### Electrical Specifications

<b>Voltage</b>	12V
<b>M.R.C. 25 Amps</b>	165
<b>80% DOD Voltage Cutoff</b>	11.2V
<b>Low Voltage Cutoff</b>	10.8V
<b>Self Discharge</b>	Less than 3% per month (20°C/68°F)
<b>Charge Temperature</b>	Min: -10°C (14°F) / Max: 50°C (122°F)
<b>Discharge Temperature**</b>	Min: -40°C (-40°F) / Max: 50°C (122°F)
<b>Storage</b>	Min: -20°C (-4°F) / Max: 60°C (140°F)

Cell Type Ue (100%) / VPC Ref Temp	C5 1.70 25°C	C10 1.75 25°C	C20 1.75 25°C	C100 1.80 25°C
EQM-27	78	81	87	92

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

### Mechanical Specifications

Industry Reference	BCI27	
<b>Length (A)</b>	12.1 in	307 mm
<b>Width (B)</b>	6.6 in	168 mm
<b>Height (C)</b>	8.3 in	211 mm
<b>Weight</b>	70.5 lbs	32 kgs
<b>0°C MCA (EN)</b>	430	
<b>Terminal (Opt'l)</b>	DUAL	
<b>Cell(s)</b>	6	
<b>Electrolyte</b>	Gel	
<b>Terminal Torque Nm</b>	8	

NOTE: There is a tolerance of +/-2%.

### Features:

Carbon Nano Tube - Ultra energy efficiency due to low resistance

Solid Silica Gel Electrolyte (25% more Electrolyte)

Up to 2 x Faster charging – allows for opportunity charging

PSOC operation – between 40% - 90% SOC

High Specification Materials

Maintenance Free – no topping up required

98% Manufactured Material is recycled

Robust Construction – Vibration resistant

Cycle Life - up to 1500 cycles (EQM) & up to 2000 cycles (LFT)

Design life 12-15 years

High Starting Power

### Applications:

Ocean & offshore:

River

Inland waterways

Electric Propulsion

RV

Motorhome & Caravan

All off grid applications:

Utility vehicle

Vehicle conversions

Ambulances & blue light

Solar & renewable energy storage systems

CCTV

Lighting

Traffic Management

Mobility

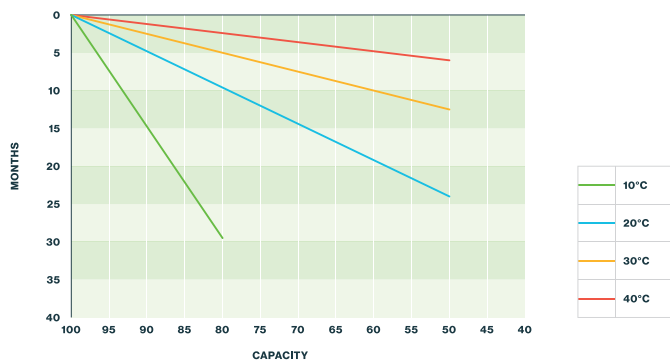
## Charging profile

**IU Charging** I = min. 12% C<sub>5</sub> max. 30% C<sub>5</sub>  
U = 2.4 V per cell

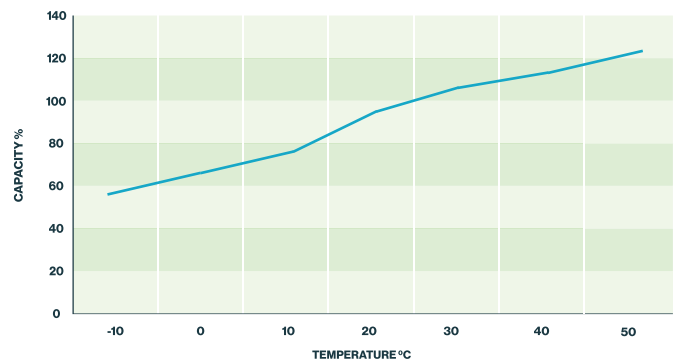
**IUI Charging** I<sub>1</sub> = min. 12% C<sub>5</sub> max. 40% C<sub>5</sub>  
U = 2.35 V per cell  
I<sub>2</sub> = 1.5% C<sub>5</sub> for max. 4 hours

Select either AGM or GEL setting (GEL setting does increase lifespan)

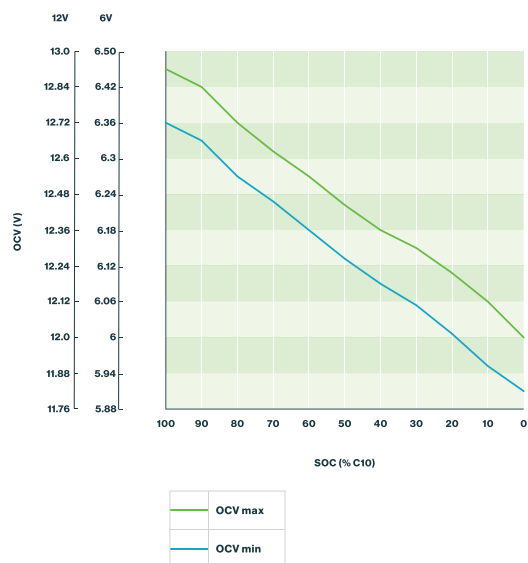
### Self discharge at different temperatures



### Capacity vs. temperature



### Storage: Determine the state of charge



### Relation between charging, voltage and temperature

