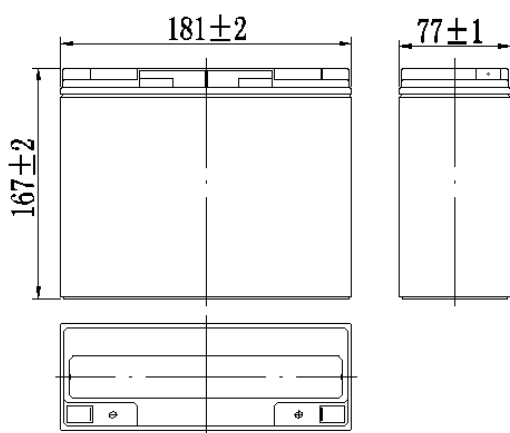


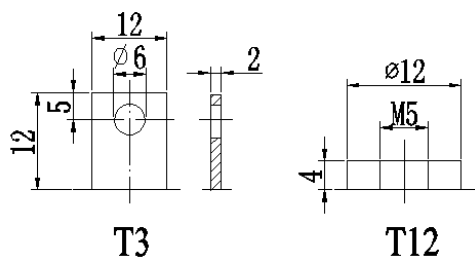
Specifications

Nominal Voltage		12 V
Rated capacity(20HR)		20Ah
Dimension	Length	181±2mm (7.13inch)
	Width	77±1mm (3.03inch)
	Height	167±2mm (6.57inch)
	Total Height	167±2mm (6.57inch)
Approx. Weight		5.7kg (12.5lbs)±4%

Dimensions



Terminal



Characteristics

Capacity (25℃)	20HR(10.5V)	20Ah
	10HR(10.5V)	19Ah
	1HR(9.60V)	13Ah
Terminal type		T3/T12
Internal resistance (Fully charged, 25℃)		Approx. 12mΩ
Capacity affected by temperature (20HR)	40℃	102%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-discharge (25℃)	3 month	Remaining Capacity: 91%
	6 month	Remaining Capacity: 82%
	12 month	Remaining Capacity: 65%
Nominal operating temperature		25℃±3℃(77°F±5°F)
Operating temperature range	Discharge	-15℃~50℃(5°F~122°F)
	Charge	-10℃~50℃(14°F~122°F)
	Storage	-20℃~50℃(-4°F~122°F)
Float charging voltage(25℃)		13.50 to 13.80V Temperature compensation: -18mV/℃
Cyclic charging voltage(25℃)		14.50 to 15.00V Temperature compensation: -30mV/℃
Maximum charging current		6A
Maximum discharge current		300A(5 sec.)
Designed floating life(20℃)		10 years

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 (A, 25℃)

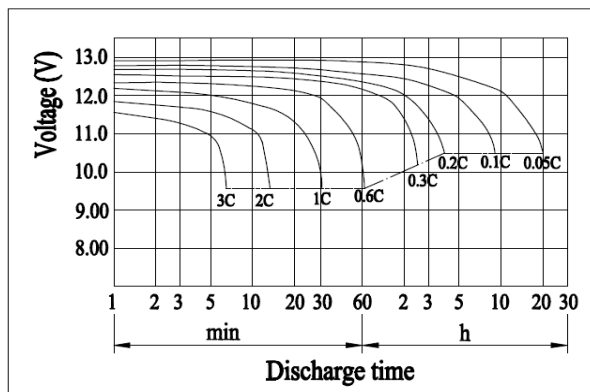
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	80.2	50.8	39.7	22.4	13.8	7.52	5.21	4.31	3.66	1.99	1.07
9.90V	77.8	49.3	38.7	21.9	13.5	7.48	5.17	4.28	3.64	1.98	1.06
10.2V	74.6	47.3	37.3	21.2	13.2	7.41	5.14	4.25	3.62	1.97	1.06
10.5V	71.4	45.2	36.0	20.7	12.9	7.30	5.10	4.22	3.59	1.96	1.05
10.8V	67.4	42.7	34.1	20.0	12.5	7.12	4.95	4.09	3.48	1.92	1.03

Constant Power Discharge Characteristics (Watt, 25℃)

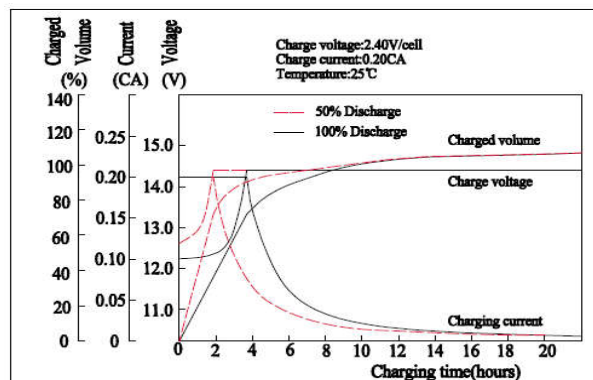
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	895	573	452	256	159	88.0	61.8	51.3	43.7	23.9	12.8
9.90V	868	556	442	251	157	87.5	61.5	51.0	43.5	23.8	12.7
10.2V	833	533	425	243	153	86.7	61.0	50.6	43.2	23.7	12.7
10.5V	797	510	411	238	150	85.4	60.6	50.3	42.9	23.5	12.6
10.8V	752	482	389	229	145	83.3	58.8	48.8	41.6	23.0	12.3

Note: The above characteristics data can be obtained within three charge/discharge cycles.

