

# GTAD12-12 12V12AH

## DEEP CYCLE BATTERY - DC SERIES



### Specifications

Nominal Voltage	12V (6 cells per unit)	
Nominal Capacity (20HR)	12Ah/10.5V	
Dimensions	Length	151±1.5mm
	Width	98±1mm
	Height	95±1mm
	Total height	101±1mm
Approx. Weight	3.65kg±4%	
Terminal Type	F2	
Rated Capacity (25°C)	20HR (10.5V)	12Ah
	10HR (10.5V)	11.7Ah
	1HR (9.60V)	7.8Ah
Max. Discharge Current	180A (5 sec.)	
Max. Charging Current	3.6A	
Internal Resistance (Fully charged, 25°C)	Approx. 13mΩ	
Operating Temp. 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)
Nominal Operating Temp.	25°C±3°C (77°F±5°F)	
Cyclic Charging Voltage (25°C)	14.60 to 15.00V Temperature compensation : -30mV/°C/Block	
Float Charging Voltage (25°C)	13.60 to 13.70V Temperature compensation : -18mV/°C/Block	
	40°C	102%
Capacity affected by temperature (10HR)	25°C	100%
	0°C	85%
	-15°C	65%
	3 months	Remaining capacity: 91%
Self-discharge (25°C)	6 months	Remaining capacity: 82%
	12 months	Remaining capacity: 65%
	Design Life	8 years for floating (25°C) Eurobat (20°C): 6-9 years, general purpose.

### Applications

- ◆ Uninterruptable Power Supply (UPS)
- ◆ Electric Power System (EPS)
- ◆ Emergency backup power supply
- ◆ Alarm and security system
- ◆ Electronic apparatus and equipment
- ◆ Communication power supply
- ◆ Solar Power System

#### Remarks:

- Use in normal climate environment with standard range of regulated powered electricity.
- Falling, hitting, bending, etc. may cause degradation of battery characteristics.

### Construction

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

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

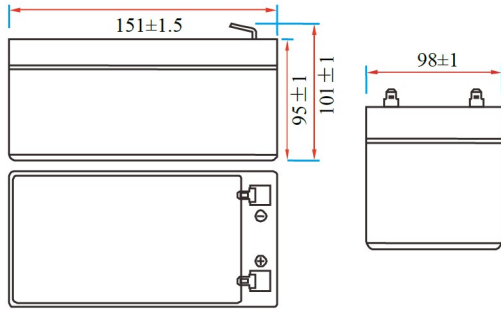
F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	47.8	30.3	23.6	13.3	8.19	4.48	3.10	2.56	2.18	1.18	0.63
9.90V	46.3	29.3	23.1	13.0	8.06	4.45	3.08	2.55	2.17	1.18	0.63
10.2V	44.4	28.1	22.2	12.6	7.86	4.41	3.06	2.53	2.15	1.17	0.63
10.5V	42.5	26.9	21.5	12.3	7.70	4.35	3.04	2.51	2.14	1.17	0.63
10.8V	40.1	25.4	20.3	11.9	7.47	4.24	2.95	2.44	2.07	1.14	0.61

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

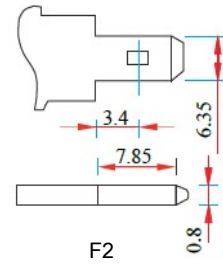
F.V/Time	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	533	341	269	153	94.8	52.4	36.8	30.5	26.0	14.2	7.61
9.90V	517	331	263	150	93.4	52.1	36.6	30.3	25.9	14.1	7.58
10.2V	496	317	253	145	91.0	51.6	36.3	30.1	25.7	14.1	7.55
10.5V	474	304	245	141	89.2	50.9	36.1	29.9	25.5	14.0	7.50
10.8V	448	287	232	136	86.5	49.6	35.0	29.0	24.8	13.7	7.35

Note 1: Above characteristics data can be obtained within three charge and discharge cycles.

