

MK12-455W 12V120Ah

introduce



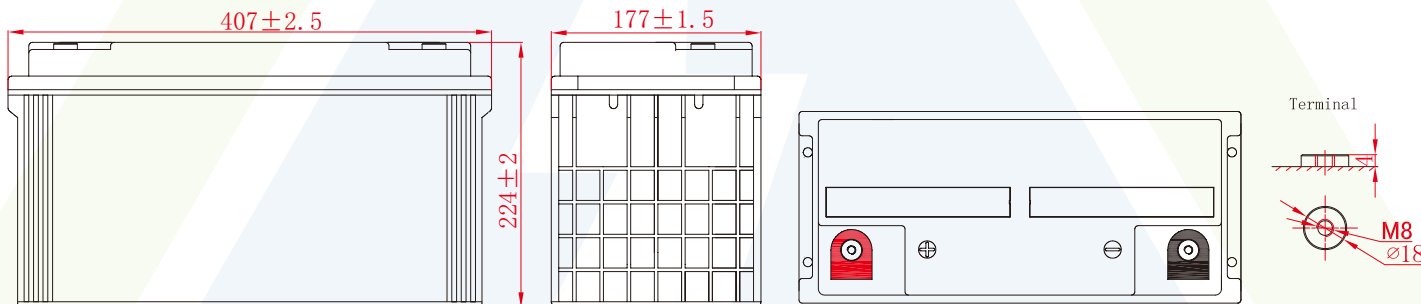
MK-manufactured **VRLA** (Absorbent **G**lass **M**at type) batteries are UL-recognized components under UL2000.

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	455W@15min-rate to 1.67V per cell @25°C (77°F)
Weight	Approx. 37.0 kg(81.57lbs)
Maximum Discharge Current	1200A (5sec)
Internal Resistance	Approx. 4.5mΩ
Operating Temperature Range	Discharge: -15°C~50°C (5°F~122°F) Charge: -15°C~40°C (5°F~104°F) Storage: -15°C~40°C (5°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C (77°F)
Recommended Maximum Charging Current Limit	36A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C (77°F)
Self Discharge	Baace Batteries can be stored for more than 6 months at 25°C (77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	Thread lead alloy recessed terminal to accept M8 bolt
Container Material	ABS(UL 94-HB) & Flammability resistance of (UL 94-V0) can be available upon request.

Dimensions :	Overall Height (H)	Container height (h)	Length (L)	Width (W)
Unit: mm	224±2.5	224±2	407±2.5	177±1.5

Unit: mm



Constant Current Discharge Characteristics Unit:A(25°C/77°F)

F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN	120min
1.85V	300	267	232	198	166	126	76.6	56.1	46.7
1.80V	325	288	253	212	174	133	79.2	58.2	49.3
1.75V	350	307	273	225	182	138	81.3	59.8	51.0
1.70V	373	324	291	236	188	142	82.8	61.1	51.5
1.67V	390	337	303	244	195	147	85.1	62.8	52.5
1.60V	423	360	323	257	208	153	88.7	65.4	53.3

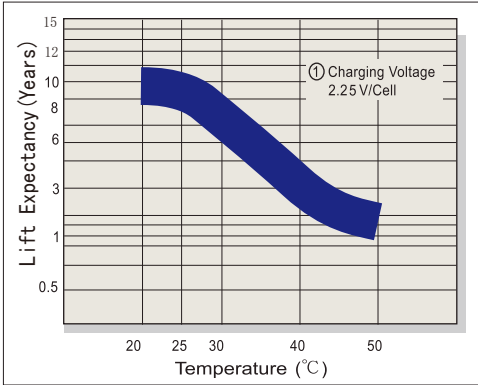
Constant Power Discharge Characteristics Unit:: W/cell(25°C/77°F)

F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN	120min
1.85V	580	521	460	346	328	254	154	113	98.1
1.80V	620	552	492	383	341	263	157	115	101
1.75V	658	580	521	419	354	270	160	117	103
1.70V	693	607	550	444	365	276	162	119	104
1.67V	714	623	564	455	372	278	164	121	105
1.60V	762	655	593	470	385	284	166	123	106