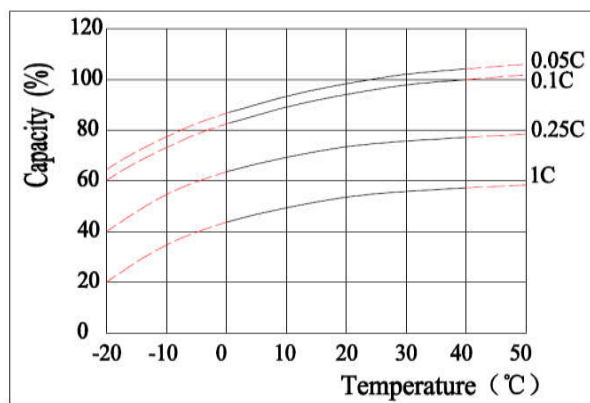
Discharge Characteristics(25°C)



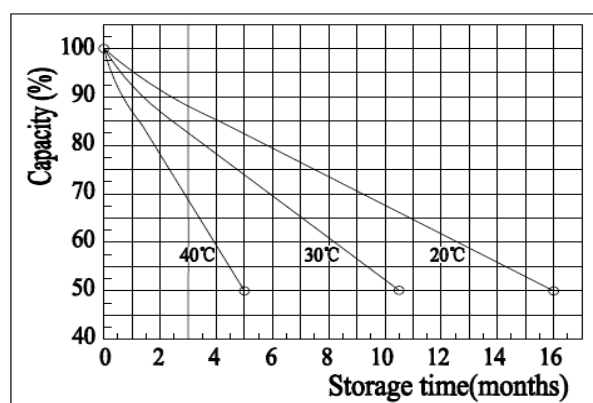
Charging Characteristics(25°C)



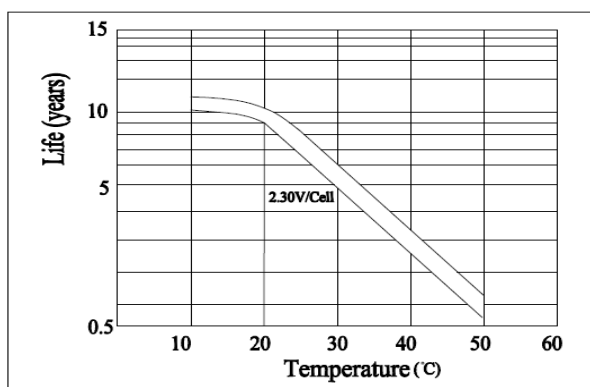
Effect of Temperature on Capacity



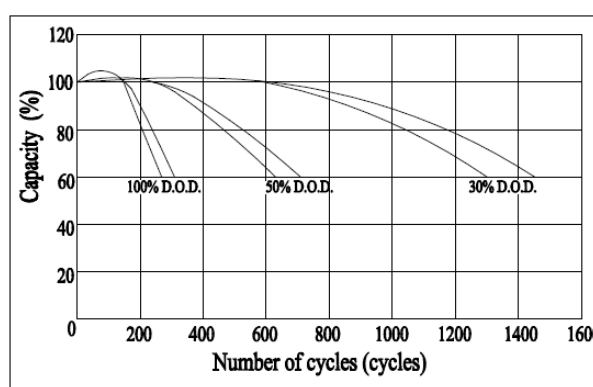
Self-discharge Characteristics



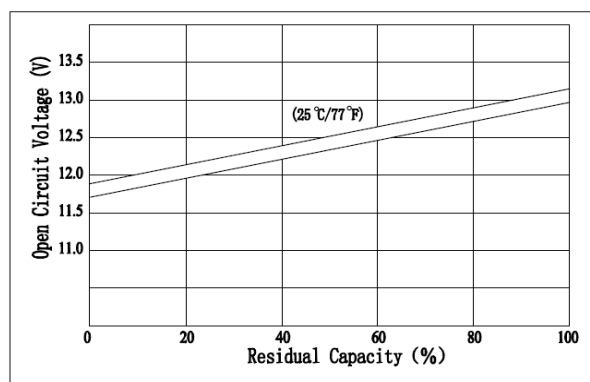
Floating Life on Temperature



Cycle Life on D.O.D(25°C)



The Relationship for Open Circuit Voltage and Residual Capacity (25°C)



The Relationship for Charging Voltage and Temperature

