POWERMAX

Valve Regulated Lead Acid Battery

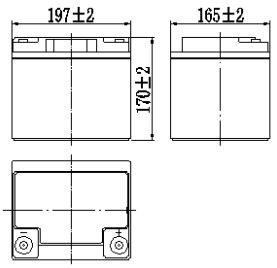
PMA12-50 12V50Ah

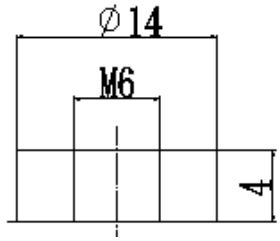


Specifications

Nominal Voltage		12V
Rated capacity (20 hour rate)		50Ah
Dimensions	Length	197±2mm(7.76inch)
	Width	165±2mm(6.50inch)
	Height	170±2mm(6.69inch)
	Total Height	170±2mm(6.69inch)
Approx. Weight		14.5kg(32.0lbs)±3%

Outer dimensions (mm)





T14

Characteristics

Capacity (25℃)	20HR(10.8V)	50Ah
	3HR(10.8V)	34.5Ah
	1HR(10.5V)	26Ah
Terminal type		T14
Internal resistance (Fully charged,25℃)		Approx.7.5m 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℃~50℃(5℉~122℉)
	Charge	-10℃~50℃(14℉~122℉)
	Storage	-20℃~50℃(-4℉~122℉)
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		13.5A
Maximum discharge current		400A(5 sec.)
Desigend 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 Charactreristices Unit:A (25℃, 77℉)

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	100	77.1	46.1	28.4	16.4	11.8	9.46	8.08	5.55	4.58	2.43
9.90V	97.1	75.3	45.2	27.9	16.3	11.8	9.40	8.03	5.52	4.57	2.42
10.2V	93.1	72.5	43.8	27.2	16.2	11.7	9.33	7.98	5.48	4.56	2.42
10.5V	89.1	70.0	42.8	26.4	16.0	11.6	9.27	7.92	5.45	4.53	2.40
10.8V	84.1	66.3	41.2	25.5	15.6	11.3	8.99	7.68	5.28	4.50	2.39

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

F.V/Time	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
9.60V	1081	847	518	323	190	139	111	95.5	66.0	54.7	29.1
9.90V	1048	826	507	319	189	138	111	94.9	65.6	54.6	29.1
10.2V	1005	796	492	310	188	137	110	94.3	65.1	54.4	29.0
10.5V	962	769	480	301	185	137	109	93.6	64.7	54.1	28.8
10.8V	908	728	462	291	180	132	106	90.8	62.7	53.7	28.6

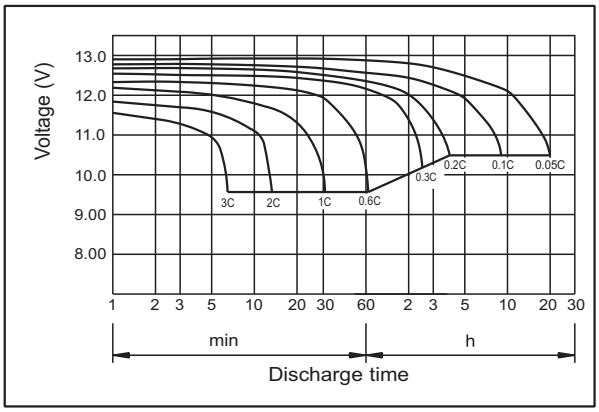
Note: The above characteristics data can be obtained within three charge or discharge cycles.

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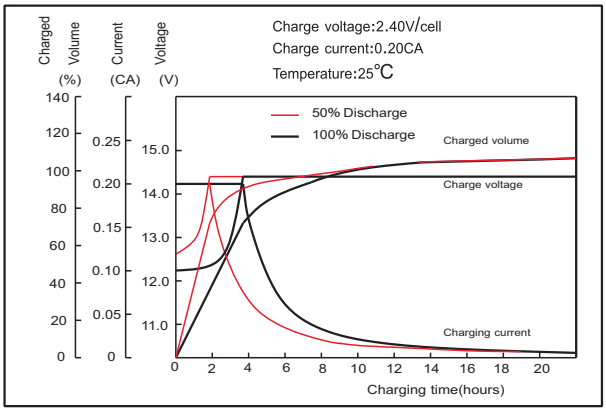
Valve Regulated Lead Acid Battery

