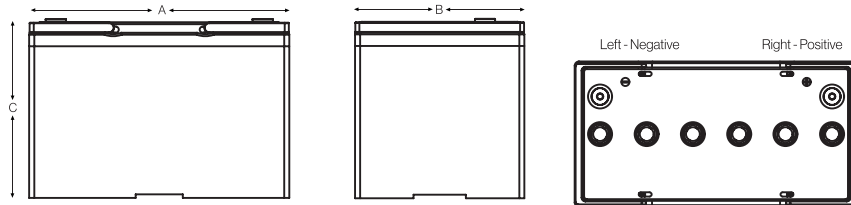


EQM-31M

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

| | |
|--------------------------------|--|
| Voltage | 12V |
| M.R.C. 25 Amps | 170 |
| 80% DOD Voltage Cutoff | 11.2V |
| Low Voltage Cutoff | 10.8V |
| 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) |

| 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-31M | 85 | 88 | 94 | 100 |

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

Mechanical Specifications

| Industry Reference | BCI31 | |
|---------------------------|--------|--------|
| Length (A) | 13 in | 329 mm |
| Width (B) | 6.7 in | 170 mm |
| Height (C) | 8.1 in | 205 mm |
| Weight | 71 lbs | 32 kgs |
| 0°C MCA (EN) | 550 | |
| Terminal (Opt'l) | DUAL | |
| Cell(s) | 6 | |
| Electrolyte | Gel | |
| Terminal Torque Nm | 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

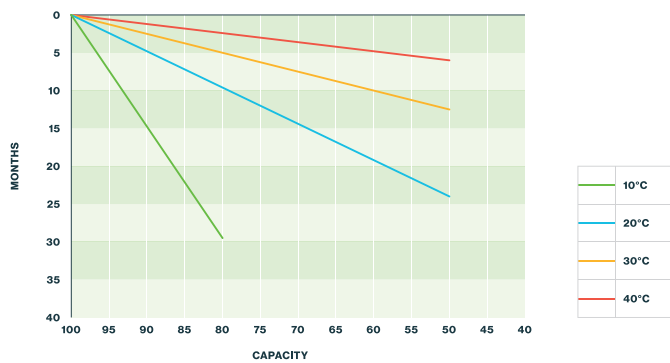
Charging profile

IU Charging I = min. 12% C₅ max. 30% C₅
U = 2.4 V per cell

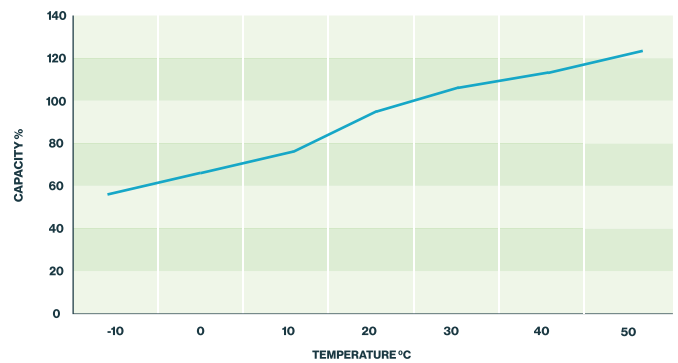
IUI Charging I₁ = min. 12% C₅ max. 40% C₅
U = 2.35 V per cell
I₂ = 1.5% C₅ for max. 4 hours

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

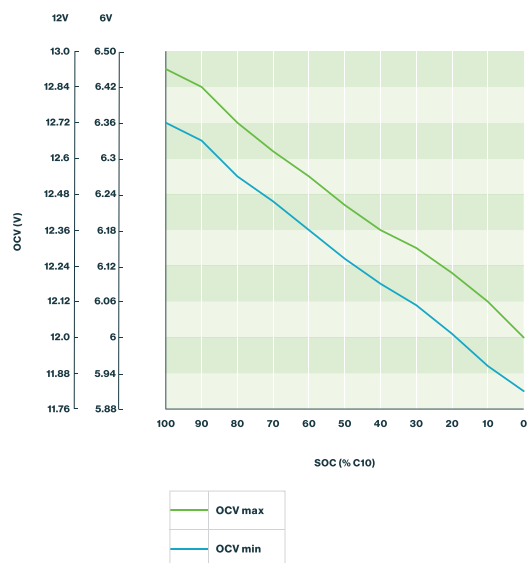
Self discharge at different temperatures



Capacity vs. temperature



Storage: Determine the state of charge



Relation between charging, voltage and temperature

