



## 6FM33S(12V33Ah)

LONGWAY® 6FM33S is specially designed for green energy systems. 6FM33S have a good deep cycle property, maintenance-free. It can be used for more than 350 cycles at 100% discharge in cycle service, up to 12 years in standby service.



### Specifications:

|                                     |   |
|-------------------------------------|---|
| Cells per Unit                      | 6   |
| Normal Voltage                      | 12V   |
| Capacity                            | 33Ah@10Hr-rate to 1.80V per cell@25°C   |
|                                     | 38Ah@100Hr-rate to 1.90V per cell@25°C  |
| Weight                              | Approx (10.5±3% ) kg (23.1lbs)  |
| Maximum Discharge Current           | 330A(5sec)  |
| Internal Resistance                 | Approx. 9.0mΩ full charged @25°C  |
| Operating Temperature Range         | Discharge: -20°C~60°C   |
|                                     | Charge: 0°C~50°C  |
|                                     | Storage: -20°C~60°C   |
| Nominal Operating Temperature Range | 25°C±3°C  |
| Float Charging Voltage              | 13.7~13.9VDC/unit Average @25°C   |
| Maximum Charging Current            | 8.25A   |
| Equalization and Cycle Service      | 14.4V~15.0VDC/unit Average @ 25°C   |
| Self Discharge                      | LONGWAY Valve Regulated Lead Acid (VRLA) batteries can be stored for more than 6 months at 25°C. Self-discharge ratio less than 3% per month at 25°C. Please charge batteries before using. |
| Terminal                            | Terminal F9   |
| Container Material                  | ABS(UL94-HB)<br>*Flammability resistance of (UL94-V0) can be available upon request   |



ISO 9001:2008 Standard



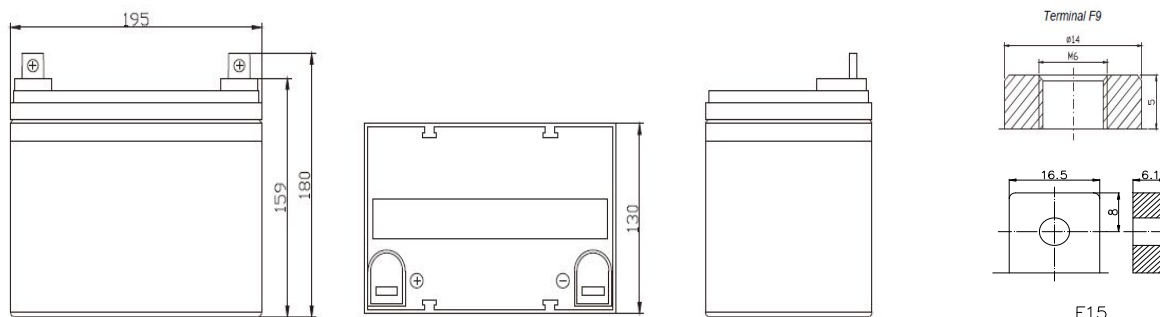
ISO 14001:2004 Standard



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### Dimensions: L195\*W130\*H161(TH181)mm



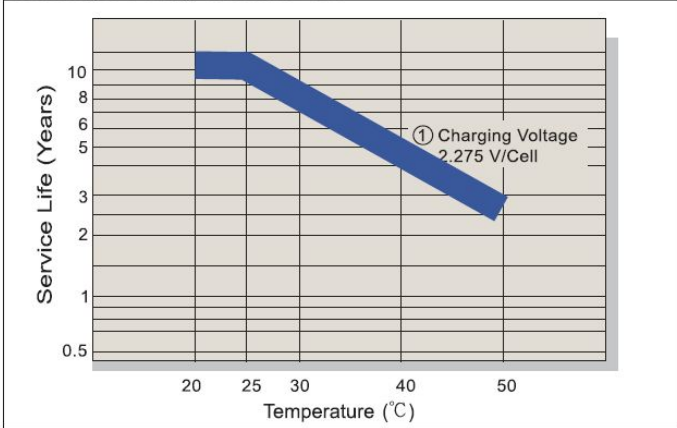
### Constant Current Discharge Characteristics (A, 25 °C)

