



### MPL12150H

**Nominal Voltage(V)** 12V

#### Nominal Power

15 mins rate: 150W/cell to 1.67V/cell

#### Nominal Capacity

|              |       |    |         |         |
|--------------|-------|----|---------|---------|
| 20 hour rate | (2.0A | to | 10.50V) | 40.00Ah |
| 8 hour rate  | (4.6A | to | 10.50V) | 36.80Ah |
| 5 hour rate  | (6.8A | to | 10.20V) | 34.00Ah |

**Weight Approx.** 13.4kg (29.5Lbs.)

**Internal Resistance (at 1KHz) Approx.** 7.5 mΩ

#### Maximum Discharge Current for

**5 seconds:** 480A

#### Charging Methods at 25°C (77°F)

|                           |                |
|---------------------------|----------------|
| Maximum Charging Current: | 12A            |
| Boost Charging Voltage    | 14.4 to 15.0V  |
| Boost Charge Time         | 8-9Hr          |
| 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 | 96% |
| 6 month | 94% |

**Case Material** ABS UL94 HB

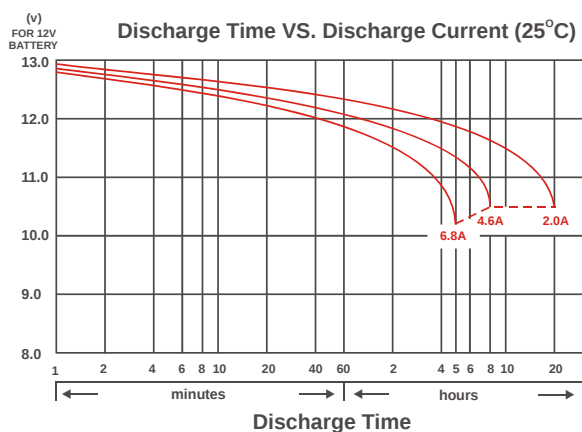
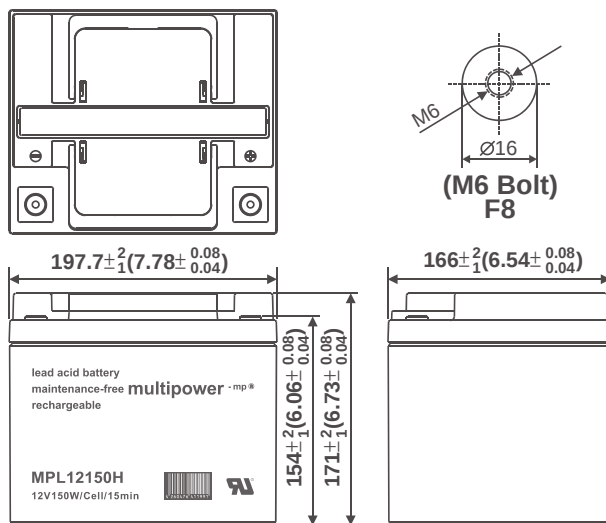
**Terminal** M6

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

|                                |                         |
|--------------------------------|-------------------------|
| Recommended torque value       | M6: 7 N·m (71 kgf·cm)   |
| Maximum allowable torque value | M6: 10 N·m (102 kgf·cm) |

