

# DC12-40A(12V40Ah)



## Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	40Ah@20hr-rate to 1.75V per cell @25°C
Weight	Approx. 11.5 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 8.8 mΩ
Terminal	F4(M6)/F11 (M6)
Max. Discharge Current	400A (5 sec)
Design Life	12 years (floating charge)
Max. Charging Current	12.0 A
Reference Capacity	C3 30.0AH C5 34.4AH C10 38.1AH C20 40.0AH
Float Charging Voltage	13.6 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ±5°C
Self Discharge	RITAR Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.



DC (Deep Cycle) series batteries provide superior high integrity and reliability. It is specially designed for frequent cyclic charge and discharging. By using strong grids, thick plate and specially active material are designed for repeated deep-discharge applications. The DC series batteries offer 30% more cyclic life than the standby series. It is suitable for solar and wind renewable energy storage, mobility and medical equipment and cable TV etc.



ISO 9001



ISO 14001



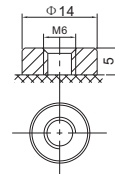
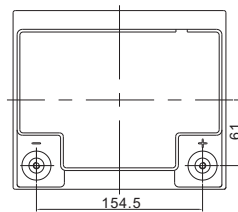
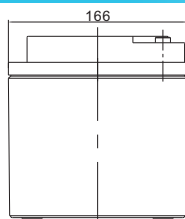
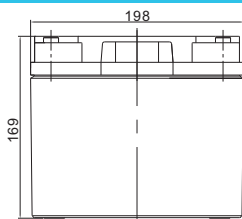
OHSAS 18001



MH 28539



## Dimensions



F11 TERMINAL

Length	198±2mm (7.80 inches)
Width	166±2mm (6.54 inches)
Height	169±2mm (6.65 inches)
Total Height	169±2mm (6.65 inches)
Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

### Constant Current Discharge Characteristics : A(25°C)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	94.70	71.98	41.93	24.29	14.47	11.06	8.840	7.519	4.823	4.000	2.073
1.65V	87.23	67.31	39.72	23.47	13.98	10.72	8.576	7.283	4.785	3.962	2.062
1.70V	80.84	63.30	37.66	22.71	13.61	10.27	8.311	7.086	4.709	3.886	2.036
1.75V	74.17	59.29	36.17	22.00	13.09	10.00	8.084	6.889	4.633	3.848	2.000
1.80V	67.50	54.30	34.84	21.02	12.64	9.815	7.896	6.800	4.557	3.810	1.981
1.85V	52.81	44.92	29.54	18.77	11.56	9.136	7.404	6.260	4.291	3.581	1.962

### Constant Power Discharge Characteristics : WPC(25°C)

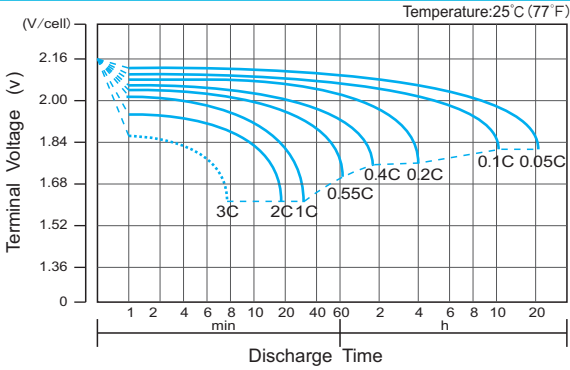
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	161.2	125.6	76.18	45.61	27.35	21.00	17.04	14.23	9.399	7.845	4.139
1.65V	155.3	122.1	74.40	44.83	26.62	20.48	16.62	13.85	9.324	7.769	4.102
1.70V	144.9	115.6	70.82	43.51	25.95	19.70	16.09	13.50	9.211	7.618	4.065
1.75V	134.8	109.1	68.34	42.31	25.03	19.21	15.72	13.19	9.061	7.543	3.991
1.80V	124.2	100.8	66.13	40.58	24.46	19.10	15.41	13.02	8.910	7.467	3.954
1.85V	98.56	84.71	56.72	36.44	22.52	17.82	14.51	12.04	8.422	7.053	3.917

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values. The battery must be fully charged before the capacity test. The C<sub>20</sub> should reach 95% after the first cycle and 100% after the third cycle.

