

# RECHARGEABLE SEALED LEAD ACID BATTERY

# SPECIFICATION



## MPL100-12FT

**Nominal Voltage(V)** 12V

### Nominal Capacity

10 hour rate	(10A	to	10.80V)	100.00Ah
5 hour rate	(17A	to	10.20V)	85.00Ah
1 hour rate	(60A	to	9.60V)	60.00Ah
1 C	(100A	to	9.60V)	50.00Ah

**Weight Approx.** 30.0kg (66Lbs.)

**Internal Resistance (at 1KHz) Approx.** 4.3 mΩ

### Maximum Discharge Current for

**5 seconds:** 1000A

### Charging Methods at 25°C (77°F)

Cycle use:	
Charging Voltage	14.7 to 14.8V
Coefficient	-5.0mV/°C/cell
Maximum Charging Current:	30A
Standby use:	
Float Charging Voltage	13.5 to 13.8V
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	94%
6 month	85%

**Case Material** ABS UL94 HB

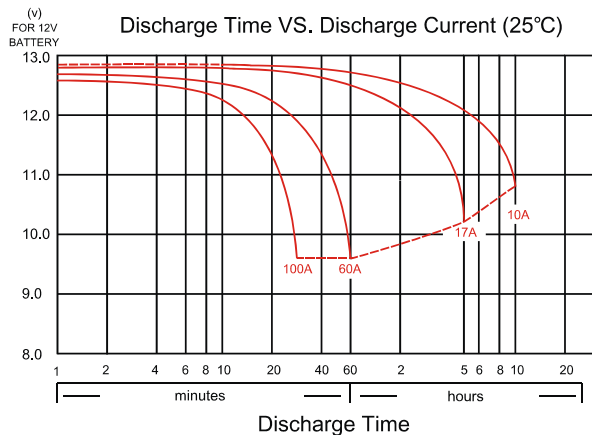
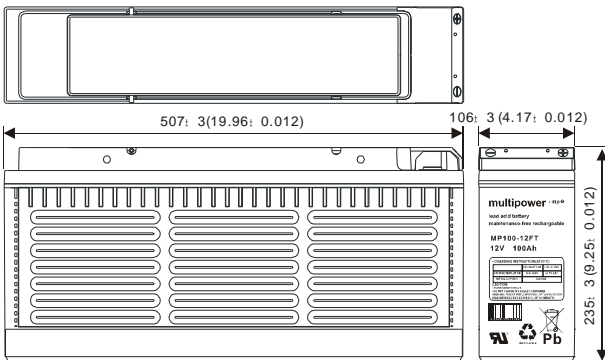
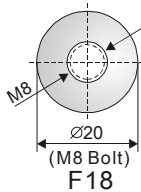
**Terminal** F18

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

Recommended torque value	M8: 12N·m (122kgf·cm)
Maximum allowable torque value	M8: 15N·m (153kgf·cm)

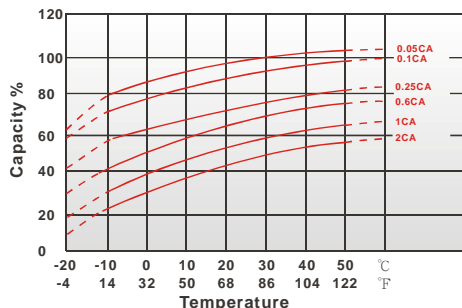
### Design Life

Eurobat (20°C) : 10+ years

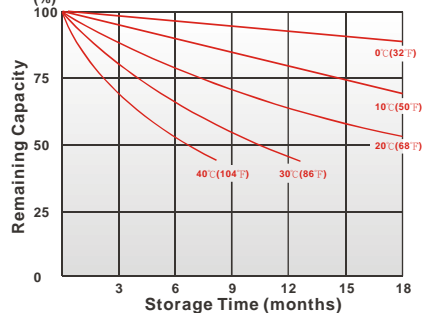


## CHARACTERISTIC & PERFORMANCE DATA

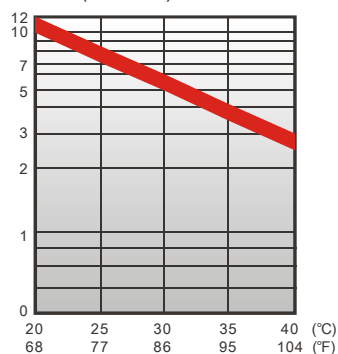
Effect of Temperature on Capacity 25 $\bar{0}$  (77 $\bar{K}$ )



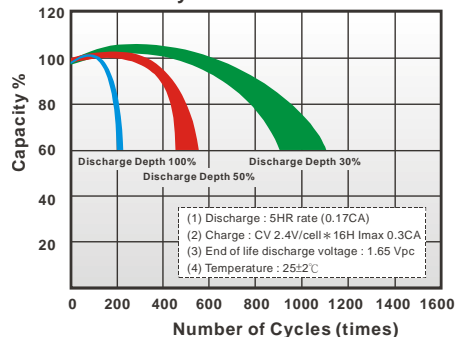
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



### - PERFORMANCE DATA

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

Time	End Voltage							
	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V	
15	min	268	293	364	369	379	389	392
30	min	171	191	203	215	225	232	242
60	min	114	116	119	121	124	127	129
120	min	59.8	69.9	73.4	75.3	76.7	77.5	78.3
180	min	46.3	48.3	49.8	51.7	52.7	53.7	55.0
240	min	36.0	38.3	40.5	41.3	41.7	42.0	42.3
300	min	26.7	29.5	31.3	31.8	32.7	33.5	34.2
480	min	21.2	21.7	23.0	23.3	24.0	24.5	25.0
600	min	17.5	18.5	19.3	19.8	20.2	20.3	20.5
1200	min	8.67	9.83	10.5	10.7	10.8	10.8	11.0

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

Time	End Voltage							
	1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V	
15	min	135	153	189	190	194	198	202
30	min	100	105	109	112	115	118	125
60	min	54.5	60.0	61.5	62.4	63.6	64.3	64.7
120	min	32.2	34.4	36.0	36.8	37.5	38.3	39.7
180	min	24.3	25.1	26.4	26.7	27.0	27.4	27.8
240	min	18.2	19.1	20.0	20.3	20.5	20.8	21.1
300	min	15.8	16.4	17.0	17.3	17.7	18.0	18.3
480	min	10.5	11.3	11.7	11.9	12.0	12.1	12.2
600	min	9.5	10.0	10.1	10.2	10.3	10.4	10.5
1200	min	4.70	5.00	5.10	5.20	5.20	5.30	5.40

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%)