| F.V/TIME | 15min | 30min | 60min | 2h   | 3h   | 5h   | 8h   | 10h  | 20h  | 48h  | 100h |
|----------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 9.60     | 59.7  | 37.3  | 21.5  | 12.9 | 8.88 | 6.03 | 4.04 | 3.35 | 1.76 | 0.82 | 0.40 |
| 9.90     | 58.5  | 36.5  | 21.0  | 12.9 | 8.83 | 6.00 | 4.00 | 3.33 | 1.75 | 0.80 | 0.39 |
| 10.2     | 57.3  | 35.8  | 20.6  | 12.7 | 8.75 | 5.94 | 3.98 | 3.32 | 1.74 | 0.79 | 0.39 |
| 10.5     | 55.5  | 34.7  | 19.9  | 12.5 | 8.66 | 5.88 | 3.96 | 3.31 | 1.74 | 0.78 | 0.38 |
| 10.8     | 54.5  | 34.0  | 19.6  | 12.4 | 8.57 | 5.82 | 3.88 | 3.30 | 1.73 | 0.77 | 0.38 |

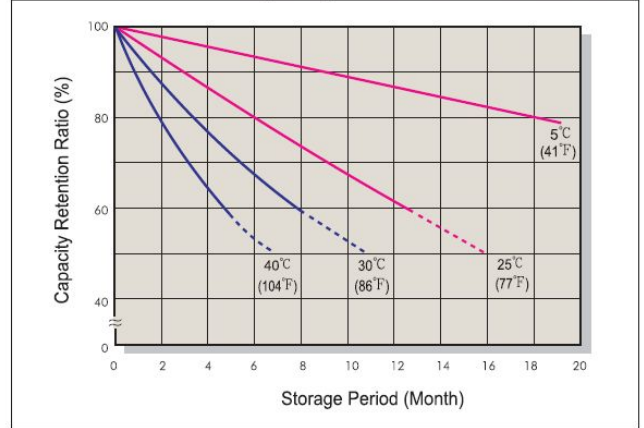
### Constant Power Discharge Characteristics (Watt, 25 °C)

| F.V/TIME | 15min | 30min | 60min | 2h  | 3h  | 5h   | 8h   | 10h  | 20h  | 48h  | 100h |
|----------|-------|-------|-------|-----|-----|------|------|------|------|------|------|
| 9.60     | 659   | 425   | 248   | 150 | 104 | 71.3 | 48.5 | 40.0 | 21.1 | 1.63 | 0.79 |
| 9.90     | 646   | 417   | 240   | 149 | 104 | 70.9 | 48.0 | 39.8 | 21.0 | 1.60 | 0.79 |
| 10.2     | 633   | 408   | 235   | 147 | 103 | 70.2 | 47.8 | 39.6 | 20.9 | 1.57 | 0.77 |
| 10.5     | 613   | 395   | 227   | 145 | 102 | 69.5 | 47.5 | 39.5 | 20.8 | 1.56 | 0.76 |
| 10.8     | 601   | 388   | 223   | 144 | 101 | 68.8 | 46.6 | 39.4 | 20.8 | 1.53 | 0.76 |