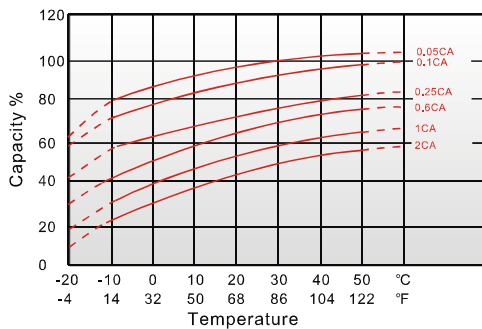
#### Design Life

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

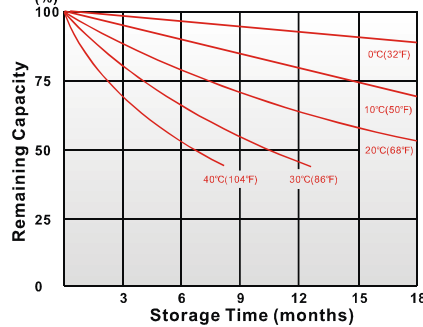


## CHARACTERISTIC & PERFORMANCE DATA

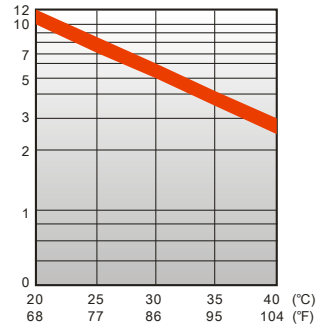
Effect of Temperature on Capacity 25°C(77°F)



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 |
|-------------|-----|-------|-------|-------|-------|-------|-------|-------|
| Time        |     |       |       |       |       |       |       |       |
| 5           | min | 204   | 215   | 227   | 230   | 232   | 235   | 237   |
| 10          | min | 166   | 178   | 196   | 198   | 200   | 203   | 205   |
| 15          | min | 141   | 147   | 154   | 157   | 160   | 161   | 162   |
| 20          | min | 111   | 116   | 122   | 123   | 123   | 124   | 125   |
| 30          | min | 83.9  | 87.0  | 90.8  | 92.0  | 93.1  | 93.8  | 94.5  |
| 45          | min | 65.0  | 69.9  | 73.1  | 75.9  | 77.5  | 78.1  | 78.5  |
| 60          | min | 54.8  | 55.7  | 56.8  | 58.0  | 59.3  | 60.0  | 60.8  |
| 90          | min | 41.4  | 41.7  | 42.4  | 43.3  | 44.5  | 44.6  | 44.9  |
| 120         | min | 32.5  | 32.8  | 33.6  | 33.8  | 34.0  | 34.1  | 34.3  |
| 180         | min | 22.8  | 23.0  | 23.4  | 23.6  | 23.8  | 23.9  | 24.1  |
| 240         | min | 17.3  | 17.6  | 17.9  | 18.3  | 18.4  | 18.6  | 19.0  |
| 300         | min | 14.4  | 15.0  | 15.2  | 15.3  | 15.4  | 15.4  | 15.5  |
| 480         | min | 9.46  | 9.67  | 9.89  | 9.94  | 10.0  | 10.0  | 10.1  |
| 1200        | min | 3.51  | 3.70  | 3.89  | 4.01  | 4.11  | 4.19  | 4.30  |

- 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        |     |       |       |       |       |       |       |       |
| 5           | min | 113   | 121   | 126   | 127   | 129   | 130   | 133   |
| 10          | min | 95.0  | 101   | 104   | 106   | 107   | 107   | 108   |
| 15          | min | 69.0  | 73.5  | 79.1  | 80.0  | 81.0  | 82.0  | 82.9  |
| 20          | min | 57.8  | 59.7  | 62.1  | 62.4  | 62.9  | 63.4  | 63.9  |
| 30          | min | 42.9  | 44.7  | 46.6  | 47.0  | 47.4  | 47.9  | 48.5  |
| 45          | min | 33.4  | 36.2  | 37.8  | 38.9  | 39.6  | 39.9  | 40.2  |
| 60          | min | 29.7  | 30.2  | 30.9  | 31.3  | 31.8  | 32.2  | 32.8  |
| 90          | min | 20.7  | 21.0  | 21.4  | 21.6  | 21.8  | 22.0  | 22.3  |
| 120         | min | 16.8  | 16.9  | 17.0  | 17.1  | 17.2  | 17.3  | 17.4  |
| 180         | min | 11.3  | 11.4  | 11.6  | 11.7  | 11.8  | 11.9  | 12.1  |
| 240         | min | 8.75  | 8.84  | 9.03  | 9.13  | 9.22  | 9.32  | 9.37  |
| 300         | min | 7.33  | 7.50  | 7.61  | 7.65  | 7.67  | 7.69  | 7.75  |
| 480         | min | 4.74  | 4.79  | 4.88  | 4.90  | 4.91  | 4.92  | 4.95  |
| 1200        | min | 2.12  | 2.14  | 2.25  | 2.26  | 2.27  | 2.28  | 2.28  |

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

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