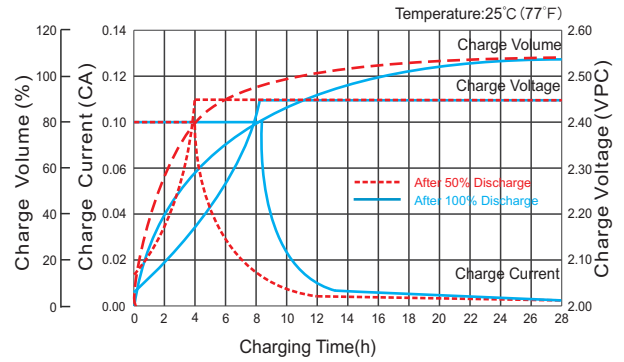
# DC12-40A(12V40Ah)



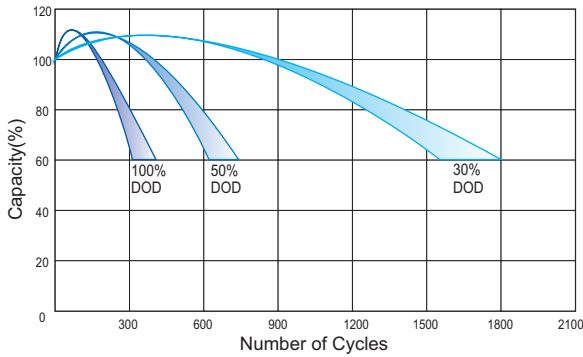
## Discharge Characteristics Curve



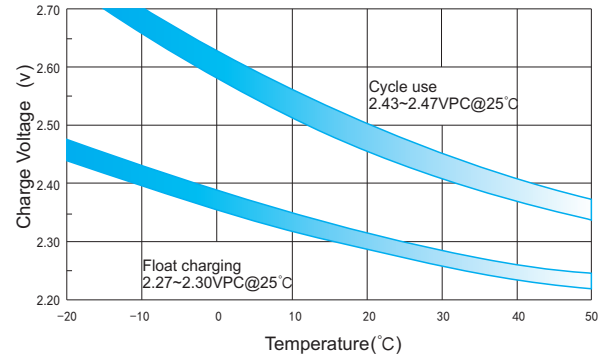
## Charge Characteristic Curve for Cycle Use(IU)



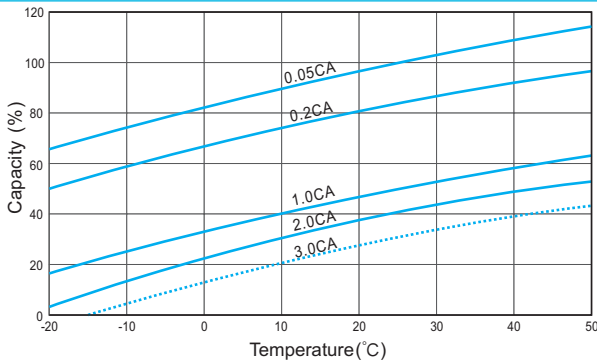
## Cycle Life in Relation to Depth of Discharge



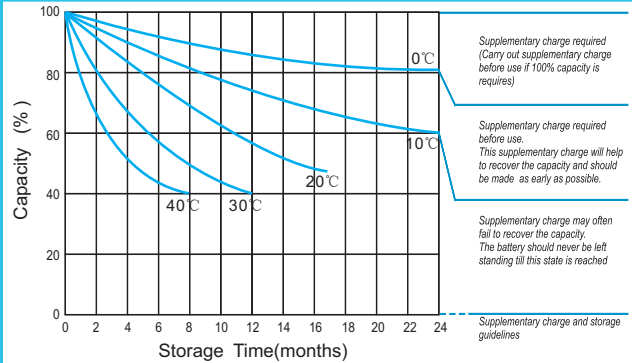
## Relationship Between Charging Voltage and Temperature



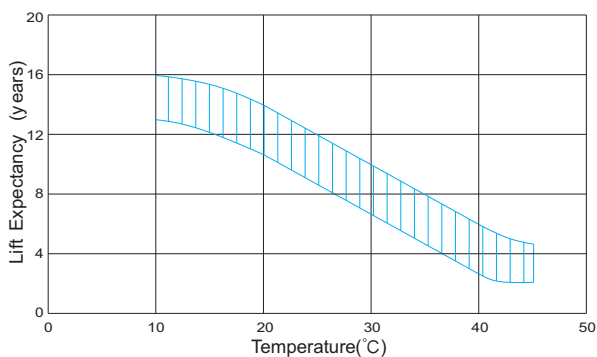
## Temperature Effects on Capacity



## Storage Characteristics



## Effect of Temperature on Long Term Life



## Relationship of OCV And State of Charge(20°C)



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.