

EXPDC-8-12V

12 Volt 8 Amp.
Deep Cycle Battery

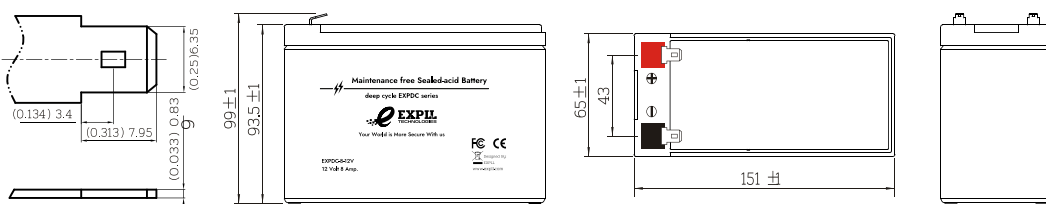
Physical Specification

| | |
|-------------------------------|-------------------------|
| Part Number: | EXPDC-8-12V |
| Length: | 151 ± 2mm (5.95 inches) |
| Width: | 65 ± 2mm (2.56 inches) |
| Container Height: | 93 ± 2mm (3.68 inches) |
| Total Height (with terminal): | 99 ± 2mm (3.90 inches) |
| Approx Weight: | 2.45 Kg (5.40 lbs) |



Dimensions

T2 Terminal



Specifications

| | | |
|------------------------------|--|--|
| | Nominal Voltage | 12V |
| | Nominal Capacity (10HR) | 8.0AH |
| Terminal Option | T2 | |
| Container Material | Standard Option | ABS |
| | Flame Retardant Option (FR) | ABS (UL94:VO) |
| Rated Capacity | (20hr, 1.80V/cell, 25°C/77°F) | 8.58AH/0.43A |
| | (10hr, 1.80V/cell, 25°C/77°F) | 8.00AH/0.80A |
| | (5hr, 1.75V/cell, 25°C/77°F) | 7.02AH/1.40A |
| | (3hr, 1.75V/cell, 25°C/77°F) | 6.36AH/2.12A |
| | (1hr, 1.60V/cell, 25°C/77°F) | 46.5AH/4.65A |
| Max Discharge Current (5s) | 120 A | |
| Internal Resistance | Approx. 18.0mΩ | |
| Discharge Characteristics | | Discharge: -15°C~50°C (5°F~122°F) |
| | Operating Temp. Range | Charge: 0°C~40°C (32°F~104°F) Storage: -15°C~40°C (5°F~104°F) |
| | Nominal Operating Temp. Range | 25 ± 3°C (77 ± 5°F) |
| | Cycle Use | Initial Charging Current less than 1.05A. Voltage 14.4V~15V at 25°C (77°F) Temp. Coefficient -30mV/°C |
| | Self Discharge | No limit on Initial Charging Current Voltage 13.5V~13.8 V at 25°C (77°F) Temp. Coefficient 20-mV/°C |
| | Capacity affected by Temperature | 40°C (104°F) 103% |
| | | 25°C (77°F) 100% |
| | | 0°C (32°F) 86% |
| Design Floating Life at 20°C | 20+ Years | |
| Self Discharge | EXPLL deep cycle batteries may be stored for up to 6 months at 25°C (77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter. Self-discharge is less than 2% | |

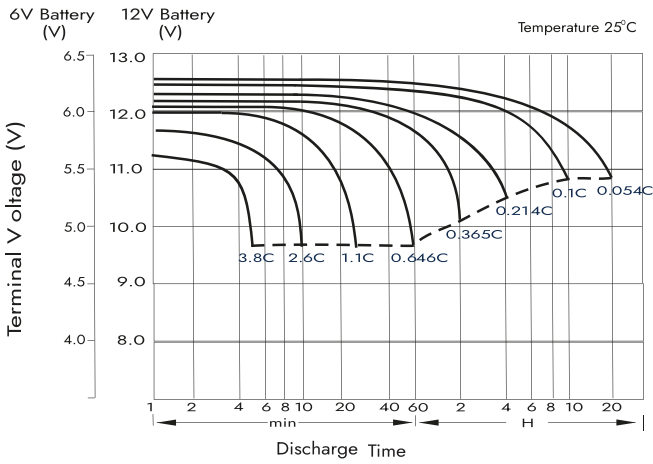
Constant Current Discharge (Amperes) at 25°C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|
| 1.85V/cell | 11.7 | 9.9 | 8.61 | 6.20 | 4.92 | 3.99 | 2.48 | 1.93 | 1.57 | 1.27 | 1.11 | 0.91 | 0.76 | 0.425 |
| 1.80V/cell | 15.0 | 11.9 | 10.2 | 7.31 | 5.72 | 4.47 | 2.71 | 2.08 | 1.67 | 1.37 | 1.19 | 0.96 | 0.80 | 0.429 |
| 1.75V/cell | 16.4 | 13.0 | 11.0 | 7.59 | 5.94 | 4.68 | 2.81 | 2.12 | 1.71 | 1.40 | 1.22 | 0.98 | 0.81 | 0.433 |
| 1.70V/cell | 17.9 | 13.9 | 11.5 | 7.90 | 6.18 | 4.83 | 2.92 | 2.18 | 1.76 | 1.44 | 1.25 | 0.99 | 0.82 | 0.441 |
| 1.65V/cell | 19.3 | 14.8 | 12.2 | 8.34 | 6.33 | 4.99 | 3.00 | 2.27 | 1.82 | 1.48 | 1.28 | 1.01 | 0.83 | 0.446 |
| 1.60V/cell | 21.0 | 15.8 | 13.0 | 8.80 | 6.60 | 5.17 | 3.10 | 2.34 | 1.87 | 1.53 | 1.30 | 1.02 | 0.84 | 0.449 |

