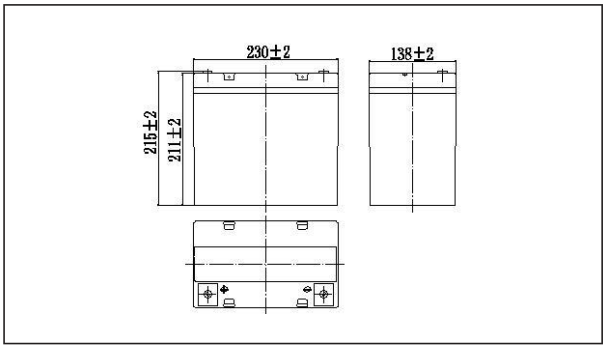
TYD12-50 12V50Ah



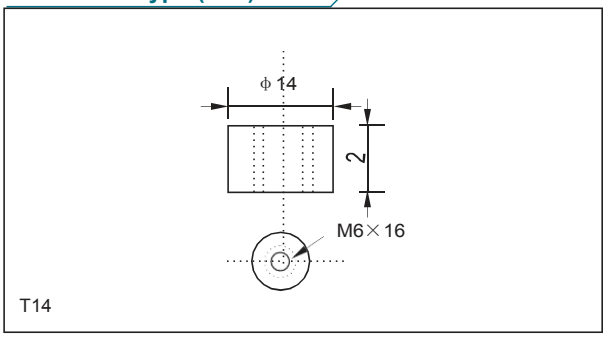
Specifications

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
	10HR(10.8V)	47Ah
	1HR(10.5V)	30Ah
Terminal type		T14
Internal resistance (Fully charged,25℃)		Approx.6.5m 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℃)		13.50 to 13.80V Temperature compensation: -18mV/℃
Cyclical voltage(25℃)		14.40 to 14.80V Temperature compensation: -30mV/℃
Maximum charging current		15A
Maximum discharge current		500A(5 sec.)
Designed floating life(20℃)		10years

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:A(25℃,77℉)

F.V/Time	10m i n	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	118	90.7	54.3	33.4	19.7	14.2	11.3	9.69	6.66	5.50	2.91
9.90V	114	88.5	53.2	32.9	19.6	14.1	11.3	9.64	6.63	5.49	2.91
10.2V	109	85.3	51.6	32.0	19.4	14.0	11.2	9.57	6.58	5.47	2.90
10.5V	105	82.4	50.3	31.0	19.1	13.9	11.1	9.50	6.53	5.44	2.88
10.8V	98.9	78.0	48.5	30.0	18.7	13.5	10.8	9.22	6.34	5.40	2.86

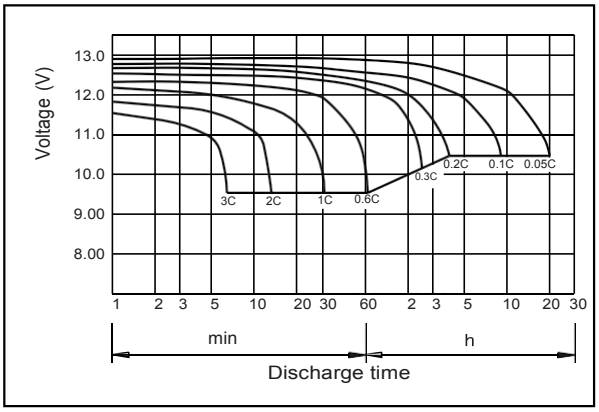
Constant Power Discharge Characteristics Unit:W(25℃,77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	1271	996	609	380	228	167	133	115	79.2	65.6	35.0
9.90V	1233	972	597	375	227	166	133	114	78.7	65.5	34.9
10.2V	1182	936	578	365	225	165	132	113	78.2	65.3	34.8
10.5V	1132	904	564	354	222	164	131	112	77.6	64.9	34.6
10.8V	1068	857	544	342	216	159	127	109	75.3	64.5	34.3

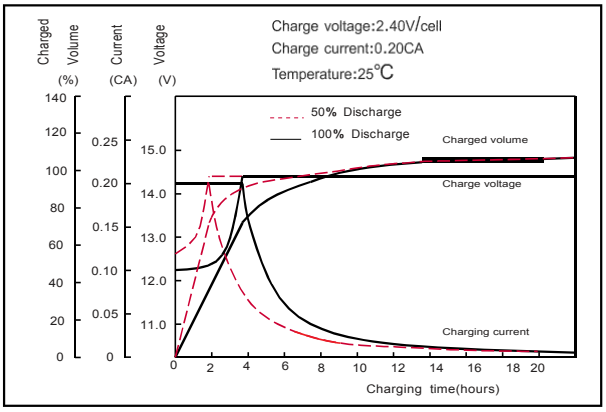
Note: The above characteristics data can be obtained within three charge or discharge cycles.

