



WINNER
BATTERY

WINNER MERCURY

100-12

GEL Deep Cycle Series

Datasheet Q1/2016

Specifications

Nominal Voltage	12V
Nominal Operating Range	25°C ± 5°C
Dimensions	
Length	328 mm
Width	172 mm
Total Height	222 mm
Weight	30.00 Kg
Terminals	F25
Float Service Lifetime	10 years
Container Material	A.B.S. UL94-HB (UL94-V0 Optional).

Characteristics

Capacity 25°C	100Ah 20HR (1.80V)
Int. Resistance (25 °C)	7.5 mΩ
Charging Voltage (25 °C)	
Float use	2.27 to 2.30 VDC/cell
Cycle Use	2.37 to 2.40 VDC/cell
Max Charging Current	20A
Self-Discharge (25°C)	less than 3% per month
Max Discharge Current	1000A (5sec)
Operating Temperature Range	
Discharge	-40 to +60°C
Charge	-20 to +50°C
Storage	-40 to +60°C

Compliant Standards

IEC 60896-21/22:2004
JIS C8704-2:2006, YD/T 1360-2005
DIN 43539-T5
IEC 61427

Application

Electric wheelchairs – Scooters – Lawn mowers
Telecommunications – Traffic Lights
Off – Grid Solar Systems
Marine Signaling/Service applications

The WINNER MERCURY technology

WINNER MERCURY series is designed for repeated Deep Cycle use, to be discharged and recharged hundreds of times. The consistency performance of group usage (groups with multiple connections) is much better than of other general series, making MERCURY ideal for heavy duty applications.

WINNER MERCURY provides excellent cyclic and recovery performance after over-discharging. It incorporates the latest GEL VRLA technology and excellent know-how.

WINNER MERCURY differs from conventional VRLA batteries, as it contains more lead, heavier plates and other special materials that are able to deliver more power and capacity over many charging cycles. The use of a special plate curing process for 10 days and extra superior pasting to the grids, ensuring long service life and fast recovery from deep discharge.

Positive plate

The positive plates are made of a grid frame of heavy duty lead-tin-calcium alloy and active material of porous lead dioxide.

Negative plate

The negative plates are made of a grid frame of lead-tin-calcium alloy as well and with active material of spongy lead.



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Separator

The separators are made of non-woven fabric of fine glass fibers and are chemically stable in the electrolyte sulfuric acid.

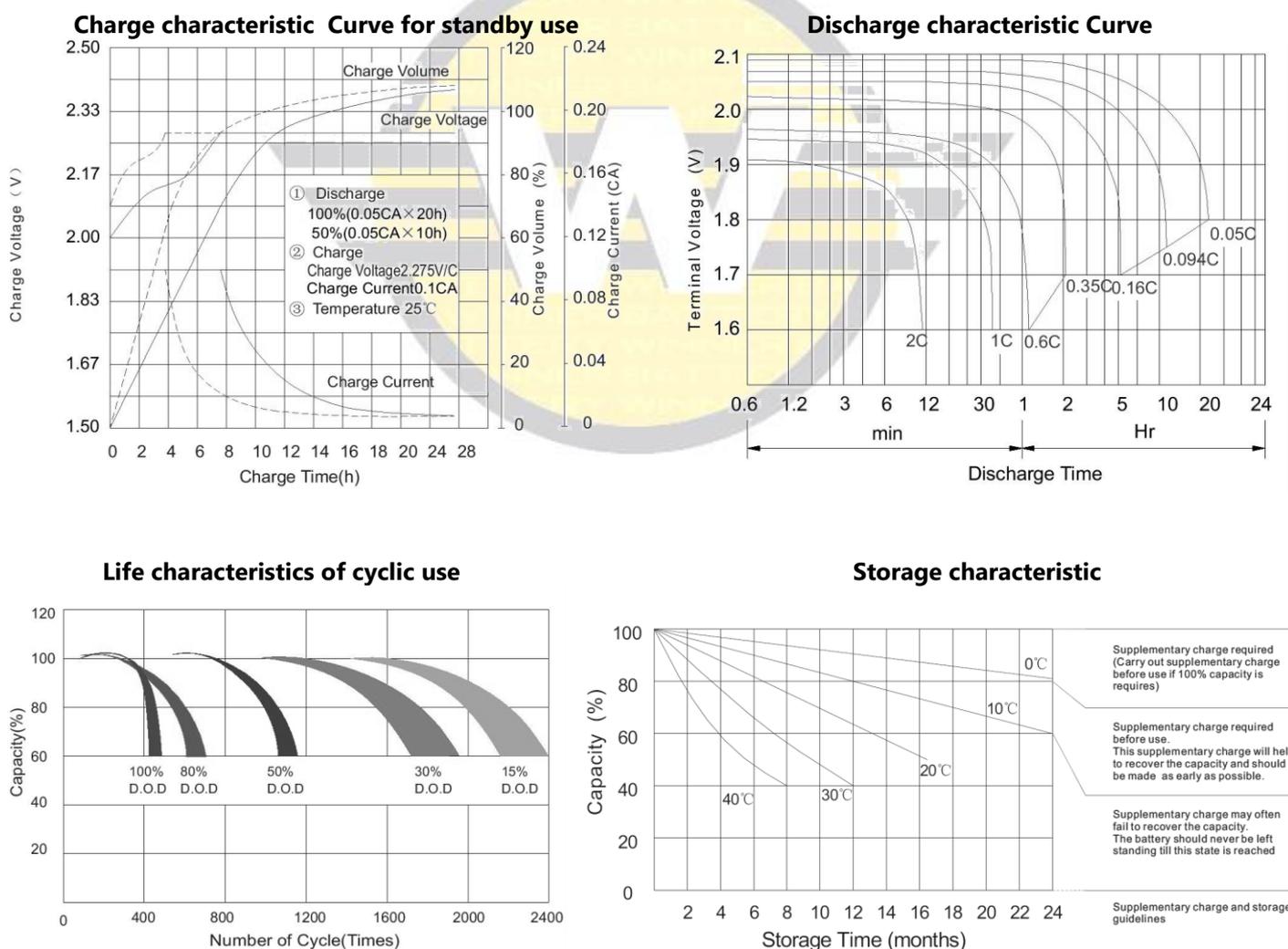
Terminal structure

The electrode terminals are protected due to both the structure that secures long adhesive - embedded paths and the use of strong epoxy material.

Casing

The unique construction and sealing techniques of WINNER MERCURY Deep Cycle series guarantee leak-proof operation in any position with no adverse effect to capacity or service life. The battery case is made of ABS material, is shock resistant and it can be also available as flame retardant too.

Performance Curve





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Constant Current Discharge Table : Amperes (25°C)

[A]	MINUTES - AMPERE CONSTANT CURRENT DISCHARGE (25 °C)										
	F.V	5	10	15	30	60	120	180	300	600	1200
1,80	204,78	154,28	132,22	97,32	57,92	35,47	25,60	17,26	9,58	5,00	
1,75	224,27	167,22	141,79	98,07	59,95	36,11	26,32	17,69	9,89	5,26	
1,70	246,85	179,09	147,19	97,86	60,52	36,39	26,42	17,90	9,99	5,38	
1,65	254,40	185,64	149,54	98,73	61,09	36,67	26,63	18,01	10,09	5,48	
1,60	261,97	195,10	152,67	100,39	61,37	36,95	26,73	18,12	10,19	5,58	

Constant Power Discharge Table : Watts/cell (25°C)

[W]	MINUTES - WATTS/CELL CONSTANT POWER DISCHARGE (25 °C)										
	F.V	5	10	15	30	60	120	180	300	600	1200
1,80	378,85	287,22	243,52	185,40	112,61	70,33	51,16	34,51	19,16	9,99	
1,75	411,17	307,96	260,44	186,61	115,95	71,24	52,59	35,38	19,79	10,53	
1,70	446,39	326,83	269,87	186,09	117,00	71,76	52,80	35,80	19,98	10,76	
1,65	451,55	335,70	272,94	185,60	117,91	72,20	53,03	35,93	20,16	10,97	
1,60	460,63	346,31	277,39	187,75	118,19	72,58	53,15	36,02	20,29	11,16	

Dimensions - Terminals

