

# AccuForce 12V - 175Ah S

## Solar VRLA Battery



### Specifications

|                                 |   |               |
|---------------------------------|---|---------------|
| Nominal Voltage                 | 12 V  |               |
| Number of cells                 | 6   |               |
| Cycle Life                      | Approx. 800 cycles at 50% DOD                       |               |
| Dimensions                      | Length  | 485 mm        |
|                                 | Width   | 172 mm        |
|                                 | Height  | 240 mm        |
|                                 | Total Height  | 240 mm        |
| Approx. Weight                  | 42.8 kg   |               |
| Nominal Capacity (25°C)         | 120 hours rate (1.47 A, 11.1 V)                     | 176.4 Ah      |
|                                 | 100 hours rate (1.74 A, 11.1 V)                     | 174.0 Ah      |
|                                 | 48 hours rate (3.45 A, 10.8 V)                      | 165.6 Ah      |
|                                 | 10 hours rate (15.0 A, 10.8 V)                      | 150.0 Ah      |
|                                 | 5 hours rate (26.3 A, 10.5 V)                       | 131.5 Ah      |
| Max. Discharge Current (25°C)   | 1500 A (5s)   |               |
| Internal Resistance             | 3.5 mOhms   |               |
| Fully Charged battery (25°C)    |   |               |
| Self-Discharge                  | 3% of capacity declined per month at 25°C (average) |               |
| Operating Temperature Range     | Discharge   | -15°C~50°C    |
|                                 | Charge  | -10°C~50°C    |
|                                 | Storage   | -20°C~50°C    |
| Short Circuit Current           | 3400 A  |               |
| Charging Characteristics (25°C) | Cycle use   | 2.40-2.48 Vpc |
|                                 | Maximum charging current                            | 45 A          |
|                                 | Temperature compensation                            | -30 mV/°C     |
|                                 | Standby use   | 2.27-2.35 Vpc |
| Temperature compensation        | -18 mV/°C   |               |
| Design Floating Life (20°C)     | 10 years  |               |

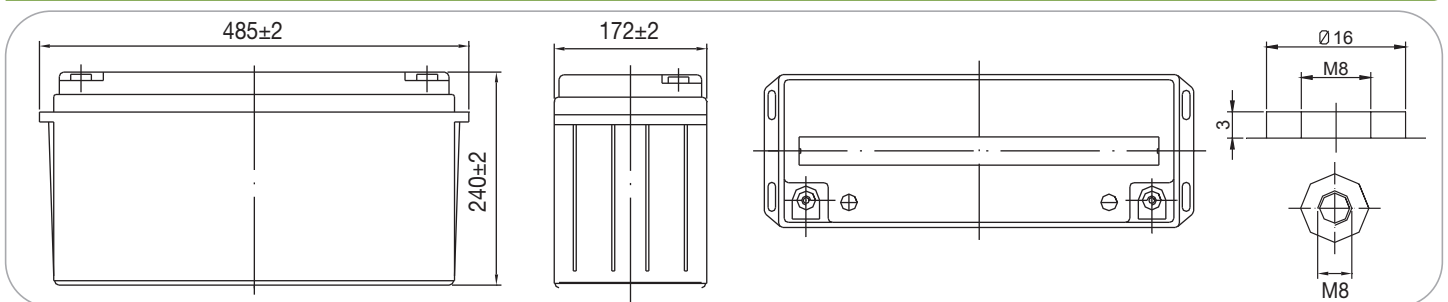
### Applications

- Solar / Wind power systems
- Residential installations
- Golf carts and electric powered vehicles
- Marine equipment
- Electric wheelchairs
- Traffic systems (signaling and lighting)
- Remote monitoring and controlling
- Power tools and cleaning machines
- Uninterruptible power supply (UPS)

### Battery Construction

| Component    | Positive Plate | Negative Plate | Container | Cover | Safety Valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide   | Lead           | ABS       | ABS   | Rubber       | Copper   | Fiberglass | Sulfuric acid |

### Dimensions



### Constant Current Discharge (Amperes) at 25°C

| End Voltage (Volts/Cell) | 15min | 30min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  | 48h  | 72h  | 100h | 120h |
|--------------------------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1.60 V                   | 251   | 152   | 93.8 | 54.8 | 38.3 | 31.3 | 26.8 | 23.3 | 18.3 | 15.3 | 8.01 | ---  | ---  | ---  | ---  |
| 1.65 V                   | 244   | 149   | 92.6 | 54.4 | 38.1 | 31.1 | 26.6 | 22.9 | 18.3 | 15.3 | 7.99 | ---  | ---  | ---  | ---  |
| 1.70 V                   | 236   | 144   | 90.2 | 54.0 | 37.9 | 30.9 | 26.4 | 22.9 | 18.2 | 15.2 | 7.99 | 3.51 | ---  | ---  | ---  |
| 1.75 V                   | 227   | 140   | 88.3 | 53.3 | 37.5 | 30.8 | 26.3 | 22.9 | 18.0 | 15.2 | 7.93 | 3.28 | 2.34 | ---  | ---  |
| 1.80 V                   | 214   | 135   | 85.7 | 51.9 | 36.4 | 29.8 | 25.5 | 22.1 | 17.4 | 15.0 | 7.88 | 3.45 | 2.33 | ---  | ---  |
| 1.85 V                   | 201   | 128   | 80.4 | 48.8 | 34.1 | 27.9 | 24.0 | 20.8 | 16.4 | 14.1 | 7.41 | 3.24 | 2.19 | 1.74 | 1.47 |

