

Valve Regulated Lead-Acid Rechargeable Battery



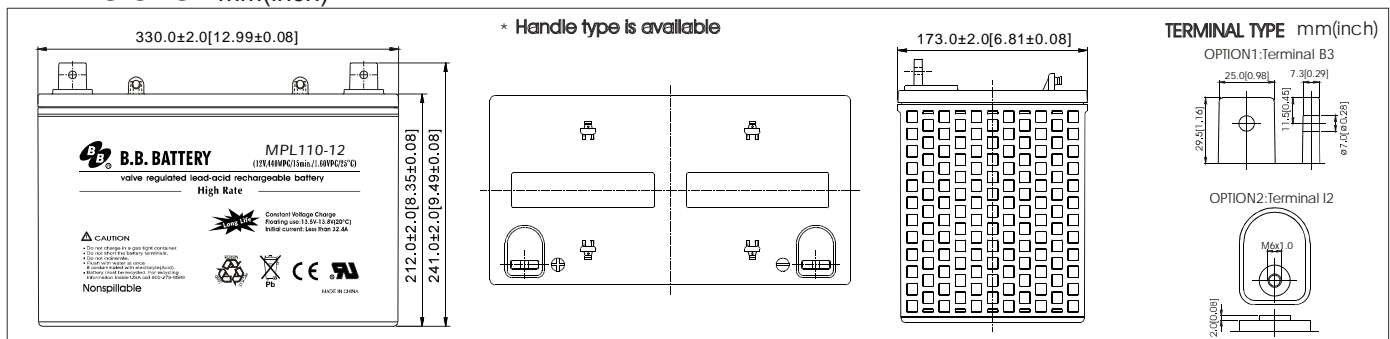
MPL110-12 (12V, 440W/Cell 15min.)

MPL 110-12 is designed with multi-plate technology so that it owns unparalleled high energy density. The unique alloy composition imposes our battery with more than 300 cycles at 100% discharge depth and 6-8 years' float life as well. Highly automated production with advanced heat-sealing and through-partition technique ensures reliable performance which is superior to any other battery manufacturer. Since its made of polypropylene, the outdoor and indoor usage of this battery are both suitable.

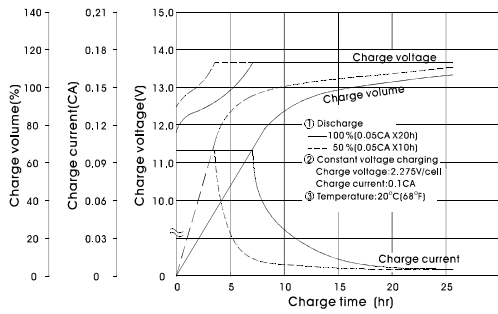
SPECIFICATIONS

Nominal Voltage(V).....	12V
Nominal Capacity(Ah) @ 25°C	
10 hour rate F.V.1.75V/cell(10.8 A discharge to 10.5 Volts).....	108.0 Ah
5 hour rate F.V.1.75V/cell(20.4 A discharge to 10.5 Volts).....	102.0 Ah
1 hour rate F.V.1.60V/cell(76.0 A discharge to 9.6 Volts).....	76.0 Ah
Nominal Power by 15 mins rate F.V.1.60 V/cell(W/cell).....	440W
Terminal Hardware initial Torque.....	58 kgf-cm (50 in-lbs; 5.6 N-m)
Approximate Weight.....	34.8 Kg (76.72Lb)
Internal Resistance.....	<3m Ω
Maximum Charging Current.....	32.4 A
Maximum Discharge Current for 5 sec.	1100 A
Short Circuit Current @ 0.1 sec.....	2800 A min
Cold Cranking Amp @ -18°C.....	850 A
Operation Temperature	
Charge.....	0°C(32°F)~50°C(122°F)
Discharge.....	-20°C(-4°F)~60°C(140°F)
Storage.....	-20°C(-4°F)~50°C(122°F)
Storage Duration.....	6 months (20°C)
Container Material and Flammability	PP, UL94-V0 & HB
Application	Telecom, UPS, Marine, Power station, Cable TV, etc.

