

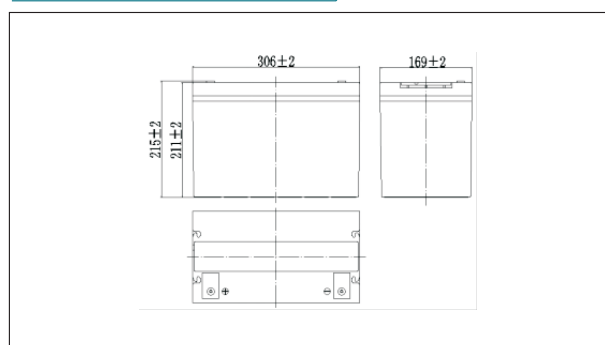
## HR12330W-FR (12V330 Watts/cell)

### Specifications

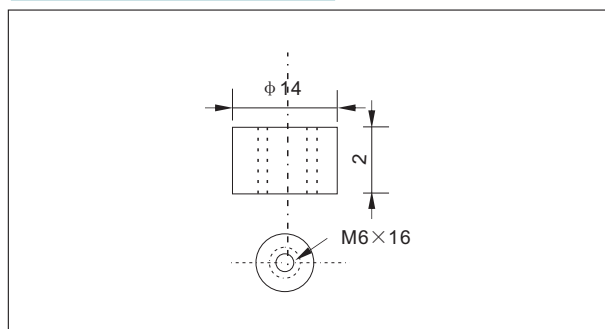
|                           |              |                    |
|---------------------------|--------------|--------------------|
| Nominal Voltage           |              | 12V                |
| Number of cell            |              | 6 cells            |
| Rated capacity(15min.rat) |              | 330 Watts/cell     |
| Dimensions                | Length       | 306±2mm(12.05inch) |
|                           | Width        | 169±2mm(6.65inch)  |
|                           | Height       | 211±2mm(8.31inch)  |
|                           | Total Height | 215±2mm(8.46inch)  |
| Approx. Weight            |              | 28.5kg(62.8lbs)±3% |



### Outer dimensions (mm)



### Terminal Type (mm)



### Construction

| Component    | Positive plate | Negative plate | Container | Cover | Separator | Electrolyte   | Safety valve | Terminal |
|--------------|----------------|----------------|-----------|-------|-----------|---------------|--------------|----------|
| Raw material | Leaddioxide    | Lead           | ABS       | ABS   | AGM       | Sulfuric acid | Rubber       | Copper   |

### Constant Current Discharge Characteristics Unit:A(25℃,77°F)

| F.V/Time   | 10min | 15min | 20min | 30min | 45min | 60min | 2h   | 3h   | 4h   | 5h   | 6h   |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V/cell | 215   | 176   | 141   | 99.8  | 74.4  | 60.7  | 34.7 | 24.9 | 20.1 | 17.4 | 14.9 |
| 1.67V/cell | 206   | 171   | 135   | 96.6  | 72.0  | 59.2  | 34.4 | 24.7 | 19.9 | 17.3 | 14.8 |
| 1.70V/cell | 200   | 166   | 132   | 94.8  | 70.6  | 58.2  | 34.2 | 24.6 | 19.8 | 17.2 | 14.7 |
| 1.75V/cell | 192   | 160   | 128   | 92.5  | 68.9  | 57.1  | 33.7 | 24.4 | 19.7 | 17.1 | 14.6 |
| 1.80V/cell | 181   | 151   | 121   | 89.1  | 66.4  | 55.3  | 32.8 | 23.7 | 19.1 | 16.6 | 14.2 |

### Constant Power Discharge Characteristics Unit:W(25℃,77°F)

| F.V/Time   | 10min | 15min | 20min | 30min | 45min | 60min | 2h   | 3h   | 4h   | 5h   | 6h   |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V/cell | 405   | 340   | 272   | 193   | 144   | 117   | 67.7 | 49.1 | 39.5 | 34.5 | 29.5 |
| 1.67V/cell | 386   | 330   | 261   | 186   | 139   | 114   | 67.1 | 48.6 | 39.2 | 34.2 | 29.3 |
| 1.70V/cell | 376   | 320   | 256   | 183   | 136   | 112   | 66.7 | 48.4 | 39.0 | 34.1 | 29.2 |
| 1.75V/cell | 360   | 309   | 247   | 179   | 133   | 110   | 65.7 | 48.1 | 38.7 | 33.9 | 29.0 |
| 1.80V/cell | 340   | 292   | 234   | 172   | 128   | 107   | 64.0 | 46.7 | 37.6 | 32.8 | 28.1 |