### Constant Power Discharge (Watts) at 25°C

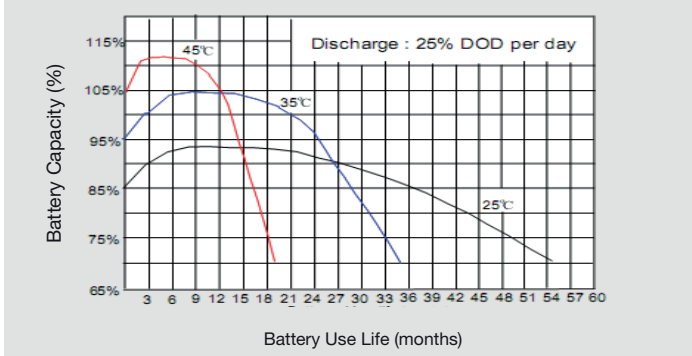
| End Voltage (Volts/Cell) | 15min | 30min | 1h   | 2h  | 3h  | 4h  | 5h  | 6h  | 8h  | 10h | 20h  | 48h  | 72h  | 100h | 120h |
|--------------------------|-------|-------|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| 1.60 V                   | 2745  | 1684  | 1067 | 630 | 446 | 364 | 315 | 274 | 218 | 182 | 96.0 | ---  | ---  | ---  | ---  |
| 1.65 V                   | 2679  | 1656  | 1054 | 626 | 444 | 364 | 311 | 270 | 218 | 182 | 95.8 | ---  | ---  | ---  | ---  |
| 1.70 V                   | 2580  | 1609  | 1029 | 623 | 441 | 360 | 311 | 270 | 216 | 180 | 95.6 | 42.0 | ---  | ---  | ---  |
| 1.75 V                   | 2492  | 1571  | 1009 | 615 | 439 | 358 | 308 | 266 | 214 | 180 | 95.3 | 41.8 | 28.1 | ---  | ---  |
| 1.80 V                   | 2361  | 1519  | 979  | 600 | 426 | 351 | 302 | 261 | 206 | 179 | 94.5 | 41.4 | 27.9 | ---  | ---  |
| 1.85 V                   | 2216  | 1425  | 919  | 563 | 399 | 328 | 283 | 244 | 193 | 168 | 88.9 | 39.0 | 26.3 | 21.0 | 17.6 |

Note: The above characteristics data can be obtained within three charge/discharge cycles.

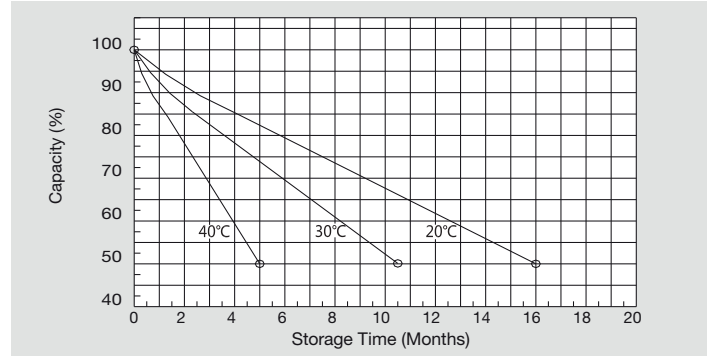
# AccuForce 12V - 175Ah S

## Solar VRLA Battery

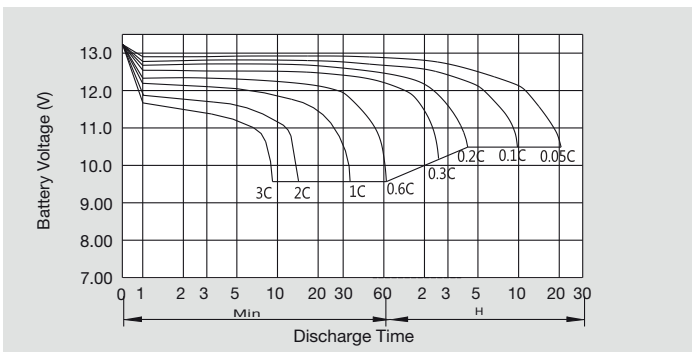
### Typical Use Life and Operating Temperature



