

# AGM Battery (YD Series) YD 12-18 (12V 18Ah)

## Specifications

Rated Voltage	12V	
Nominal Capacity	18.0Ah	(C <sub>20</sub> , 1.75V/cell)
Dimension	Length	181.5±2mm (7.14 inches)
	Width	76.5±1mm (3.01 inches)
	Container Height	167.5±2mm (6.59 inches)
	Total Height	167.5±2mm (6.59 inches)
Approx Weight	5.35 Kg (11.8 lbs)	
Terminal	T3	
Container Material	ABS	
Rated Capacity (25°C)	18.0 Ah	(20hr, 0.900A, 1.75V/cell)
	17.0 Ah	(10hr, 1.70A, 1.75V/cell)
	15.5 Ah	(5hr, 3.10A, 1.75V/cell)
	13.8 Ah	(3hr, 4.59A, 1.75V/cell)
	11.8 Ah	(1hr, 11.8A, 1.60V/cell)
Max. Discharge Current	270A (5s)	
Internal Resistance (25°C)	Approx 16mΩ	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°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 3.6A Voltage	
	14.4V~14.7V at 25°C (77°F) Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 3.6A Voltage	
	13.5V~13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C	
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	YD 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

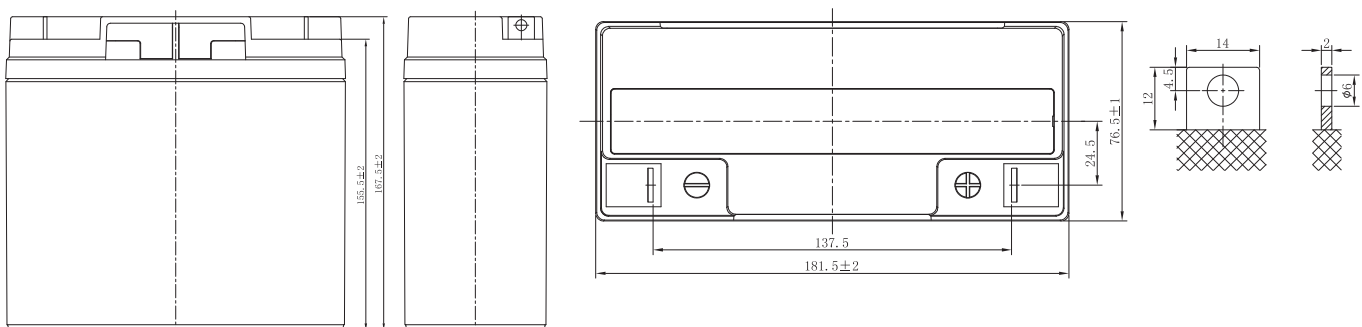
- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system



## General Features

- 5 years float life (25°C)
- Special exhaust structure and sealing technology, safe and reliable, flexible installation, convenient maintenance
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- High purity raw material: ensure low self discharge rate

