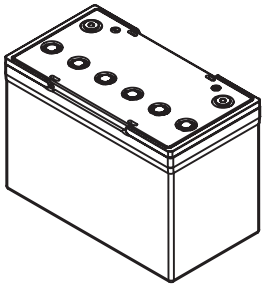
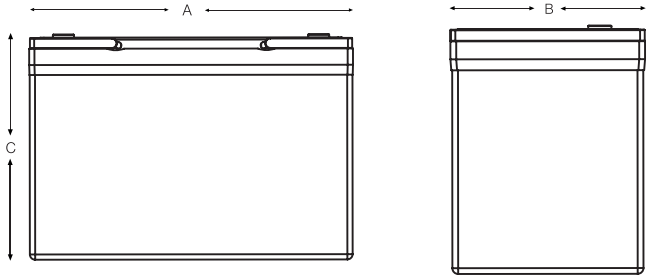
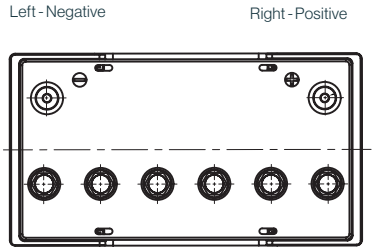
# EQ-27

## Carbon Nano Gel Bloc






### Electrical Specifications

| | |
|---|---|
| **Voltage** | 12V |
| **M.R.C. 25 Amps** | 165 |
| **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<br>Boost Voltage: 2.35 to 2.40VPC @ 25°C / 77°F |
| **Temperature Compensation** | ±3.5mV/°C/Cell |

| **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** |
|---|---|---|---|---|
| EQ-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** | BCI 27 | |
| **Length (A)** | 12.1 in | 307 mm |
| **Width (B)** | 6.6 in | 168 mm |
| **Height (C)** | 8.3 in | 211 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**

ET/DATAQUASAR GEL EQ-27 V8 0725

### Features

- Maintenance free - no topping up required
- Ultra energy efficient due to low resistance
- Reduced operating temperatures for increased cycle life (up to 1000 cycles) and battery lifetime
- Cost savings due to increased efficiency
- Up to 2 x faster recharge
- Increased design life from 12 to 15 years
- Allows for opportunity charging to give you those extra running times when required
- Suitable for extreme temperature variants

### Applications: all motive, leisure & solar:

- Electric vehicles, including cleaning machines
- Wheelchairs
- Electric Working Platforms
- UPS Systems
- Traffic Systems
- Telecommunications & Emergency Lighting
- Caravans / Motorhomes RV's & Maritime
- Solar & Renewable Energy & Home Inverter

**Compliant with** IEC 60254-1 & IEC 60254-2

# Charging profile

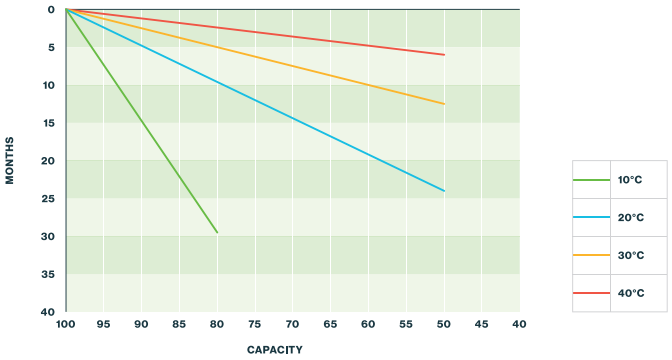
**IU Charging**

I = min. 12% $C_5$ max. 30% $C_5$
U = 2.4 V per cell

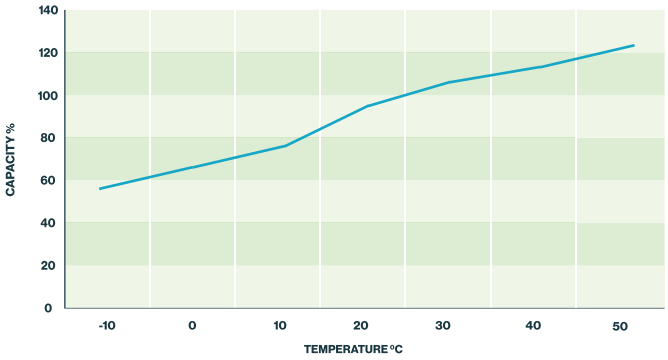
**IUI Charging**

$I_1$ = min. 12% $C_5$ max. 40% $C_5$
U = 2.35 V per cell
$I_2$ = 1.5 % $C_5$ for max. 4 hours

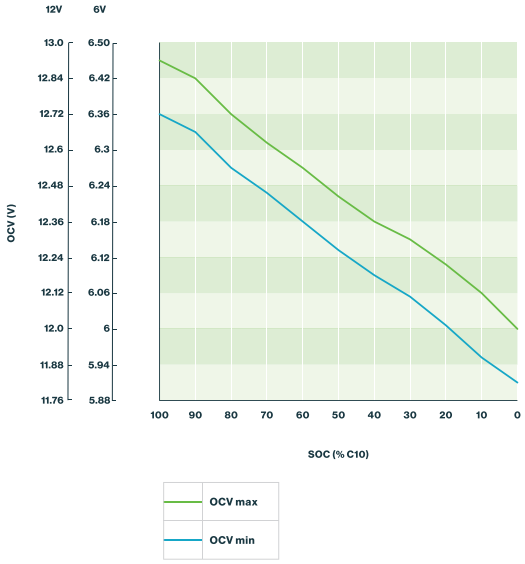
## Self discharge at different temperatures

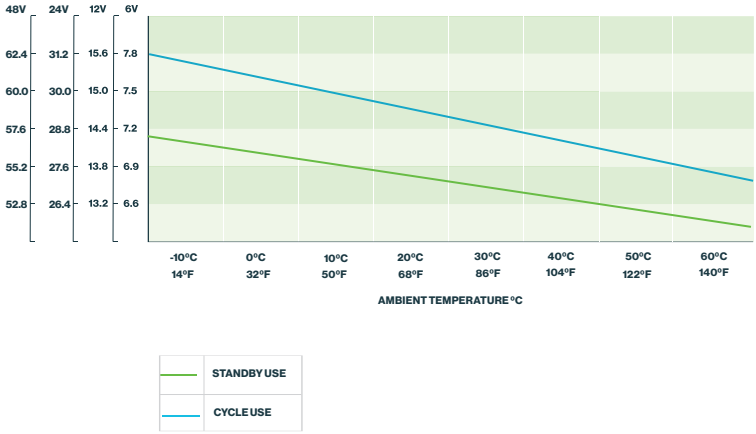



## Capacity vs. temperature




## Storage: Determine the state of charge




## Relation between charging, voltage and temperature