

CHALLENGER

EVG 12-45 (12V 45AH)

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	45Ah@ 20hr-rate to 1.75V per cell @25°C
Weight	Approx. 14.6 Kg (Tolerance ±3.0%)
Internal Resistance	Approx. 8.5 mΩ
Terminal	F4(M6)/F11(M6)
Max. Discharge Current	450A (5 sec)
Cold Cranking Ampere(CCA)	315A
Maxi. Charging Current	13.5A
Reference Capacity	C3 33.0AH
	C5 37.2AH
	C10 42.5AH
	C20 45.0AH
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	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.



EVG (Electric Vehicle) series is specially designed for frequent discharge deep cycle application. By using the specially designed active material, strong grids, thick plate construction and hybrid GEL electrolyte, the EVG series battery offers reliable performance in high load situations and could provide competitive cycle performance. It is suitable for Electric Vehicle and Golf cart, Floor Machines, Forklifts, Aerial lifts, Robotics, Marine, RV, Mobility and Medical Equipment, and most outdoor application.



ISO 9001



ISO 14001



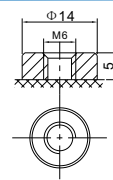
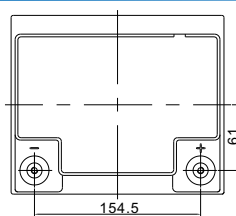
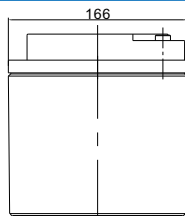
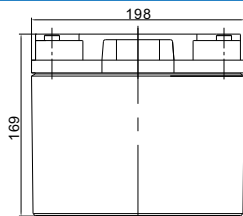
OHSAS 18001



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	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	143.1	108.0	81.24	47.52	26.25	15.50	12.01	9.44	8.03	5.40	4.49	2.35
1.65V	137.9	102.0	77.67	45.62	25.35	15.01	11.64	9.18	7.83	5.34	4.43	2.31
1.70V	131.2	93.94	72.75	43.60	24.53	14.51	11.32	8.93	7.62	5.26	4.37	2.28
1.75V	122.6	85.99	67.70	41.68	23.63	14.01	10.99	8.71	7.43	5.18	4.31	2.25
1.80V	111.7	77.84	62.51	39.83	22.73	13.50	10.65	8.46	7.24	5.10	4.25	2.23
1.85V	98.27	63.61	51.87	34.31	20.38	12.37	9.84	7.86	6.75	4.78	4.00	2.12

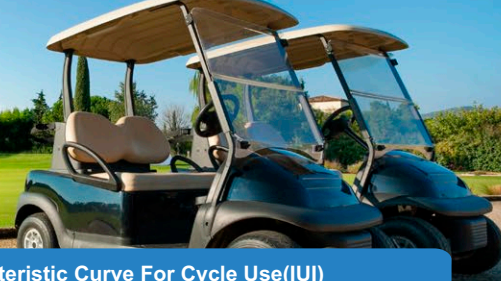
Constant Power Discharge Characteristics : WPC(25°C)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	246.3	183.6	142.0	86.31	49.33	29.38	22.94	18.12	15.49	10.54	8.82	4.62
1.65V	243.7	176.8	137.8	83.73	47.92	28.58	22.33	17.70	15.14	10.45	8.73	4.56
1.70V	234.4	165.7	131.0	80.83	46.65	27.79	21.82	17.28	14.80	10.31	8.61	4.51
1.75V	222.9	154.5	123.7	78.06	45.21	26.95	21.25	16.90	14.48	10.19	8.50	4.46
1.80V	206.7	142.2	115.8	75.36	43.74	26.11	20.68	16.48	14.15	10.04	8.41	4.42
1.85V	185.1	118.3	97.46	65.55	39.47	24.05	19.20	15.37	13.24	9.44	7.92	4.20

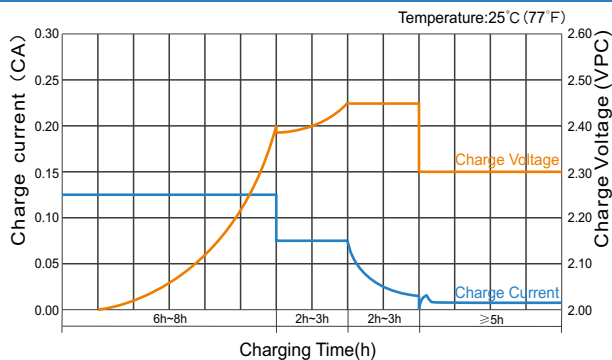
(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.

The battery must be fully charged before the capacity test. The C₂₀ should reach 95% after the first cycle and 100% after the third cycle.