## Layout



# AGM Battery (YD Series) YD 12-18 (12V 18Ah)

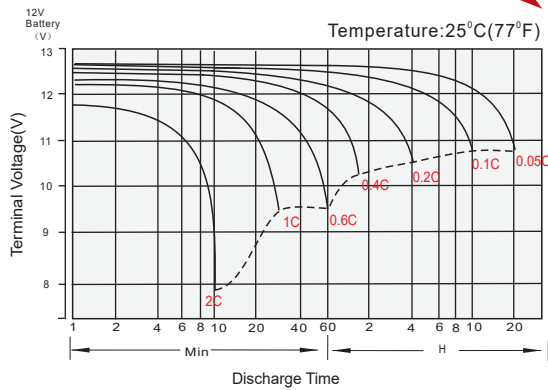
## Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	54.7	37.5	29.2	24.0	17.9	13.1	10.7	7.84	6.16	4.45	3.54	3.02	2.58	2.03	1.66	0.880
1.80V/cell	58.9	39.8	30.6	25.0	18.4	13.4	11.0	8.00	6.28	4.52	3.59	3.06	2.62	2.06	1.69	0.890
1.75V/cell	62.0	41.4	31.7	25.7	18.9	13.7	11.2	8.15	6.39	4.59	3.64	3.10	2.65	2.09	1.70	0.900
1.70V/cell	64.9	43.0	32.7	26.4	19.4	14.0	11.4	8.29	6.48	4.66	3.69	3.14	2.68	2.11	1.72	0.907
1.67V/cell	67.2	44.2	33.5	27.0	19.7	14.2	11.6	8.40	6.56	4.70	3.73	3.17	2.71	2.12	1.73	0.914
1.60V/cell	71.3	46.1	34.7	27.8	20.3	14.6	11.8	8.58	6.69	4.79	3.79	3.22	2.75	2.15	1.75	0.924

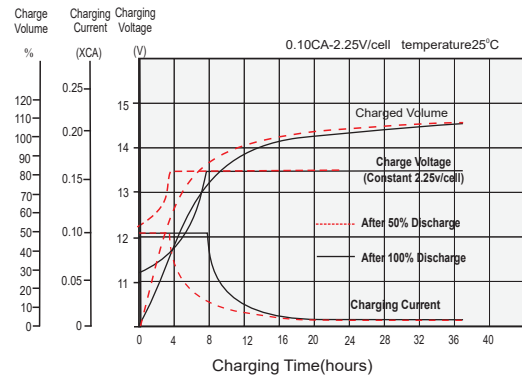
## Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	103.5	71.4	55.9	46.3	34.6	25.4	20.8	15.3	12.1	8.74	6.98	5.95	5.11	4.03	3.31	1.76
1.80V/cell	110.3	75.2	58.3	47.9	35.5	25.9	21.3	15.6	12.3	8.87	7.07	6.03	5.18	4.09	3.35	1.78
1.75V/cell	114.9	77.6	59.9	48.9	36.2	26.4	21.6	15.8	12.4	8.98	7.16	6.10	5.23	4.13	3.38	1.80
1.70V/cell	119.2	80.2	61.5	50.1	37.0	26.9	21.9	16.1	12.6	9.10	7.24	6.17	5.29	4.17	3.41	1.81
1.67V/cell	122.3	82.0	62.8	51.0	37.5	27.3	22.2	16.2	12.7	9.18	7.30	6.22	5.33	4.20	3.43	1.83
1.60V/cell	127.2	84.4	64.5	52.3	38.4	27.8	22.6	16.5	12.9	9.32	7.41	6.30	5.40	4.25	3.47	1.85

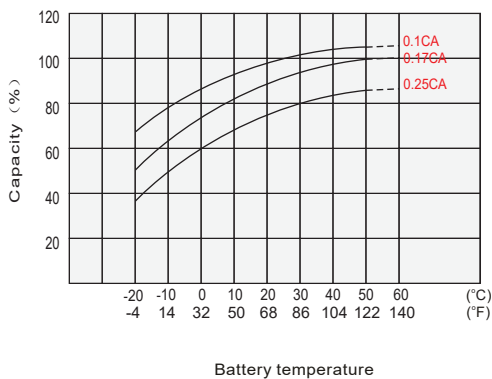
### Discharge Characteristics



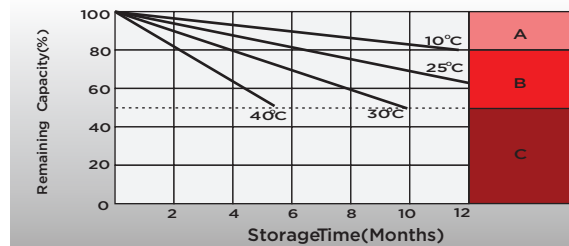
### Float Charging Characteristics



### Temperature Effects in Relation to Battery Capacity



### 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.