

# YALÇIN GOLD BATTERY

## GDC12033.0 (12V33AH)

### Specification

|                                  |  |                                |
|----------------------------------|--|--------------------------------|
| Nominal Voltage                  | 12V  |                                |
| Nominal Capacity(10HR)           | 33.0AH   |                                |
| Dimension                        | Length   | 195±2mm (7.68 inches)          |
|                                  | Width  | 130±2mm (5.12 inches)          |
|                                  | Container Height   | 164±2mm (6.46 inches)          |
|                                  | Total Height (with Terminal)   | 182±2mm (7.17 inches)          |
| Approx Weight                    | Approx 1 1.65 Kg (25.7lbs)   |                                |
| Terminal                         | T5   |                                |
| Container Material               | ABS  |                                |
| Rated Capacity                   | 35.4 AH/1.77A  | (20hr , 1.80V/cell, 25°C/77°F) |
|                                  | 33.0 AH/3.30A  | (10hr, 1.80V/cell, 25°C/77°F)  |
|                                  | 28.9 AH/5.79A  | (5hr, 1.75V/cell, 25°C/77°F)   |
|                                  | 26.2 AH/8.75A  | (3hr, 1.75V/cell, 25°C/77°F)   |
|                                  | 21.3 AH/21.3A  | (1hr, 1.60V/cell, 25°C/77°F)   |
| Max. Discharge Current           | 495A (5s)  |                                |
| Internal Resistance              | Approx 1 1.0m Ω  |                                |
| Operating Temp. Range            | Discharge  | -15~50°C (5~122°F)             |
|                                  | Charge   | 0~40°C (32~104°F)              |
|                                  | Storage  | -15~40°C (5~104°F)             |
| Nominal Operating Temp. Range    | 25±3°C (77±5°F)  |                                |
| Cycle Use                        | Initial Charging Current less than 9.9A. Voltage   |                                |
|                                  | 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C  |                                |
| Standby Use                      | No limit on Initial Charging Current Voltage   |                                |
|                                  | 13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C  |                                |
| Capacity affected by Temperature | 40°C (104°F)   | 103%                           |
|                                  | 25°C (77°F)  | 100%                           |
|                                  | 0°C (32°F)   | 86%                            |
| Self Discharge                   | Yalcin Gold series batteries may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter. |                                |



### Applications

- ◆ Electric tools
- ◆ Vehicle in place of walking
- ◆ Lawn mowers
- ◆ Golf trolleys and golf cart
- ◆ Portable apparatus, lights and instruments;
- ◆ Electric toys
- ◆ Illumination light
- ◆ Fire alarms
- ◆ Portable power
- ◆ Wheelchairs
- ◆ Medical equipments.

### 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 | 48.3  | 40.7  | 35.5  | 25.6  | 20.3  | 16.5 | 10.2 | 7.98 | 6.46 | 5.25 | 4.58 | 3.74 | 3.12 | 1.75 |
| 1.80V/cell | 61.7  | 49.1  | 42.0  | 30.2  | 23.6  | 18.5 | 11.2 | 8.59 | 6.90 | 5.64 | 4.91 | 3.97 | 3.30 | 1.77 |
| 1.75V/cell | 67.8  | 53.7  | 45.2  | 31.3  | 24.5  | 19.3 | 11.6 | 8.75 | 7.06 | 5.79 | 5.05 | 4.04 | 3.33 | 1.79 |
| 1.70V/cell | 73.9  | 57.3  | 47.5  | 32.6  | 25.5  | 19.9 | 12.0 | 8.99 | 7.24 | 5.93 | 5.15 | 4.09 | 3.37 | 1.82 |
| 1.65V/cell | 79.8  | 60.9  | 50.4  | 34.4  | 26.1  | 20.6 | 12.4 | 9.37 | 7.49 | 6.10 | 5.27 | 4.16 | 3.44 | 1.84 |
| 1.60V/cell | 86.6  | 65.1  | 53.7  | 36.3  | 27.2  | 21.3 | 12.8 | 9.66 | 7.73 | 6.30 | 5.38 | 4.20 | 3.47 | 1.85 |

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

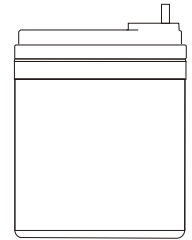
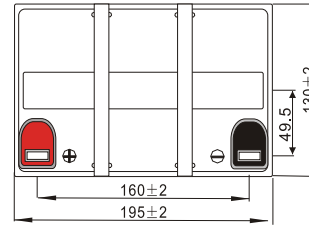
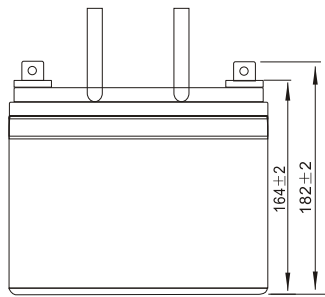
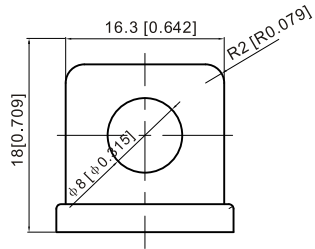
| F.V/Time   | 10min | 15min | 20min | 30min | 45min | 1h   | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|------------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 90.1  | 76.6  | 67.7  | 49.1  | 39.3  | 32.0 | 19.9 | 15.6 | 12.7 | 10.3 | 9.05 | 7.40 | 6.17 | 3.51 |
| 1.80V/cell | 113.6 | 91.2  | 78.8  | 57.3  | 45.3  | 35.6 | 21.6 | 16.7 | 13.4 | 11.0 | 9.67 | 7.84 | 6.53 | 3.53 |
| 1.75V/cell | 123.3 | 98.7  | 84.1  | 59.2  | 46.8  | 37.1 | 22.4 | 17.0 | 13.7 | 11.3 | 9.92 | 7.96 | 6.59 | 3.56 |
| 1.70V/cell | 132.6 | 104.6 | 87.9  | 61.3  | 48.5  | 38.2 | 23.2 | 17.4 | 14.1 | 11.6 | 10.1 | 8.07 | 6.65 | 3.63 |
| 1.65V/cell | 142.0 | 110.5 | 92.9  | 64.4  | 49.6  | 39.3 | 23.8 | 18.1 | 14.5 | 11.9 | 10.3 | 8.19 | 6.78 | 3.67 |
| 1.60V/cell | 151.6 | 116.8 | 97.9  | 67.3  | 51.2  | 40.4 | 24.4 | 18.5 | 14.9 | 12.2 | 10.5 | 8.26 | 6.85 | 3.68 |