PMA12-50 12V50Ah

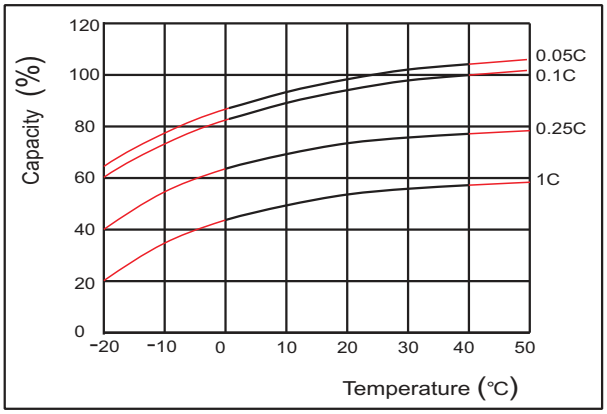
Discharge Characteristics 25℃



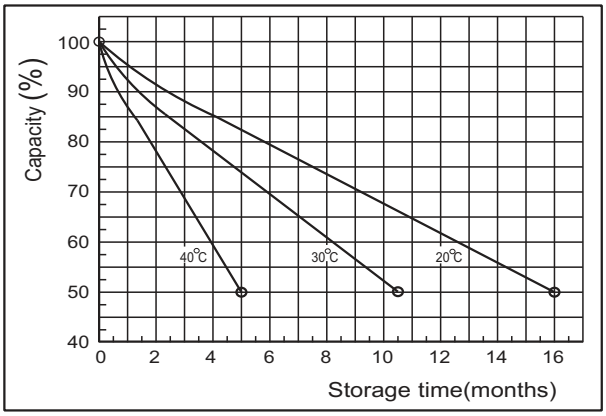
Charging Characteristics 25℃



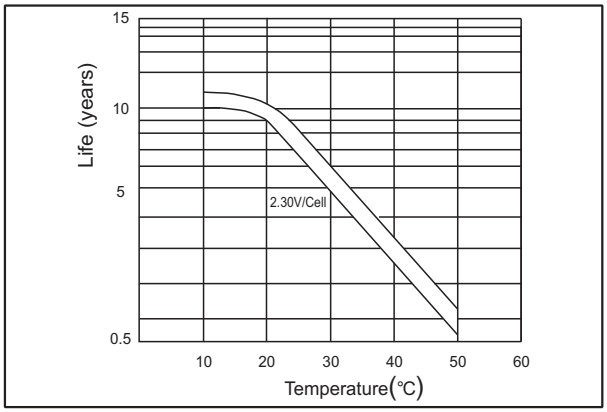
Temperature Effects on Capacity



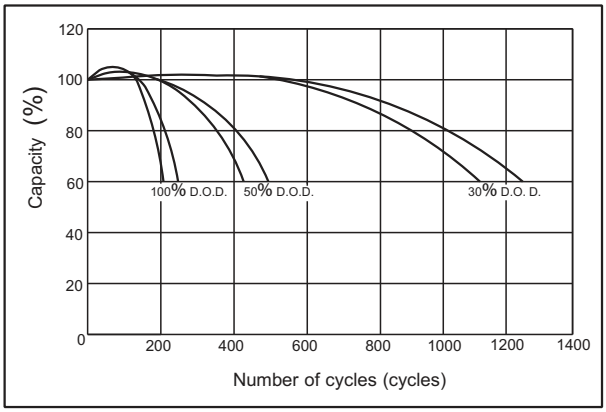
Self-discharge characteristics



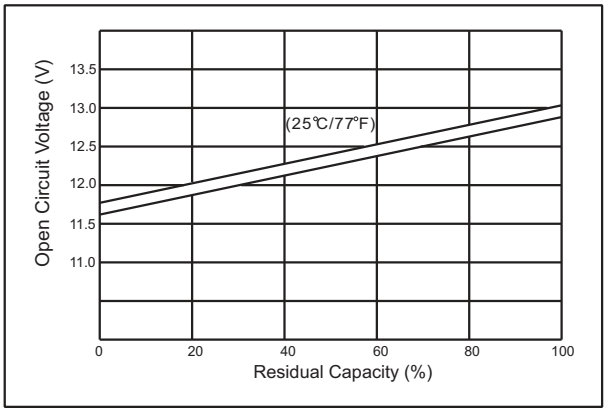
Floating life on Temperature



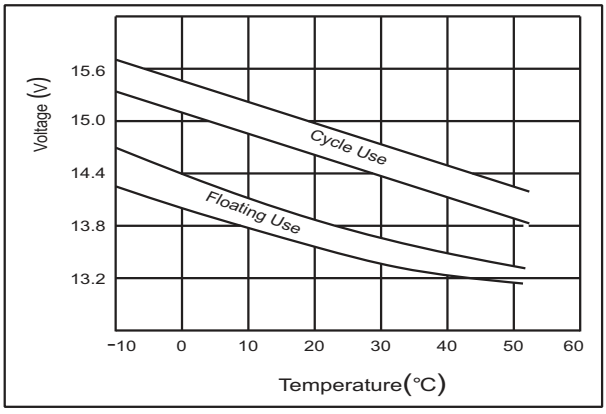
Cycle life on D.O.D (25℃)



The relationship for OCV and residual capacity (25) ℃



The relationship for charging voltage and temperature



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