

# multipower - mp®

## RECHARGEABLE SEALED LEAD ACID BATTERY

## SPECIFICATION



### MPL12420H

**Nominal Voltage(V)** 12V

#### Nominal Power

15 mins rate: 420W/cell to 1.67V/cell

#### Nominal Capacity

20 hour rate	(5.5A	to	10.50V)	110.0Ah
10 hour rate	(10.45A	to	10.50V)	104.5Ah
8 hour rate	(12.13A	to	10.50V)	97.0Ah
5 hour rate	(18.7A	to	10.20V)	93.5Ah

**Weight Approx.** 34kg (74.8Lbs.)

**Internal Resistance (at 1KHz) Approx.** 3.9 mΩ

#### Maximum Discharge Current for

**5 seconds:** 1100A

#### Charging Methods at 25°C (77°F)

Maximum Charging Current:	33A
Boost Charging Voltage	14.10 to 14.40V
Boost Charge Time	8-9Hr
Float Charging Voltage	13.50 to 13.65V
Coefficient	-3.0mV/°C/cell

#### Operating Temperature Range

Charge	-15°C (5°F) to 40°C (104°F)
Discharge	-15°C (5°F) to 50°C (122°F)
Storage	-15°C (5°F) to 40°C (104°F)

#### Charge Retention (shelf life) at 20°C (68°F)

1 month	98%
3 month	96%
6 month	94%

**Case Material** ABS UL94 HB

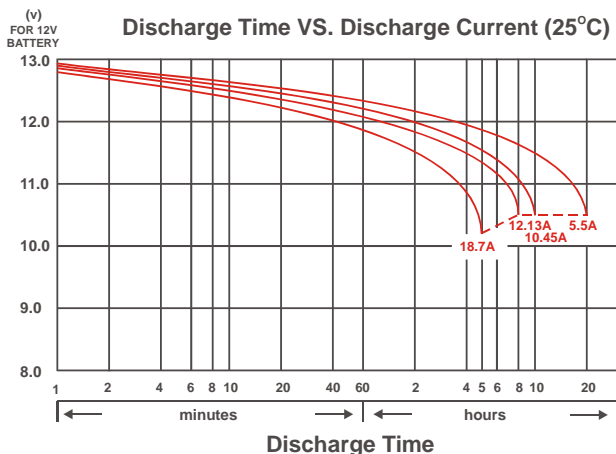
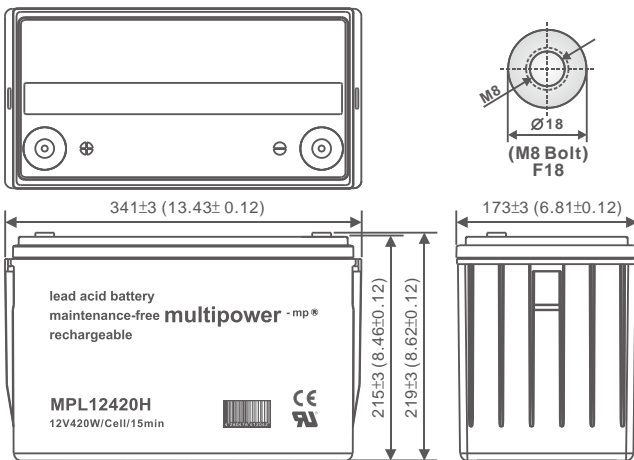
**Terminal** F18

#### Description of torque value of hard ware for the terminals:

Recommended torque value	M8: 12 N·m (122 kgf·cm)
Maximum allowable torque value	M8: 20 N·m (204 kgf·cm)