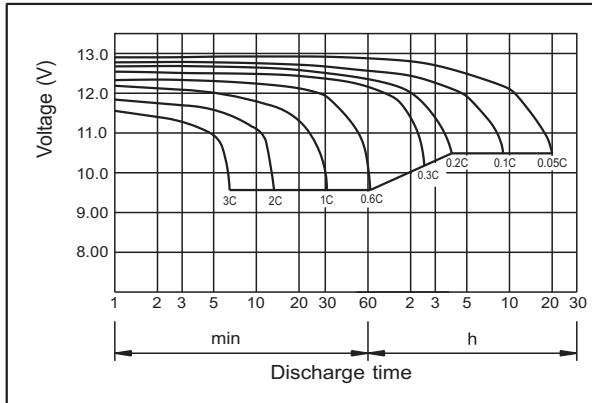
Note: The above characteristics data can be obtained within three charge or discharge cycles.

### Characteristics

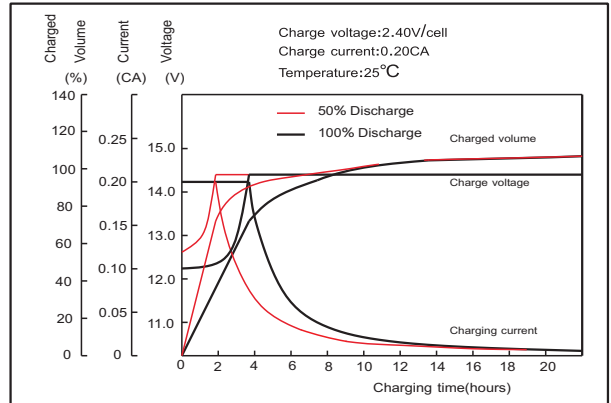
|                                                  |           |                                                         |
|--------------------------------------------------|-----------|---------------------------------------------------------|
| Capacity(10HR,25℃)                               |           | 100Ah                                                   |
| Capacity(15min.rate,25℃)                         |           | 330 Watts/cell                                          |
| Terminal type                                    |           | T14                                                     |
| Internal resistance<br>(Fully charged,25℃)       |           | Approx.5m Ω                                             |
| Capacity<br>affected by<br>temperature<br>(10HR) | 40℃       | 102%                                                    |
|                                                  | 25℃       | 100%                                                    |
|                                                  | 0℃        | 85%                                                     |
|                                                  | -15℃      | 65%                                                     |
| Self-discharge<br>(25℃)                          | 3month    | Remaining Capacity:91%                                  |
|                                                  | 6month    | Remaining Capacity:82%                                  |
|                                                  | 12month   | Remaining Capacity:65%                                  |
| Nominal operating<br>temperature                 |           | 25℃ ±3℃(77°F ±5°F)                                      |
| Operating<br>temperature<br>range                | Discharge | -15℃~50℃(5°F~122°F)                                     |
|                                                  | Charge    | -10℃~50℃(14°F~122°F)                                    |
|                                                  | Storage   | -20℃~50℃(-4°F~122°F)                                    |
| Float charging voltage(25℃)                      |           | 13.50 to 13.80V<br>Temperature compensation:<br>-18mV/℃ |
| Cyclic charging voltage(25℃)                     |           | 14.50 to 15.00V<br>Temperature compensation:<br>-30mV/℃ |
| Maximum charging current                         |           | 30A                                                     |
| Terminal material                                |           | Copper                                                  |
| Maximum discharge current                        |           | 800A(5 sec.)                                            |
| Designed floating life(20℃)                      |           | 10years                                                 |