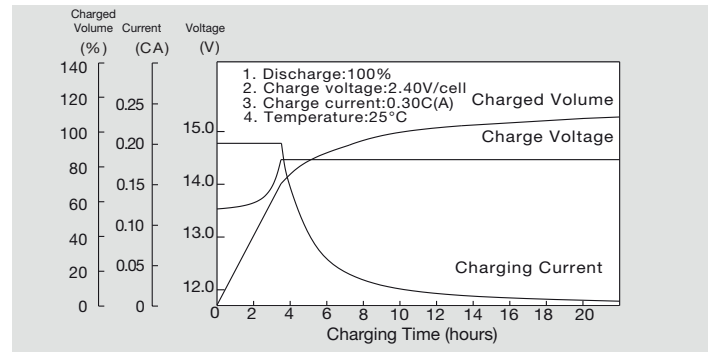
### Self Discharge Characteristics



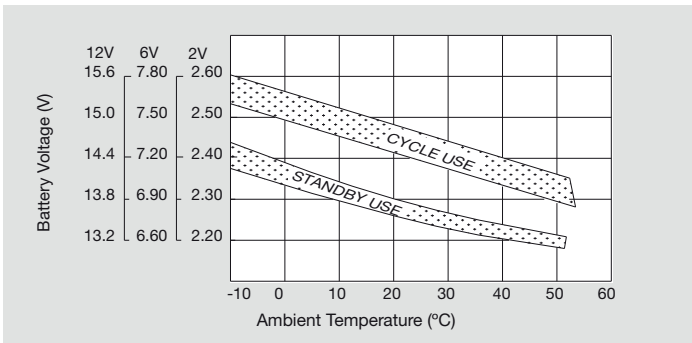
### Discharge Characteristics (25°C)



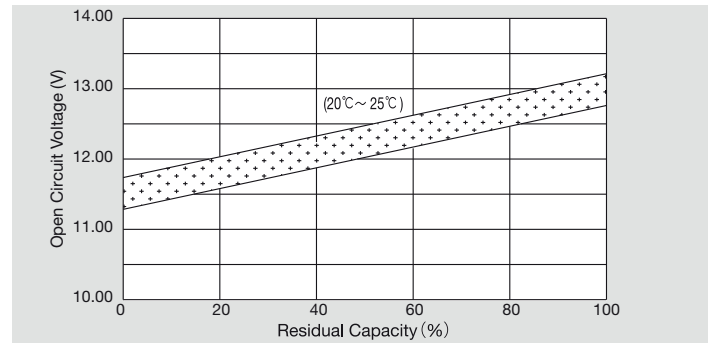
### Charging Characteristics (25°C)



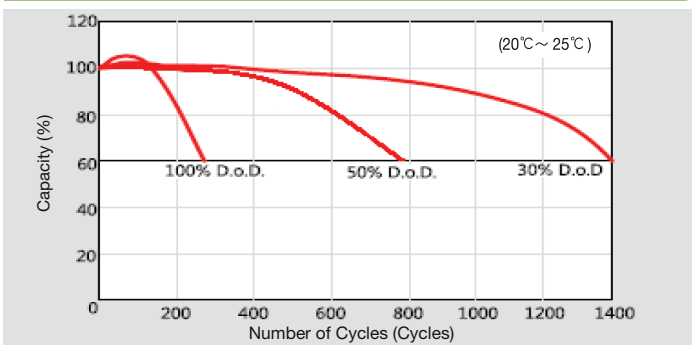
### Relationship Between Charging Voltage and Temperature



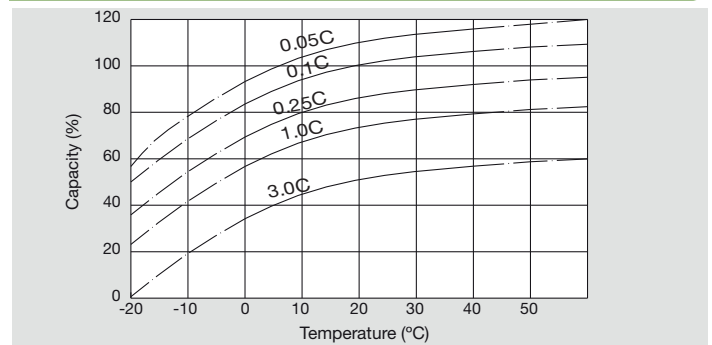
### Relationship Between OCV and Residual Capacity (25°C)



### Cycle Service Life in Relation to Depth of Discharge



### Temperature Effects on Capacity



**Headquarters** 2 Ermou & Nikis Street | Syntagma Square | 105 63 | Athens | Greece | EU  
**Manufacturing Plant** Neo Olvio | 672 00 Xanthi | Greece | EU  
**Recycling Plant** Industrial Area of Komotini | 691 00 Komotini | Greece | EU  
**Southeast Europe Industrial Sales** 14B Menexedon Street | 145 64 Kato Kifissia | Greece | EU  
**European Battery Assembly (SEBA)** 175, Via Stra | 37030 Colognola Ai Colli Verona | Italy | EU  
**Industrial SRL** 11, Soseaua Centurii | 077025 Bragadiru, Judet Ilfov | Romania | EU

T +30 210 6245400  
T +30 25410 48100  
T +30 25310 82460  
T +30 210 6245600  
T +39 045 7651771  
T +40 021 3517777

F +30 210 6245409  
F +30 25410 95446  
F +30 25310 82489  
F +30 210 6245619  
F +39 045 7651771  
F +40 021 3516667