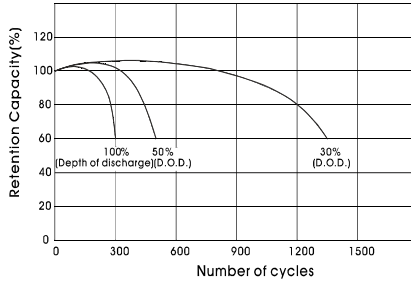
DIMENSIONS mm(inch)



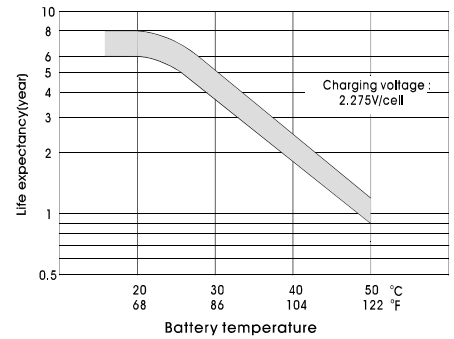
BATTERY CHARGING CHARACTERISTICS
(typical example of the charge characteristics for the standby use)



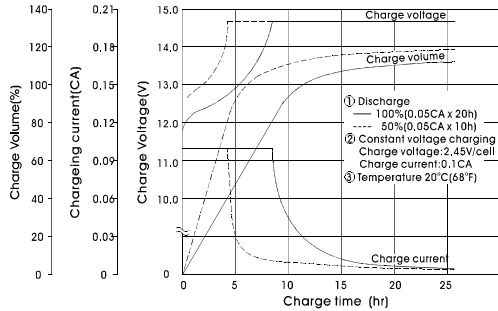
BATTERY LIFE CHARACTERISTICS OF CYCLIC USE
Testing Conditions: Discharge Current: 0.25CAmp(F.V.1.7V/cell)
Charging Current: 0.1C Amp
Charging Volume: 120% Of Discharge Capacity
Ambient Temperature: 20°C(68°F)



EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



BATTERY CHARGING CHARACTERISTICS
(Typical example of the charge characteristics for the cycle use)



CHARGING PROCEDURE

Application	Charging method	Charging Voltage at 20°C (V/cell)	Temperature compensation coefficient of charging voltage (mV/°C/cell)	Max. charging current (CA)	Charging time 0.1CA, 20°C (h)		Temp (°C)
					100% discharge	50% discharge	
For standby power Source	Constant voltage & Constant current charging (with current restriction)	2.25~2.30	-3	0.3	24	20	0~50 (32~122°F)
For cycle service		2.40~2.50	-4	0.3	16	10	

*Temperature compensation of charging voltage is not needed, when using the batteries within 5°C to 35°C range.

CONSTANT POWER DISCHARGE CHARACTERISTICS @ 25°C(77 °F)

Final Voltage	Discharge time									
	5Min	10Min	15Min	20Min	25Min	30Min	40Min	50Min	60Min	90Min
	Battery output power(W)									
10.80V	3810	2800	2326	1945	1685	1480	1192	1000	867	616
10.50V	4270	3005	2460	2020	1736	1518	1216	1021	880	626
10.20V	4554	3219	2545	2073	1770	1542	1233	1033	890	633
9.90V	4740	3225	2602	2112	1798	1560	1248	1044	898	638
9.60V	4880	3288	2640	2140	1820	1574	1260	1052	906	642

CONSTANT CURRENT DISCHARGE CHARACTERISTICS @ 25 °C(77 °F)

Final Voltage	Discharge time												
	5Min	10Min	15Min	20Min	25Min	30Min	40Min	50Min	1Hr	1.5Hr	2Hr	5Hr	10Hr
	Battery output current(Ampere)												
11.10V	302	221	186	154	132	115	92.9	78.2	70.0	49.4	39.6	17.6	9.9
10.80V	354	246	202	166	142	123	99.0	83.1	72.8	51.7	41.4	18.4	10.5
10.50V	389	265	213	174	148	128	101	85.6	73.9	52.6	42.0	18.7	10.8
10.20V	414	276	220	178	152	131	104	86.8	74.8	53.2	42.4	18.8	10.9
9.90V	430	285	226	182	154	133	105	88.0	75.5	53.7	42.8	18.8	10.9
9.60V	444	290	230	185	156	134	106	88.0	76.0	54.0	43.0	18.8	10.9



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