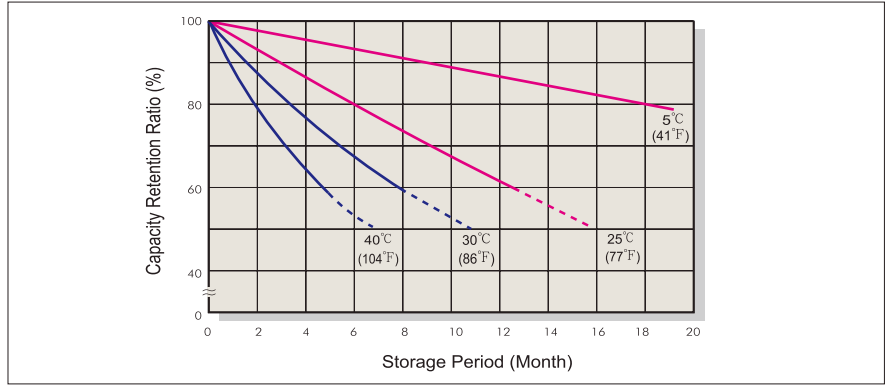
MK Lead acid high power battery series

MK12-455W 12V120Ah

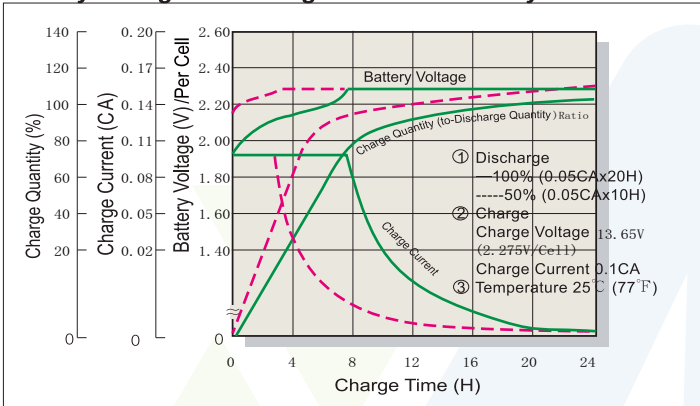
Trickle(or Float)Design Life



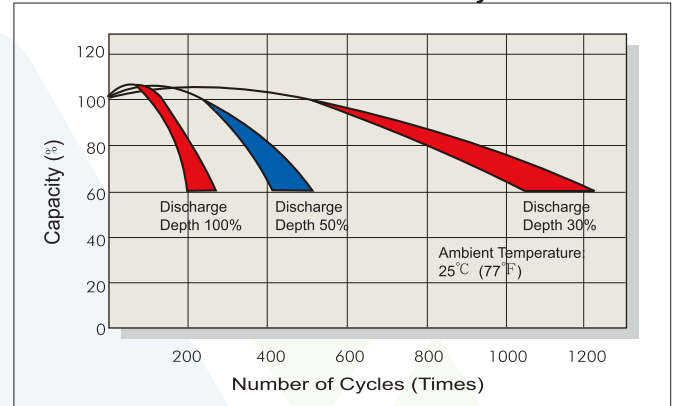
Capacity Retention Characteristic



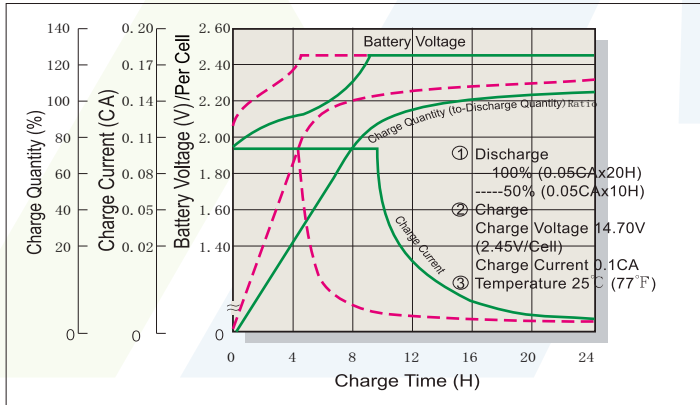
Battery Voltage and Charge Time for Standby Use



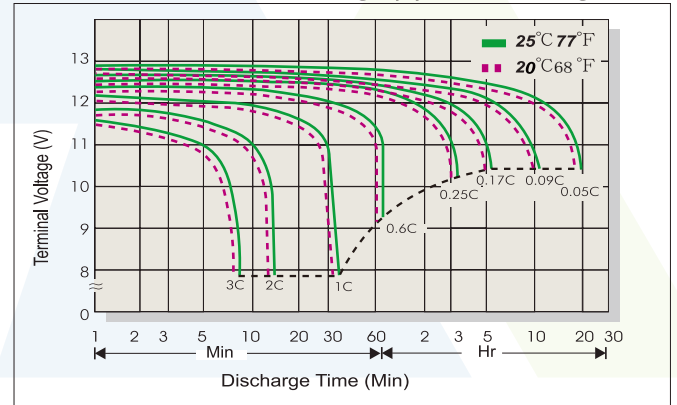
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time



Charging Procedures

Application	Charge Voltage(V/Cell)			Max.Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C (77°F)	2.45	2.40~2.50	0.30C
Standby	25°C (77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.65	1.60
Discharge Current(A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

Effect of temperature on capacity (10HR)

Temperature	Dependency of Capacity (10HR)
40°C	103%
25°C	100%
0°C	85%
-15°C	65%

Self-discharge Characteristics

Storage time	Preservation rate
3 Months	91%
6 Months	82%
12 Months	64%