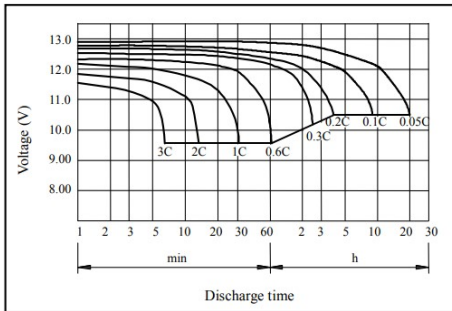
### Outer dimensions (mm)



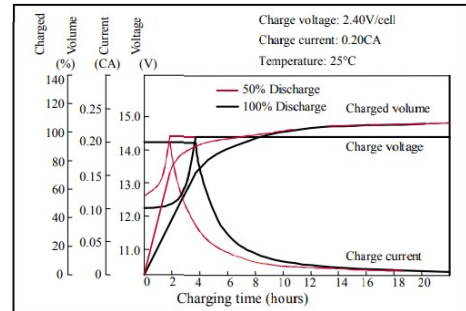
### Terminal type (mm)



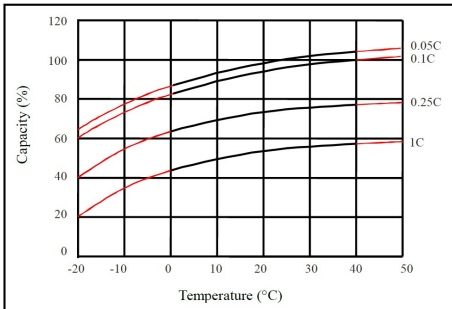
### Discharge characteristics (25°C)



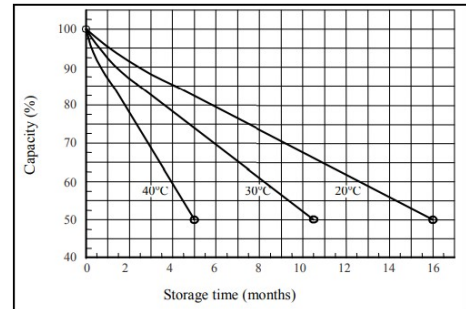
### Charging characteristics (25°C)



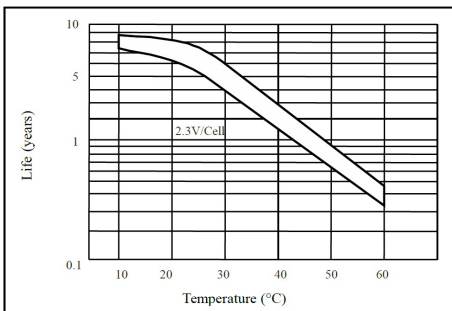
### Temperature effects on capacity



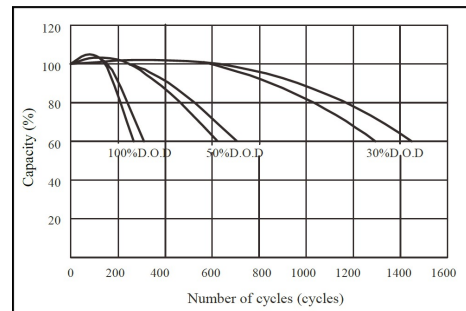
### Self-discharge characteristics



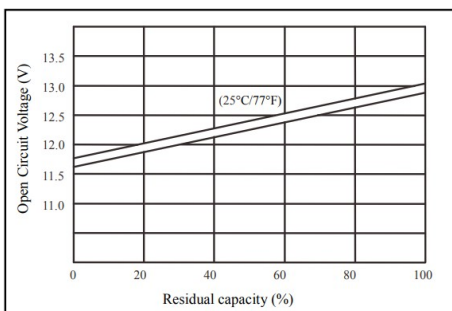
### Floating life on temperature



### Cycle life on D.O.D (25°C)



### Relationship for OCV and capacity (25°C)



### Relationship for charging voltage and temperature

