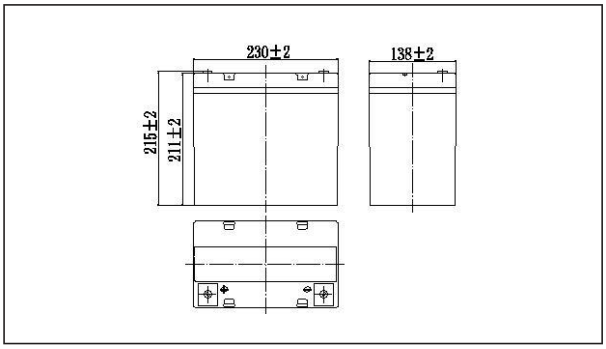
TYG12-50 12V50Ah



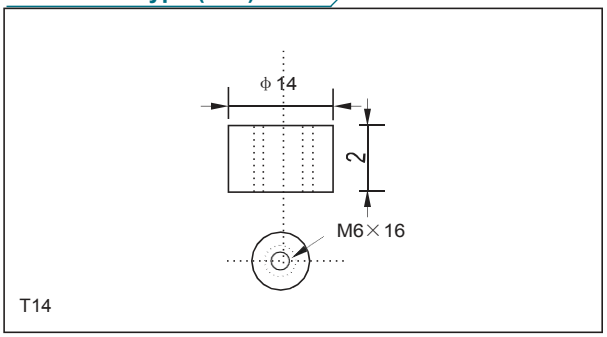
Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		50Ah
Dimensions	Length	230±2mm(9.06inch)
	Width	138±2mm(5.43inch)
	Height	211±2mm(8.31inch)
	Total Height	215±2mm(8.46inch)
Approx. Weight		16.2kg(35.64lbs)±3%

Outer dimensions (mm)



Terminal Type (mm)



Characteristics

Capacity (25℃)	20HR(10.8V)	50Ah
	20HR(10.8V)	47Ah
	1HR(10.5V)	27.5Ah
Terminal type		T14
Internal resistance (Fully charged,25℃)		Approx.7m Ω
Capacity affected by temperature (10HR)	40℃	102%
	25℃	100%
	0℃	85%
	-15℃	65%
Self-discharge (25℃)	3 months	Remaining Capacity:91%
	6 months	Remaining Capacity:82%
	12 months	Remaining Capacity:65%
Nominal operating temperature		25℃ ±3℃(77℉±5℉)
Operating temperature range	Discharge	-15~40°C (Ideal: 20~25°C)
	Charge	-10~40°C (Ideal: 20~25°C)
	Storage	-20℃~40℃
Float charging voltage(25℃)		13.40 to 13.60V Temperature compensation: -18mV/℃
Cyclic charging voltage(25℃)		14.10 to 14.40V Temperature compensation: -30mV/℃
Maximum charging current		10A
Maximum discharge current		500A(5 sec.)
Designed floating life(20℃)		12years

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:A(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	97.5	80.0	48.5	30.0	18.3	13.0	10.2	8.67	6.12	5.09	2.70
9.90V	94.6	78.1	47.5	29.6	18.2	12.9	10.1	8.62	6.08	5.08	2.69
10.2V	90.7	75.2	46.1	28.8	18.0	12.8	10.1	8.56	6.04	5.07	2.68
10.5V	86.8	72.6	45.0	27.9	17.7	12.8	10.0	8.50	6.00	5.04	2.67
10.8V	81.9	68.8	43.3	27.0	17.3	12.5	9.70	8.25	5.82	5.00	2.65

Constant Power Discharge Characteristics Unit:W(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	1053	878	544	342	212	153	120	102	72.7	60.8	32.4
9.90V	1021	857	533	337	210	152	119	102	72.3	60.7	32.3
10.2V	979	826	517	328	208	151	118	101	71.8	60.5	32.2
10.5V	937	798	504	318	205	150	118	100	71.3	60.1	32.0
10.8V	885	755	486	308	200	147	114	97.5	69.1	59.7	31.8