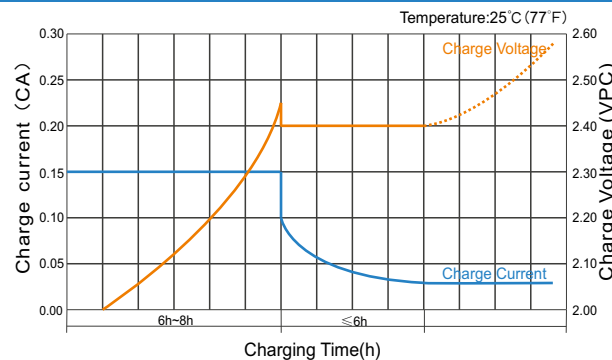
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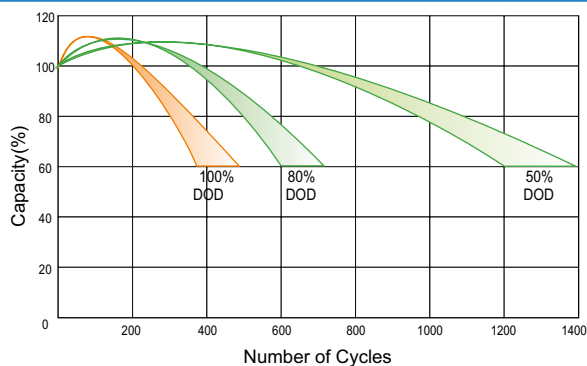
Charge Characteristic Curve for Cycle Use(IUUU)



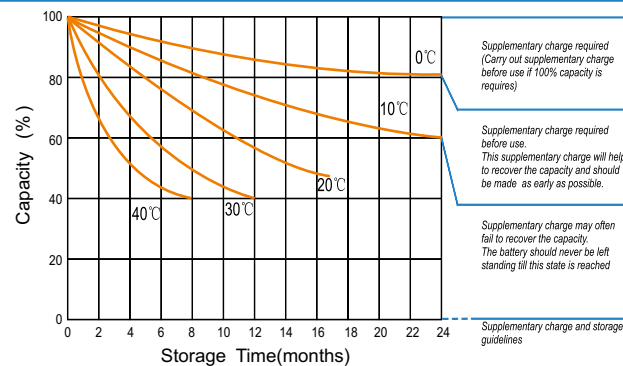
Charge Characteristic Curve For Cycle Use(IUI)



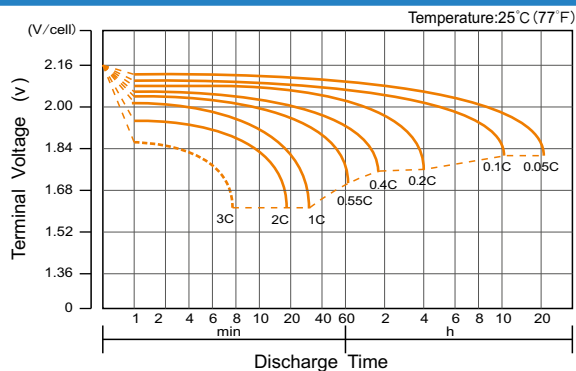
Cycle Life in Relation to Depth of Discharge



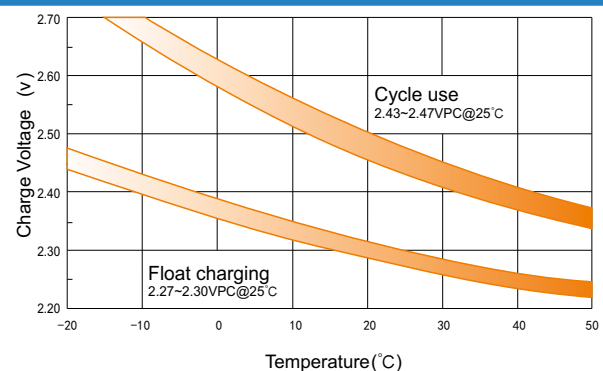
Storage Characteristics



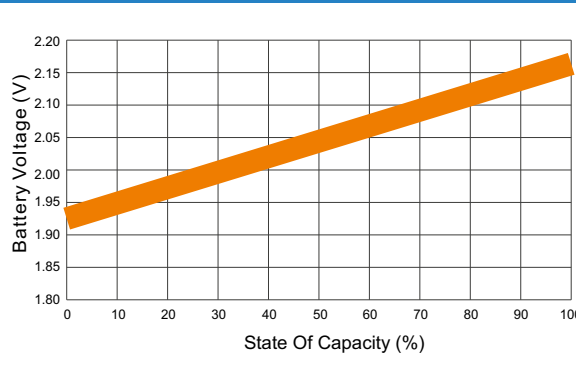
Discharge Characteristics Curve



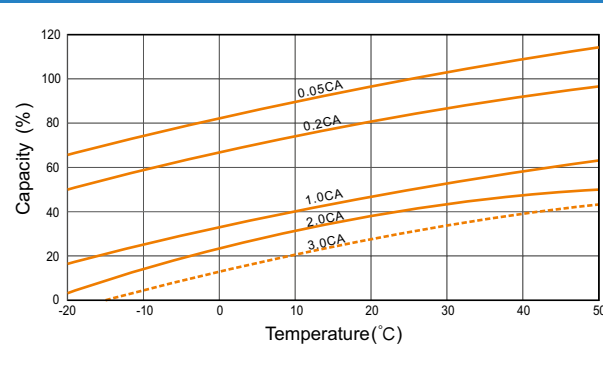
Relationship Between Charging Voltage and Temperature



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



Temperature Effects on Capacity



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