Specifications subject to change without notice.

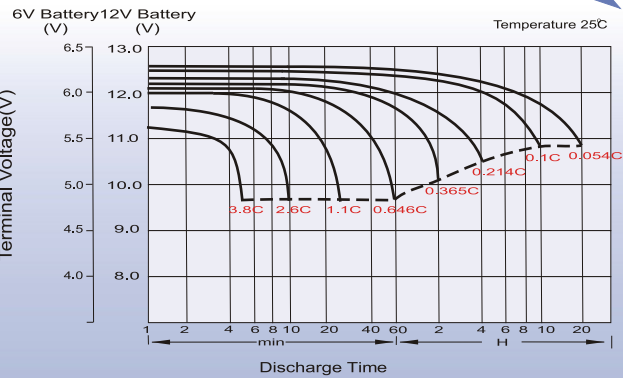


# Dimensions

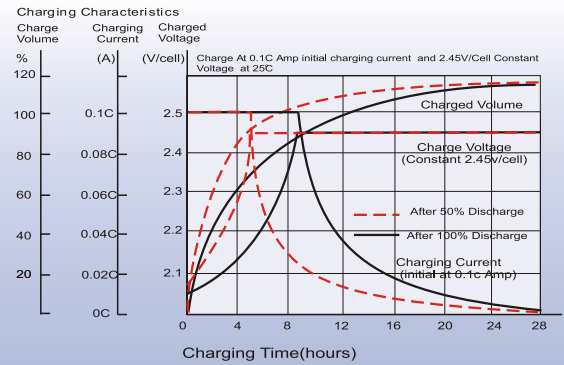
## T5 Terminal Unit: mm [inches]



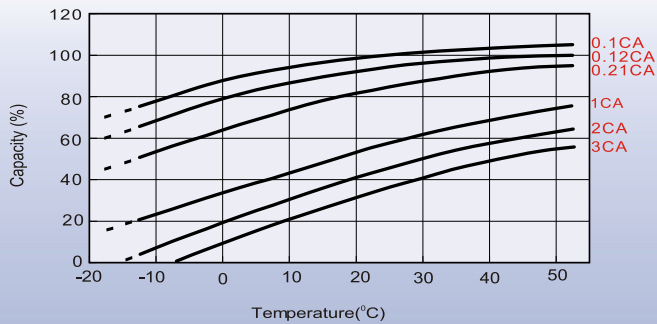
## Discharge Characteristics



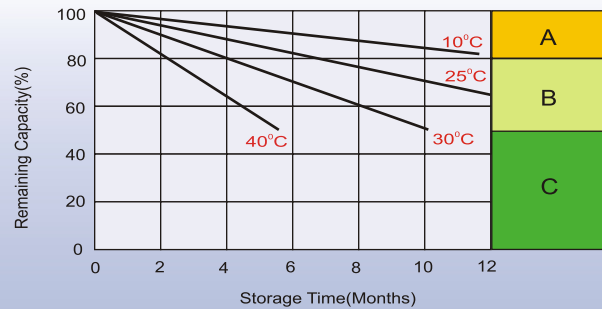
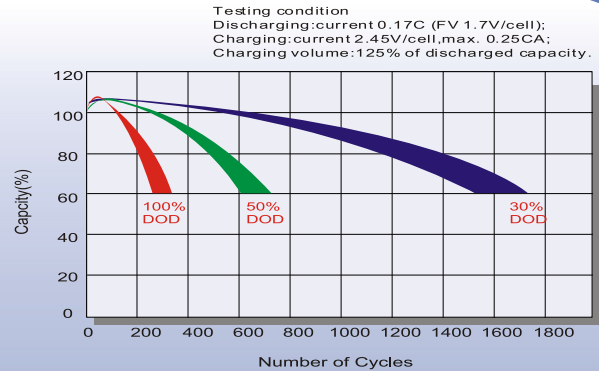
## Charging Characteristics (cycle use)



## Temperature Effects in Relation to Battery Capacity



## Cycle Life in Relation to Depth of Discharge



## Self Discharge Characteristics

- A** No supplementary charge required  
(Carry out supplementary charge before use if 100% capacity is required.)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
  2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
  3. Charged for 8-10 hours at limited current 0.05CA.
- C** Supplementary charge may often fail to recover the capacity.  
The battery should never be left standing till this is reached.