



MPL28-12I

Nominal Voltage(V) 12V

Nominal Capacity

20 hour rate	(1.40A	to	10.50V)	28.00Ah
10 hour rate	(2.66A	to	10.50V)	26.60Ah
5 hour rate	(4.76A	to	10.20V)	23.80Ah
1 C	(28A	to	9.60V)	17.73Ah
3 C	(84A	to	9.60V)	11.20Ah

Weight Approx. 9.2kg (20.2Lbs.)

Internal Resistance (at 1KHz) Approx. 9.2 mΩ

Maximum Discharge Current for

5 seconds: 420A

Charging Methods at 25°C (77°F)

Maximum Charging Current: 8.4A

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 92 %

3 month 90 %

6 month 80 %

Case Material

ABS UL94 HB

Terminal

F6

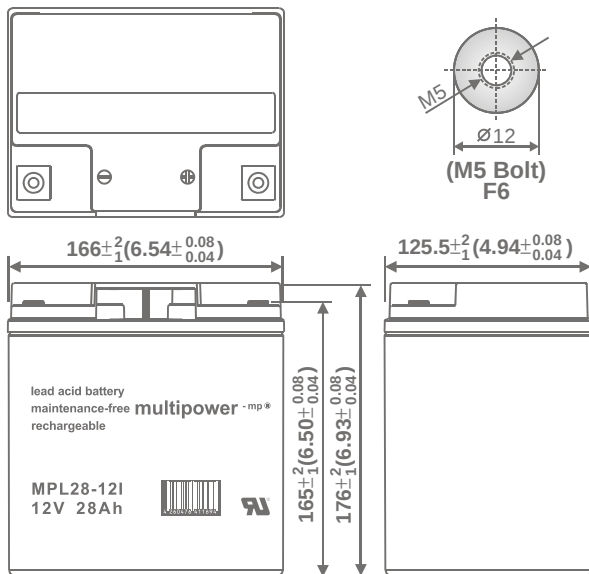
Description of torque value of hard ware for the terminals:

Recommended torque value M5: 4N-m(41kgf-cm)

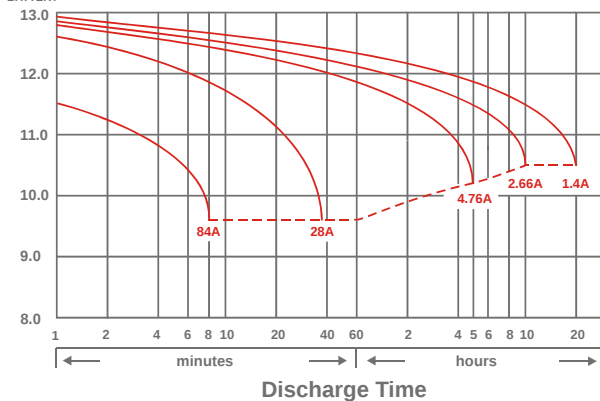
Maximum allowable torque value M5: 6N-m(61kgf-cm)

Design Life

Eurobat (20°C): 10/12 years



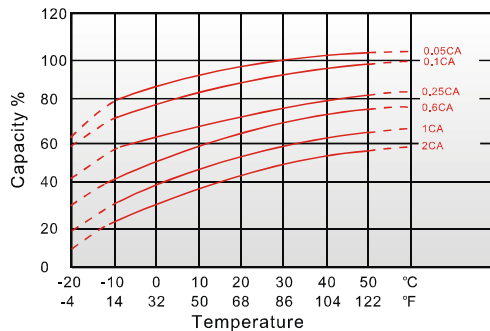
(V) FOR 12V BATTERY
Discharge Time VS. Discharge Current (25°C)



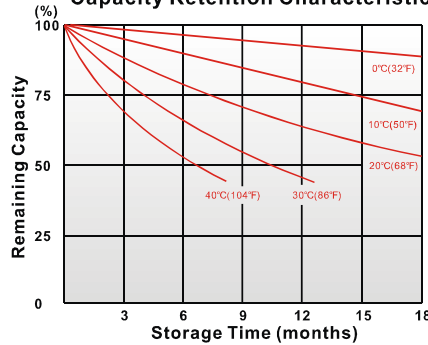


CHARACTERISTIC & PERFORMANCE DATA

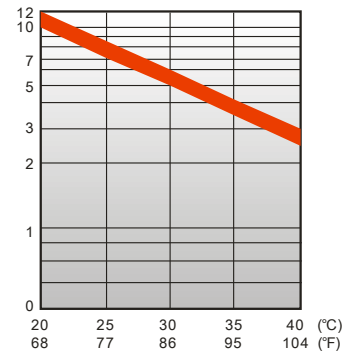
Effect of Temperature on Capacity 25°C(77°F)



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
Time								
2	min	181	210	234	245	255	264	273
4	min	157	172	186	199	211	221	231
5	min	139	161	179	186	191	196	200
6	min	130	156	166	173	180	185	190
8	min	125	139	145	150	155	160	165
10	min	107	118	124	128	133	135	137
15	min	86.4	94.7	102	104	106	108	110
20	min	76.6	82.3	83.4	84.3	85.1	85.9	86.7
30	min	54.4	58.7	59.9	60.7	61.4	62.1	62.8
45	min	45.4	48.5	49.4	49.9	50.3	50.6	50.9
60	min	35.0	36.5	36.9	37.2	37.5	37.8	38.2
90	min	25.0	25.9	26.5	26.9	27.3	27.5	27.7
120	min	21.0	21.9	22.3	22.5	22.6	22.8	23.0
180	min	15.5	16.2	16.4	16.6	16.7	16.8	16.9
240	min	11.9	12.4	12.7	12.8	12.9	13.0	13.1
300	min	10.0	10.4	10.5	10.6	10.7	10.8	10.9
600	min	5.56	5.72	5.85	5.86	5.88	5.89	5.91
1200	min	3.00	3.03	3.09	3.11	3.12	3.14	3.15

- 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
Time								
2	min	92.5	115	133	148	158	167	172
4	min	80.5	96.5	109	114	119	124	128
5	min	72.5	88.0	102	107	112	116	119
6	min	70.8	83.8	90.5	96.9	103	108	113
8	min	68.3	75.3	81.6	85.4	88.4	90.6	92.6
10	min	57.1	63.9	66.2	69.6	72.4	75.2	77.7
15	min	44.6	49.0	52.7	54.6	56.1	57.6	58.6
20	min	35.7	39.2	42.1	43.7	44.9	46.1	46.9
30	min	27.8	29.9	31.0	31.9	32.6	33.2	33.4
45	min	21.1	22.6	23.0	24.2	24.7	24.9	25.1
60	min	16.3	17.4	18.1	18.6	19.1	19.3	19.4
90	min	12.6	13.6	14.0	14.4	14.7	15.0	15.2
120	min	10.6	11.3	11.5	11.8	11.9	12.2	12.3
180	min	7.39	7.69	7.94	8.05	8.18	8.35	8.38
240	min	5.97	6.09	6.23	6.34	6.41	6.48	6.51
300	min	4.95	5.08	5.19	5.33	5.38	5.42	5.45
600	min	2.74	2.82	2.91	2.93	2.95	2.97	2.98
1200	min	1.45	1.48	1.51	1.53	1.54	1.55	1.56

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%)