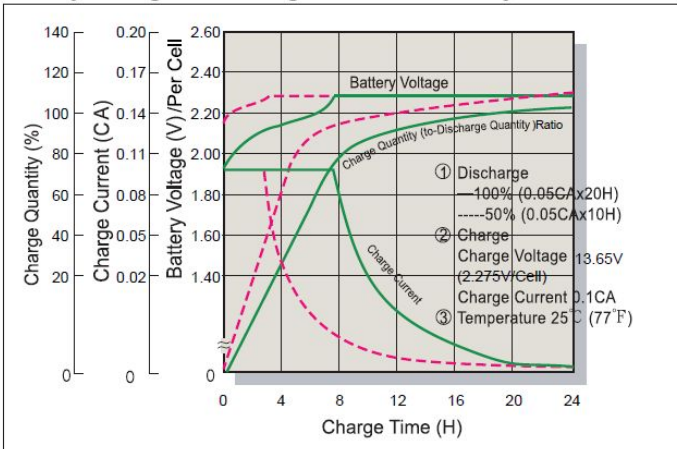
### Trickle (or Float) Service Life



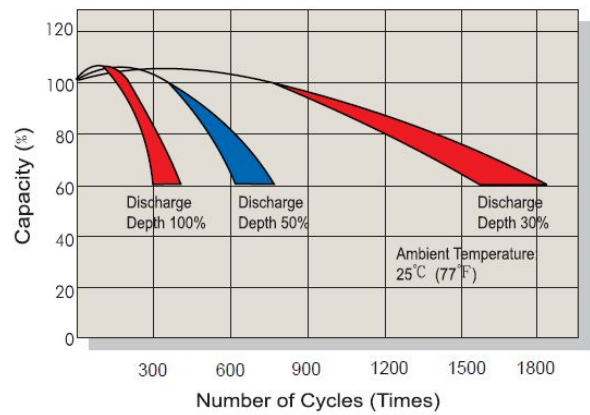
### Capacity Retention Characteristic



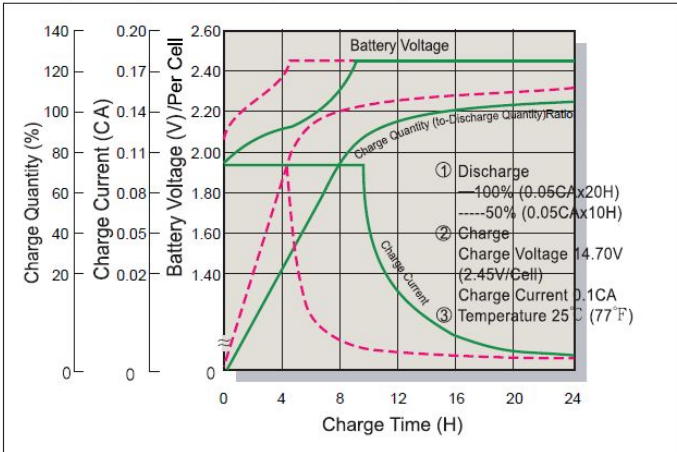
### Battery Voltage and Charge Time for Standby Use



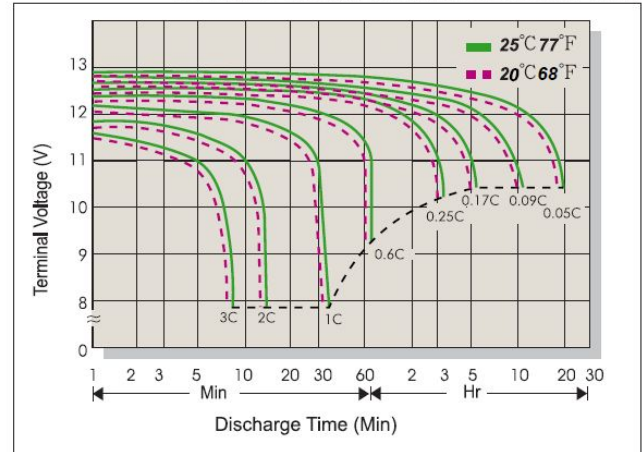
### Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



### Terminal Voltage (V) and Discharge Time



### Charging Procedures

| Application | Charge Voltage(V/cell) |           |                 | Max. Charge Current |
|-------------|------------------------|-----------|-----------------|---------------------|
|             | Temperature            | Set Point | Allowable Range |                     |
| