Eastman Solar
ENERGY. UNLIMITED

The WISE Choice



DEEP CYCLE GEL BATTERY

ES-100 GEL

MADE IN VIETNAM

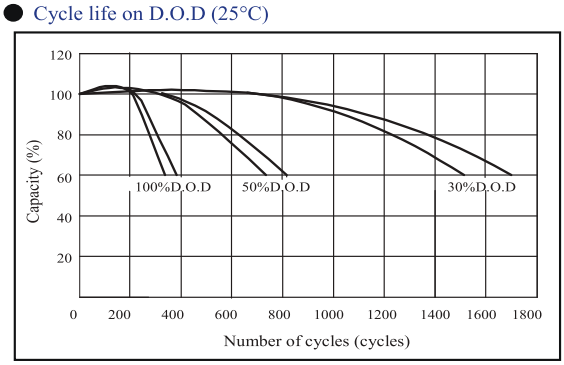
Special Features :

- Superior deep cycle design
- Very long life in deep cycle applications
- Superior recovery from deep discharge
- Wide working environment

Specifications

Nominal voltage		12V (6 cells per unit)
Rated capacity (10HR)		100Ah/10.8V
Dimensions	Length	330±2mm (33 cm)
	Width	171±2mm (17.1 cm)
	Height	214±2mm (21.4 cm)
	Total height	220±2mm (22 cm)
Approx. weight		30.50kg (67.20lbs)±3%

Cycle life on D.O.D (25°C)



Applications :



Certifications :

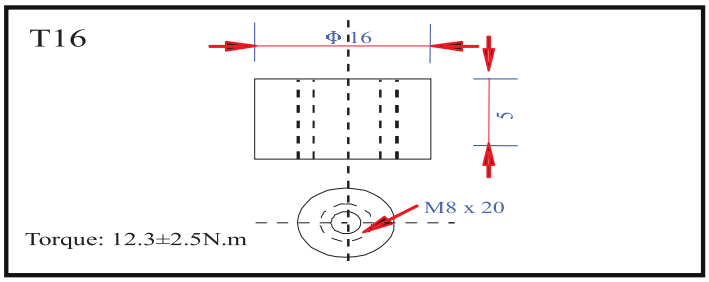
IEC CEC TLC ISO 9001 ISO 14001 OHSAS 18001

Characteristics

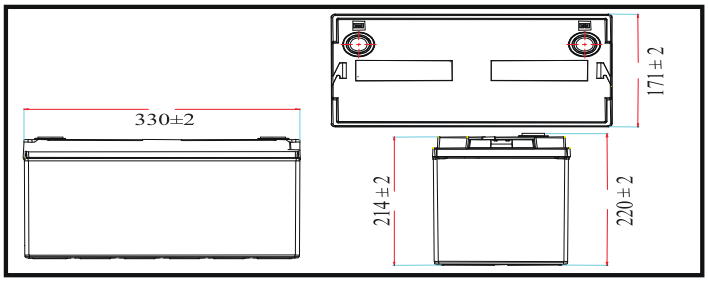
Capacity (25°C)	10HR (10.8V)	100Ah
	3HR (10.8V)	75Ah
	1HR (10.5V)	55Ah
Terminal type		T16
Internal resistance (Fully charged, 25°C)		Approx. 5mΩ
Capacity affected by temperature (10HR)	40°C	102%
	25°C	100%
	0°C	85%
	-15°C	65%
Self-discharge (25°C)	3 months	Remaining capacity: 91%
	6 months	Remaining capacity: 82%
	12 months	Remaining capacity: 65%
Nominal operating temperature		25°C± 3°C (77°F± 5°F)
Operating temperature range	Discharge	- 15°C~ 50°C (5°F ~ 122°F)
	Charge	- 10°C~ 50°C (14°F ~ 122°F)
	Storage	- 20°C~ 50°C (-4°F ~ 122°F)
Float charging voltage (25°C)		13.50 to 13.80V Temperature compensation: -18mV/°C/Block
Cycle charging voltage (25°C)		14.50 to 14.70V Temperature compensation: -30mV/°C/Block
Cycle Life		>750 cycles @ 0.2C 50% DOD.
Maximum charging current		20A
Pulse discharge current		800A (5 sec.)
Design life	12 years for floating (25°C)	
	Eurobat (20°C): 10-12 years, long life.	

DEEP CYCLE GEL BATTERY
ES-100 GEL -12V100Ah

Terminal type (mm)



Outer dimensions (mm)



Construction

Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Gel	Rubber	Copper

Constant current discharge characteristics unit: Ampere/Cell (at 25°C, 77°F)

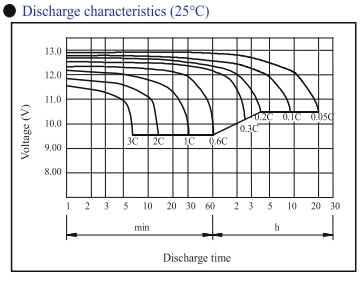
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	195	160	97.0	60.0	36.5	26	20.4	17.3	12.2	10.2	5.40
9.90V	189	156	95.1	59.1	36.3	25.9	20.3	17.2	12.2	10.2	5.38
10.2V	181	150	92.2	57.6	36.0	25.7	20.1	17.1	12.1	10.1	5.37
10.5V	174	145	89.9	55.8	35.5	25.5	20.0	17.0	12.0	10.1	5.34
10.8V	164	138	86.6	54.0	34.6	25.0	19.4	16.5	11.6	10.0	5.30

Constant power discharge characteristics unit: Watt/Cell (at 25°C, 77°F)

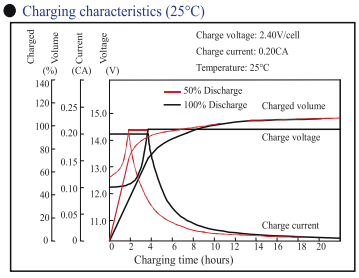
F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	2106	1757	1088	684	423	306	240	205	145	122	64.7
9.90V	2043	1715	1067	674	421	304	238	204	145	121	64.6
10.2V	1959	1651	1034	657	417	302	237	202	144	121	64.4
10.5V	1874	1595	1009	636	411	300	235	201	143	120	64.0
10.8V	1769	1511	972	616	400	294	228	195	138	119	63.6

Product specification are subject to change without prior notice.

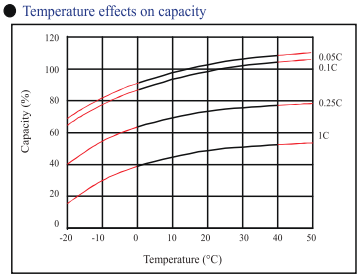
Discharge characteristics (25°C)



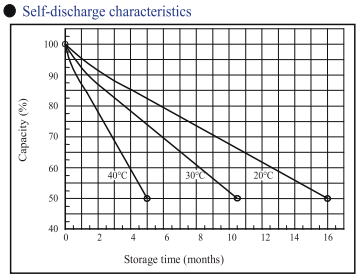
Charging characteristics (25°C)



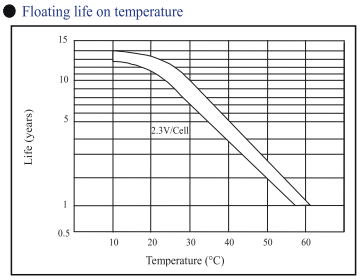
Temperature effects on capacity



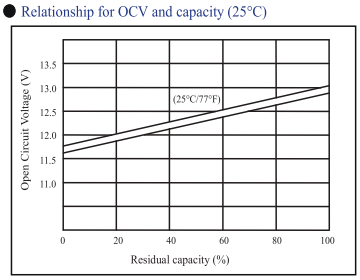
Self-discharge characteristics



Floating life on temperature



Relationship for OCV and capacity (25°C)



Relationship for charging voltage and temperature

