

AGM Battery (YD Series)

YD 12-40 (12V 40Ah)

Specifications

Rated Voltage	12V	
Nominal Capacity	40.0Ah	(C ₁₀ , 1.80V/cell)
Dimension	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container Height	170±2mm (6.69 inches)
	Total Height	170±2mm (6.69 inches)
Approx Weight	12.0 Kg (26.9 lbs)	
Terminal	T6 (M6)	
Container Material	ABS	
Rated Capacity (25°C)	42.0 Ah	C20(2.10A, 1.80V/cell)
	40.0 Ah	C10(4.00A, 1.80V/cell)
	36.4 Ah	C5(7.28A, 1.75V/cell)
	33.3 Ah	C3(11.1A, 1.75V/cell)
	25.5 Ah	C1(25.5A, 1.60V/cell)
Max. Discharge Current	380A (5s)	
Internal Resistance (25°C)	Approx 10mΩ	
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 8.0A Voltage	
	14.4V~14.7V at 25°C (77°F)Temp. Coefficient -30mV/°C	
Standby Use	Initial Charging Current less than 8.0A 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

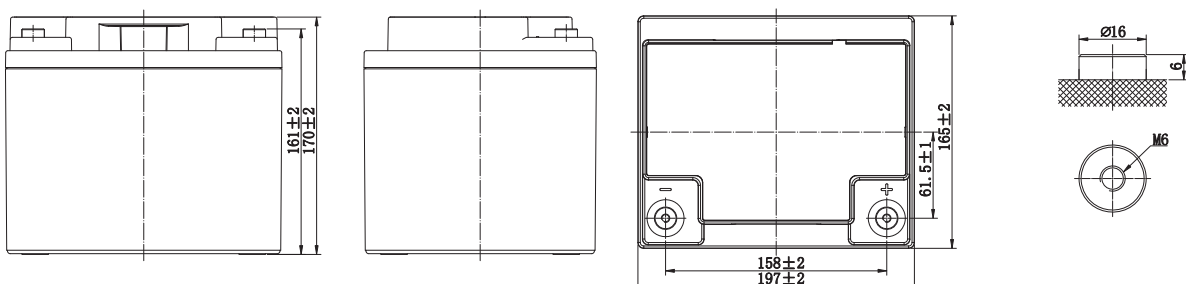
- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security system
- Communication power supply
- DC power supply
- Auto control system



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 12-40 (12V 40Ah)

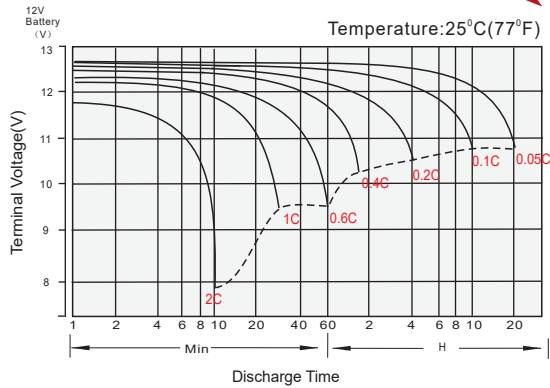
Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	83.2	59.2	51.3	40.3	36.1	26.4	22.3	16.2	13.6	9.99	7.84	6.80	5.99	4.61	3.82	2.03
1.80V/cell	94.6	67.2	58.1	45.6	39.3	28.0	23.1	16.7	14.1	10.8	8.36	7.15	6.44	4.85	4.00	2.10
1.75V/cell	102.8	72.8	62.9	49.2	40.1	29.0	24.3	17.6	14.8	11.1	8.52	7.28	6.49	4.88	4.04	2.12
1.70V/cell	109.9	77.7	66.9	52.2	40.9	29.5	24.8	18.0	15.1	11.3	8.67	7.40	6.52	4.95	4.08	2.14
1.67V/cell	113.7	80.1	68.8	53.6	41.5	30.0	25.1	18.2	15.3	11.4	8.80	7.55	6.55	5.02	4.13	2.17
1.60V/cell	117.8	82.9	70.9	55.0	42.1	30.4	25.5	18.5	15.5	11.5	8.91	7.66	6.60	5.09	4.18	2.19

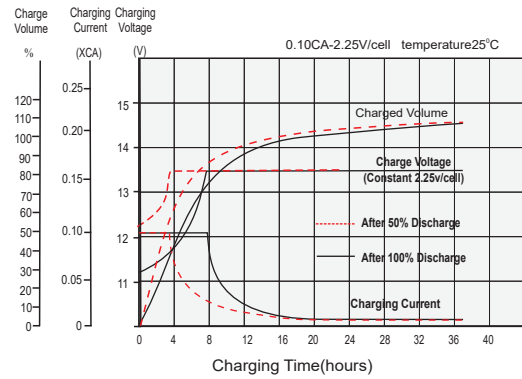
Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	155.4	111.3	97.1	76.7	70.3	50.7	44.1	32.0	27.0	19.9	15.7	13.7	11.8	9.33	7.75	4.12
1.80V/cell	173.9	124.5	108.7	85.8	75.9	53.4	45.4	33.0	27.8	21.5	16.7	14.3	12.7	9.79	8.10	4.26
1.75V/cell	185.6	132.9	116.0	91.6	76.9	55.0	47.4	34.5	29.1	21.9	16.9	14.5	12.7	9.82	8.17	4.30
1.70V/cell	195.1	139.7	121.9	96.3	77.8	55.7	48.1	35.0	29.6	22.2	17.2	14.7	12.8	10.0	8.25	4.34
1.67V/cell	198.3	142.0	123.9	97.9	78.3	56.2	48.6	35.4	29.9	22.3	17.4	15.0	12.8	10.1	8.34	4.39
1.60V/cell	201.0	144.0	125.6	99.3	78.7	56.5	48.9	35.6	30.1	22.4	17.5	15.1	12.9	10.2	8.42	4.43

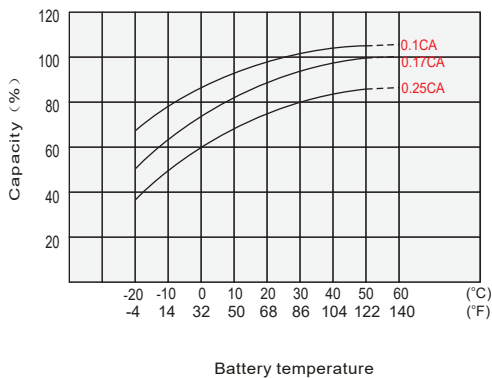
Discharge Characteristics



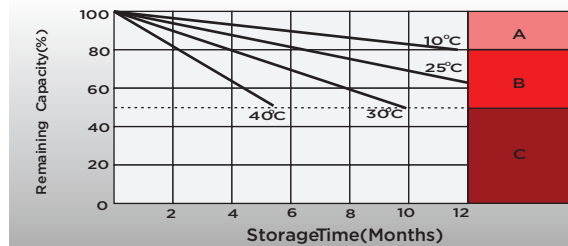
Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Self Discharge Characteristics



- A** No supplementary charge required (Carryout 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.