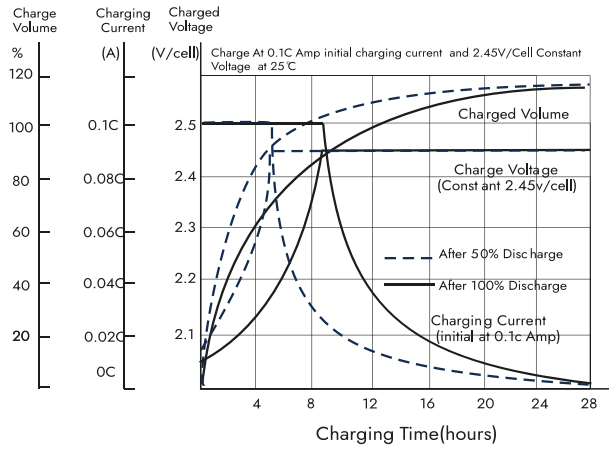
Constant Power Discharge (Watts/cell) at 25°C (77°F)

| F.V/Time | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|-------|
| 1.85V/cell | 21.9 | 18.6 | 16.4 | 11.9 | 9.52 | 7.75 | 4.83 | 3.78 | 3.07 | 2.50 | 2.19 | 1.79 | 1.50 | 0.850 |
| 1.80V/cell | 27.6 | 22.1 | 19.1 | 13.9 | 11.0 | 8.63 | 5.25 | 4.05 | 3.26 | 2.68 | 2.34 | 1.90 | 1.58 | 0.857 |
| 1.75V/cell | 29.9 | 23.9 | 20.4 | 14.3 | 11.3 | 9.00 | 5.42 | 4.11 | 3.33 | 2.74 | 2.41 | 1.93 | 1.60 | 0.864 |
| 1.70V/cell | 32.1 | 25.4 | 21.3 | 14.9 | 11.8 | 9.26 | 5.63 | 4.22 | 3.41 | 2.80 | 2.45 | 1.96 | 1.61 | 0.879 |
| 1.65V/cell | 34.4 | 26.8 | 22.5 | 15.6 | 12.0 | 9.54 | 5.77 | 4.38 | 3.52 | 2.88 | 2.50 | 1.99 | 1.64 | 0.889 |
| 1.60V/cell | 36.7 | 28.3 | 23.7 | 16.3 | 12.4 | 9.80 | 5.92 | 4.49 | 3.61 | 2.96 | 2.55 | 2.00 | 1.66 | 0.893 |

Discharge Characteristics



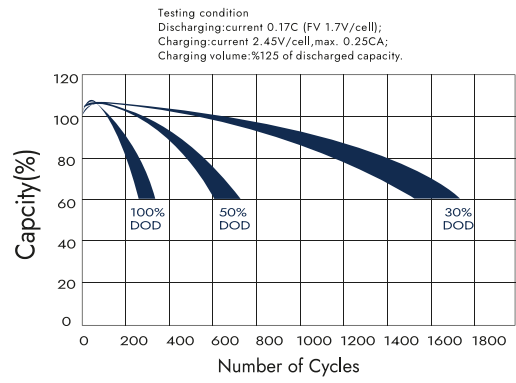
Float Charging Characteristics



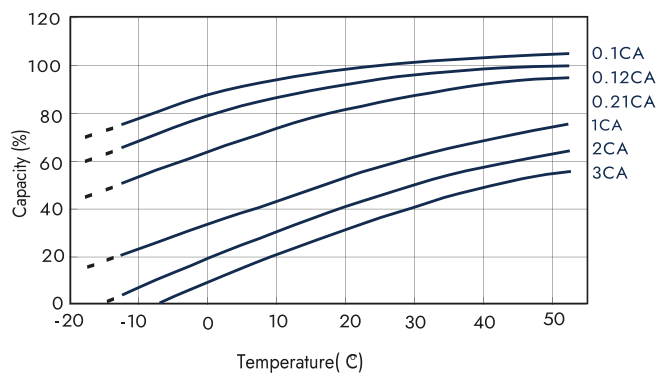
Deep Cycle Batteries

Sealed lead acid batteries are engineered to provide reliable power in a compact design. They are spill-proof and require zero maintenance, as adding water is never necessary. The acid in the battery is suspended in a glass mat separator, which makes the cells leak-proof during normal battery operation. Our batteries are proudly designed by EXPLL with quality and performance in mind, offering one of the highest cycle life among other sealed lead acid battery brands. EXPLL AGM batteries are manufactured with pure lead to ensure a low self-discharge rate of less than 2%, meaning stored batteries are only required a recharge once every six months. The series also features an outer container made from ABS material.

Cycle Life Relation to Depth of Discharge



Temperature Effects in Relation to Battery Capacity



Capacity Based on Storage Time