## HR12330W-FR (12V330 Watts/cell)

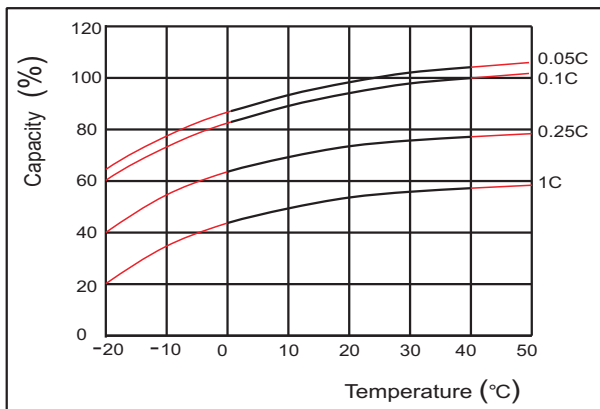
### Discharge characteristics(25°C)



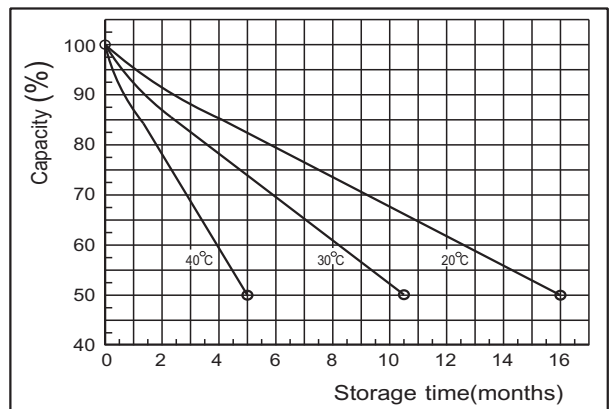
### Charging characteristics (25°C)



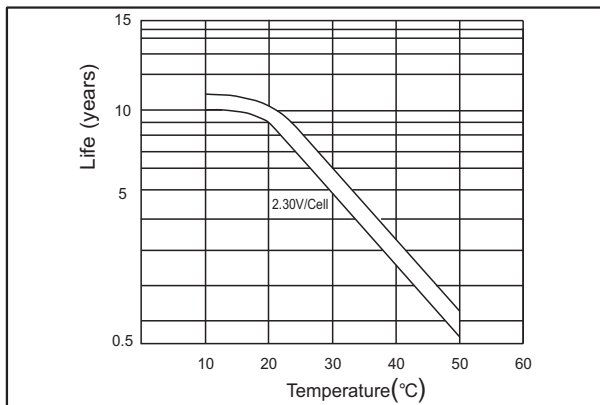
### Effect of Temperature on Capacity



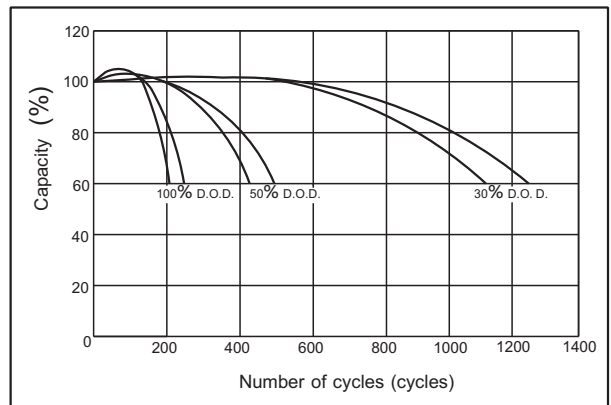
### Self-discharge characteristics



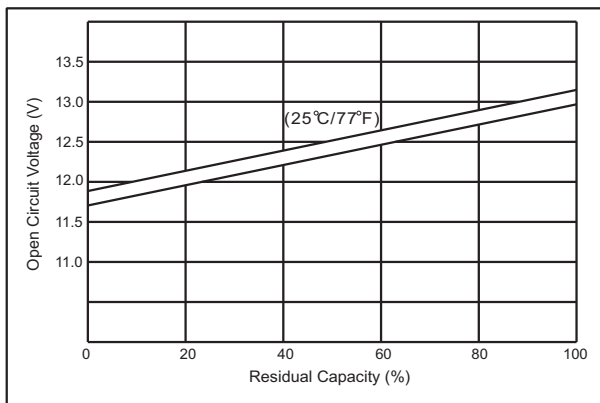
### Floating Life on Temperature



### Cycle service Life on D.O.D (25°C)



### The relationship for OCV and Capacity (25°C)



### The relationship for Charging voltage and Temperature

