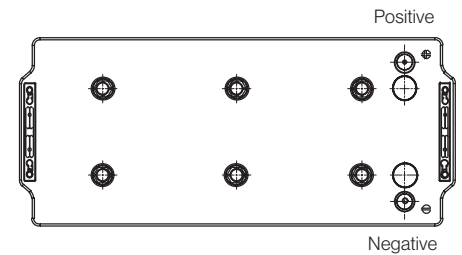
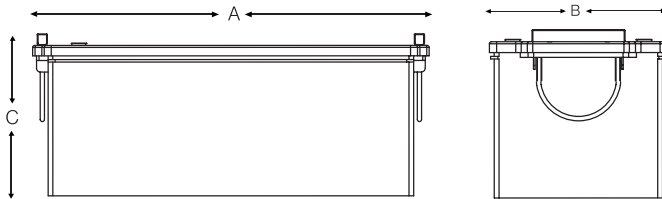


CNG12159

DEEP CYCLE CARBON NANO GEL BATTERIES



Electrical Specifications

Voltage	12V
M.R.C. 25 Amps	325
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
EQ-4D	132	150	159	170

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

Mechanical Specifications

Industry Reference	BCI 4D	
Length (A)	20.20 in	513 mm
Width (B)	8.78 in	223mm
Height (C)	7.72 in	196mm
Weight	119 lbs	54 kgs
Terminal (Opt'l)*	M8	
Cell(s)	6	
Electrolyte	Gel	
Terminal Torque Nm	n/a	

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

Terminal Options Available:

M8
A-Pole
Dual
Stud

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 Invertor

Compliant with EN60254-1&2 and IEC254-1/2

Charging profile

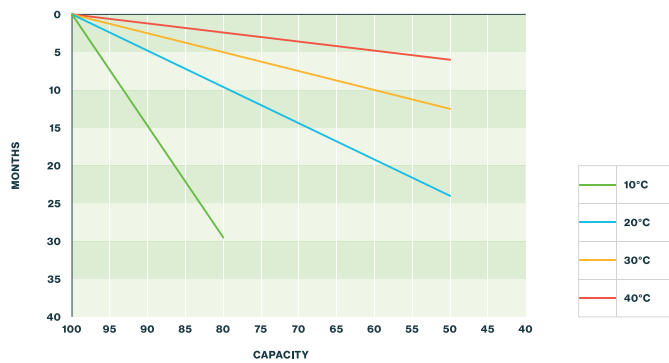
IU Charging

$I = \text{min. } 12\% C_5 \text{ max. } 30\% C_5$
 $U = 2.4 \text{ V per cell}$

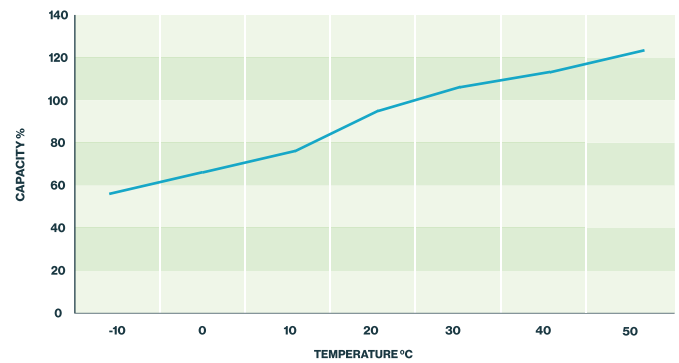
IUI Charging

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

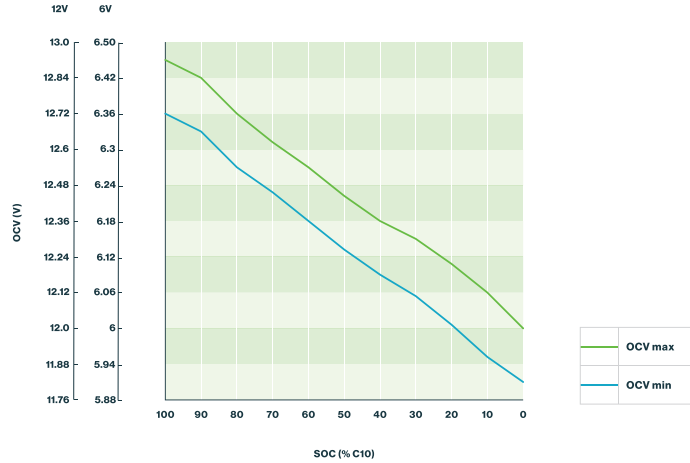
Self discharge at different temperatures



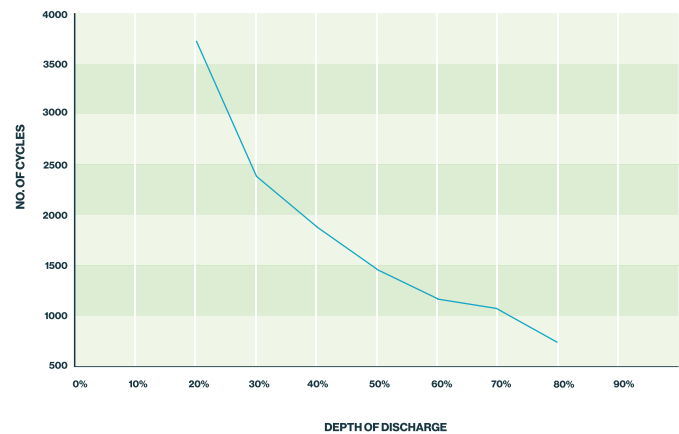
Capacity vs. temperature



Storage: Determine the state of charge



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



Relation between charging, voltage and temperature

