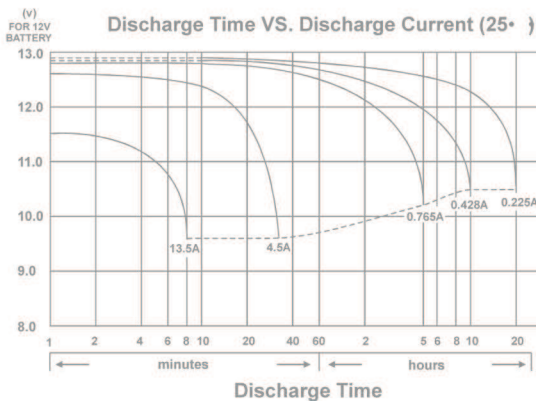
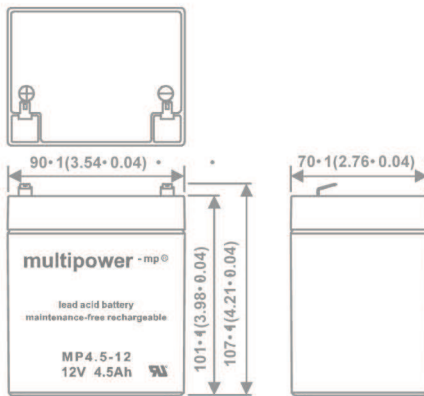
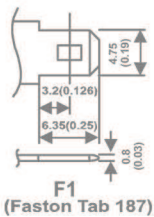


## RECHARGEABLE SEALED LEAD ACID BATTERY

## SPECIFICATION



### MP4,5-12

Nominal Voltage(V) 12V

#### Nominal Capacity

20 hour rate	(0.225A to 10.50V)	4.5Ah
10 hour rate	(0.428A to 10.50V)	4.275Ah
5 hour rate	(0.765A to 10.20V)	3.825Ah
1 C	(4.5A to 9.60V)	2.55Ah
3 C	(13.5A to 9.60V)	1.8Ah

Weight Approx. 1.62kg(3.56Lbs.)

Internal Resistance (at 1KHz) Approx. 34.2 mΩ

#### Maximum Discharge Current for

5 seconds: 67.5A

#### Charging Methods at 25° (77° )

Cycle use:

Charging Voltage 14.4 to 15.0V

Coefficient -5.0mv/° /cell

Maximum Charging Current 1.35A

Standby use:

Float Charging Voltage 13.50 to 13.80V

Coefficient -3.0mv/° /cell

#### Operating Temperature Range

Charge -15° (5° ) to 40° (104° )

Discharge -15° (5° ) to 50° (122° )

Storage -15° (5° ) to 40° (104° )

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

1 month 92° •

3 month 90° •

6 month 80° •

#### Case Material

ABS

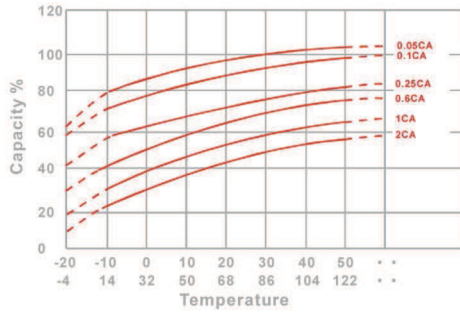
(UL94 HB flame retardant case / cover)

#### Terminal

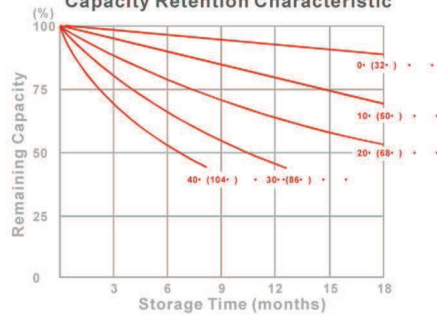
F1(Faston Tab 187)

## CHARACTERISTIC & PERFORMANCE DATA

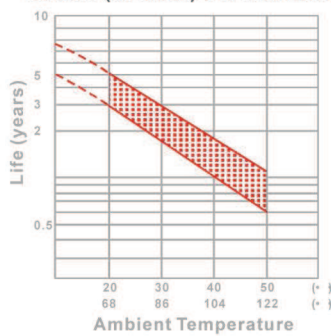
Effect of Temperature on Capacity 25 (77) °C



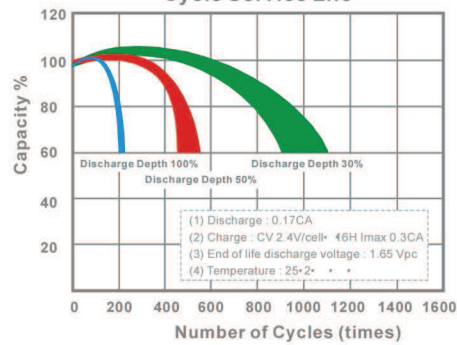
Capacity Retention Characteristic



Trickle (or float) Service Life



Cycle Service Life



### - PERFORMANCE DATA

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	143	161	174	186	191	197	204
10	min	102	115	123	129	132	135	138
15	min	84.5	93.4	97.2	99.1	100	101	102
30	min	49.1	54.9	57.1	58.2	58.8	59.5	60.2
60	min	25.2	28.6	30.8	32.6	33.2	33.9	34.4
120	min	14.9	16.6	17.4	18.0	18.3	18.7	19.1
180	min	11.8	13.0	13.6	14.1	14.3	14.6	14.9
240	min	9.61	10.4	10.8	11.1	11.3	11.5	11.7
300	min	8.76	9.35	9.62	9.81	9.92	10.1	10.3
600	min	5.13	5.48	5.64	5.76	5.81	5.87	5.95
1200	min	2.59	2.81	2.99	3.06	3.08	3.12	3.16

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

End Voltage		1.85V	1.80V	1.75V	1.70V	1.67V	1.65V	1.60V
5	min	15.3	17.6	18.9	19.5	19.7	19.9	20.2
10	min	10.5	11.7	11.9	12.1	12.2	12.3	12.4
15	min	7.56	8.22	8.71	8.92	8.99	9.07	9.15
30	min	4.39	4.94	5.11	5.25	5.3	5.35	5.41
60	min	2.36	2.61	2.73	2.84	2.87	2.91	2.94
120	min	1.32	1.44	1.50	1.54	1.55	1.57	1.59
180	min	1.09	1.15	1.18	1.20	1.21	1.22	1.23
240	min	0.835	0.891	0.916	0.942	0.948	0.955	0.963
300	min	0.776	0.812	0.825	0.837	0.841	0.846	0.852
600	min	0.435	0.452	0.464	0.473	0.477	0.481	0.486
1200	min	0.219	0.233	0.241	0.247	0.250	0.253	0.257

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

The tolerance range : X<6min(+15%~-15%), 6min • X<10min(+12%~-12%), 10min • X < 60min(+8%~-8%), X • 60min(+5%~-5%)