YTD12-50Ah 12V50Ah

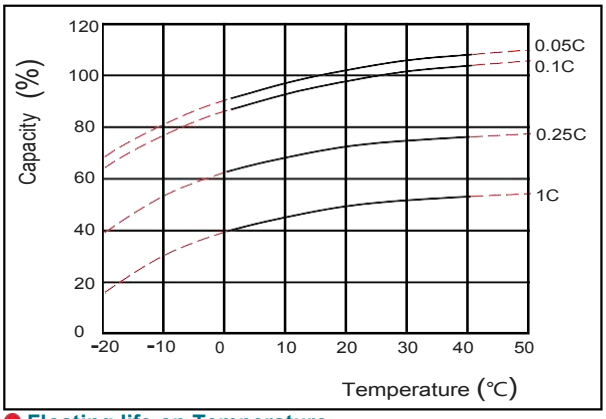
Discharge characteristics(25°C)



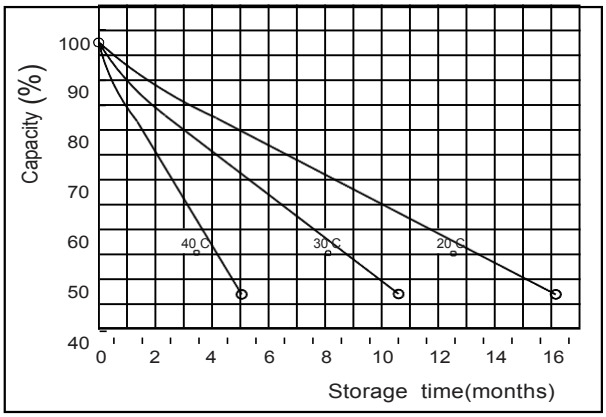
Charging characteristics (25°C)



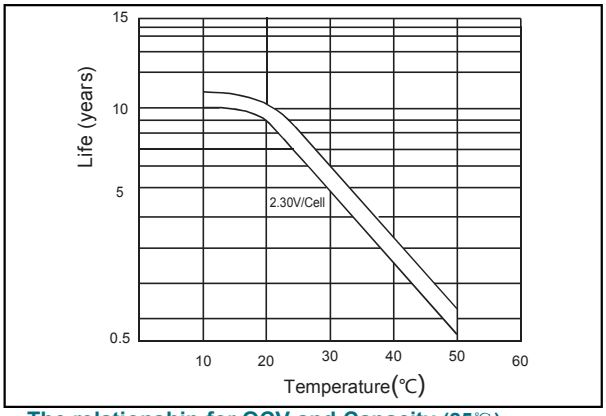
Temperature effects on Capacity



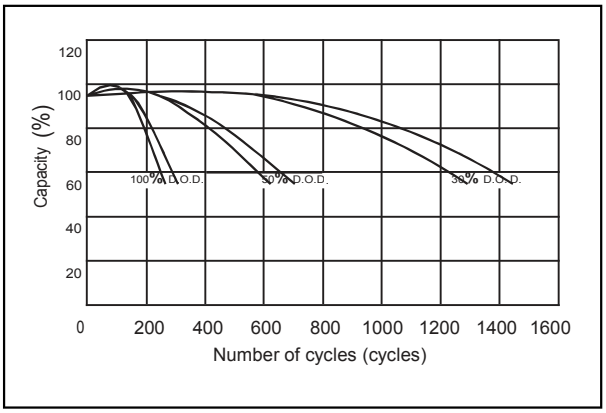
Self-discharge characteristics



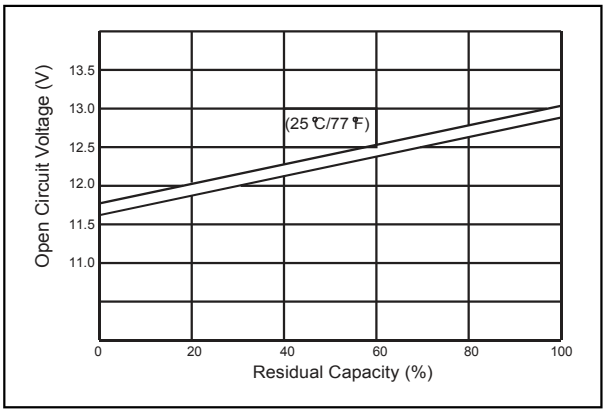
Floating life on Temperature



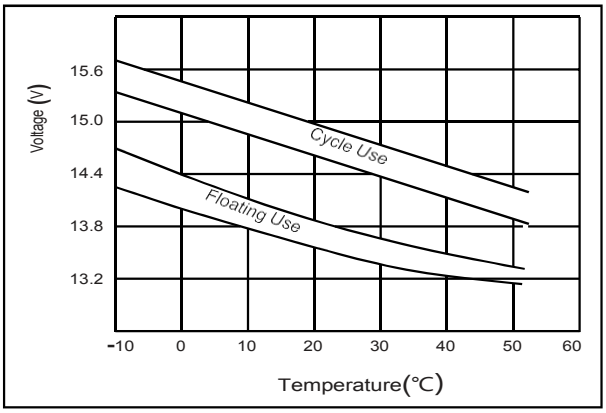
Cycle life on D.O.D (25℃)



The relationship for OCV and Capacity (25℃)



The relationship for Charging voltage and Temperature



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