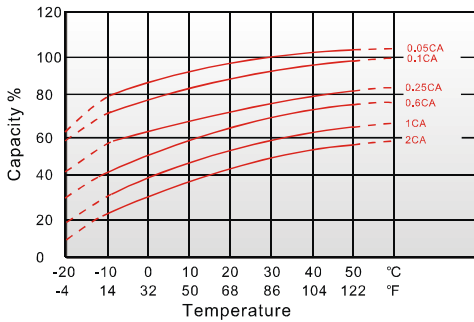
#### Design Life

Eurobat (20°C) : 10/12 Years Long Life

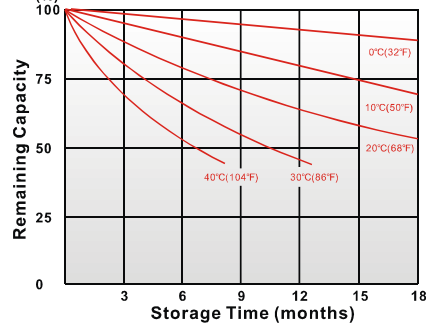


## CHARACTERISTIC & PERFORMANCE DATA

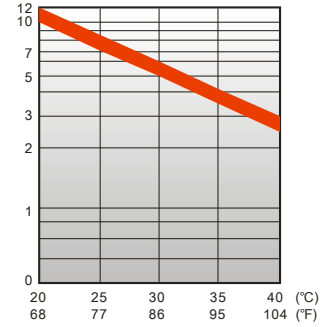
Effect of Temperature on Capacity 25°C(77°F)



Capacity Retention Characteristic



Trickle (or float) Service Life



### - PERFORMANCE DATA

Discharge Rates in Watts per Cell to Various End Voltages at 25°C(77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
2	min	695	790	883	952	1015	1074	1110
4	min	640	721	780	819	858	888	918
5	min	612	675	738	775	805	825	835
6	min	555	630	705	734	758	768	778
8	min	500	552	579	604	622	626	630
10	min	455	503	518	533	547	560	570
15	min	371	424	439	441	444	447	449
20	min	310	321	329	332	335	338	340
30	min	228	236	244	247	249	250	251
40	min	191	206	208	210	212	213	214
45	min	183	191	193	195	197	199	200
60	min	138	143	145	146	146	146	147
90	min	88.2	91.4	92.9	94.1	94.6	94.9	95.2
120	min	77.8	81.4	82.5	82.6	82.6	82.7	82.7
180	min	58.8	60.0	60.7	61.1	61.4	61.6	61.7
240	min	41.5	41.8	42.4	42.8	43.2	43.6	43.8
300	min	35.7	36.6	37.0	37.3	37.5	37.7	37.9
480	min	22.0	22.6	22.8	22.8	22.9	22.9	23.0
600	min	19.1	19.6	20.0	20.3	20.6	20.8	21.0
1200	min	10.5	10.9	11.1	11.3	11.5	11.6	11.7

- Discharge Rates in Amperes per Battery to Various End Voltages at 25°C(77°F)

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
2	min	375	454	506	550	580	610	635
4	min	343	402	456	503	520	531	543
5	min	330	384	422	452	477	492	500
6	min	302	342	377	392	397	402	405
8	min	260	287	316	327	338	346	353
10	min	232	253	278	288	298	304	311
15	min	196	206	215	224	231	238	245
20	min	157	171	179	181	183	184	185
30	min	120	123	126	129	131	133	135
40	min	96.4	101	106	109	110	111	112
45	min	91.8	96.0	98.0	99.5	101	102	103
60	min	69.5	71.0	72.5	73.9	75.2	76.5	77.5
90	min	45.5	50.6	53.2	54.1	54.6	54.9	55.2
120	min	40.0	41.7	43.1	43.3	43.4	43.5	43.6
180	min	28.5	31.3	31.8	32.0	32.1	32.2	32.3
240	min	22.2	22.7	23.4	24.1	24.6	24.8	25.0
300	min	16.9	17.2	17.9	18.7	18.7	18.7	18.8
480	min	11.6	12.1	12.2	12.3	12.4	12.4	12.5
600	min	9.75	10.2	10.5	10.7	10.8	10.8	10.9
1200	min	5.10	5.33	5.50	5.51	5.51	5.52	5.52

All data on the spec. sheet is an average value:

The tolerance range :  $X < 6\text{min}$  (+15%~-15%),  $6\text{min} \leq X < 10\text{min}$  (+12%~-12%),  $10\text{min} \leq X < 60\text{min}$  (+8%~-8%),  $X \geq 60\text{min}$  (+5%~-5%)