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

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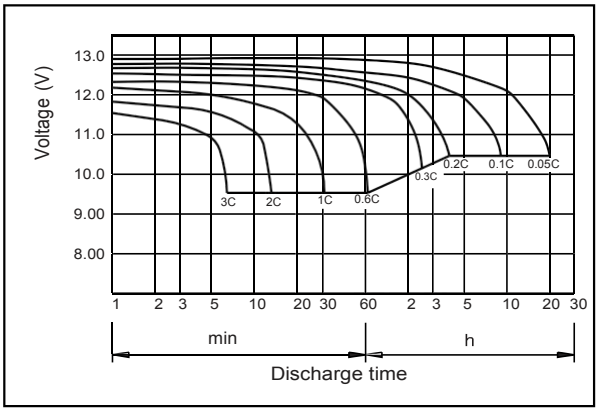
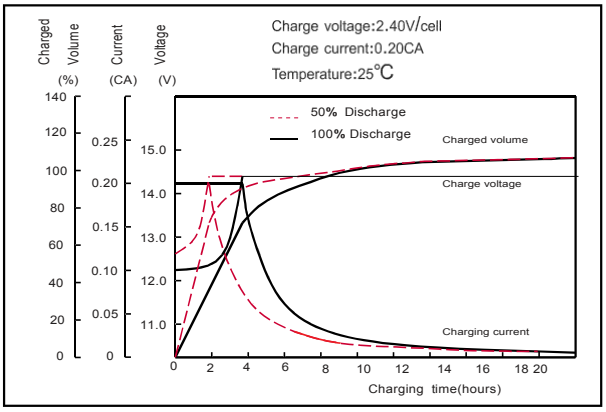
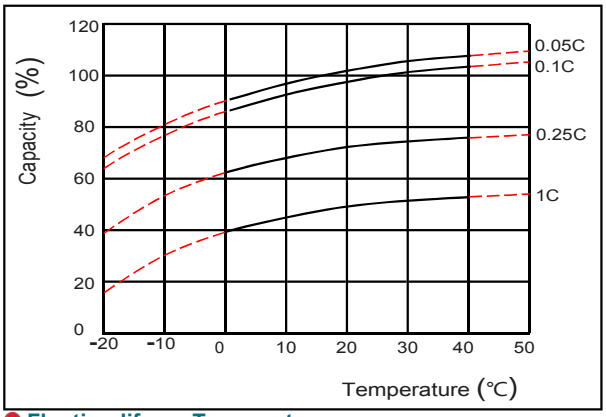
Discharge characteristics(25°C)



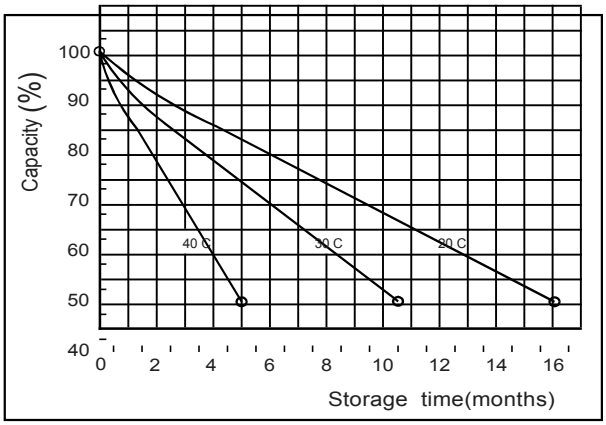
Charging characteristics (25°C)



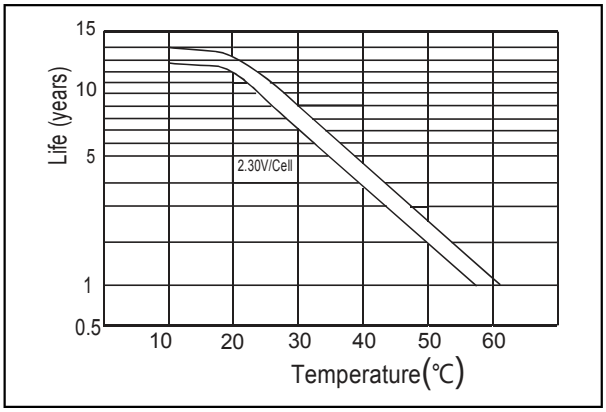
Temperature effects on Capacity



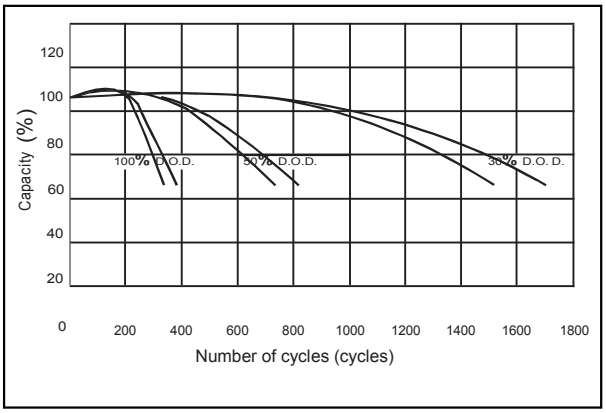
Self-discharge characteristics



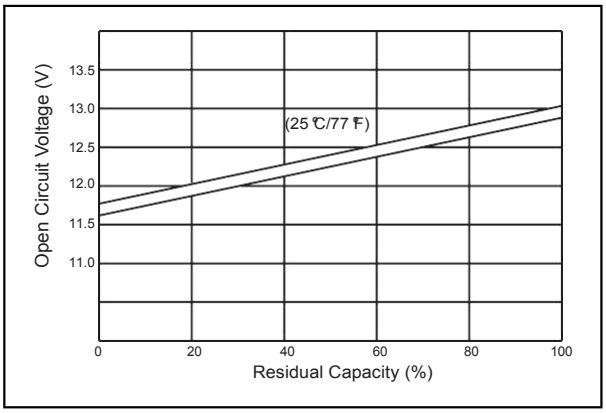
Floating life on Temperature



Cycle life on D.O.D (25℃)



The relationship for OCV and Capacity (25℃)



The relationship for Charging voltage and Temperature

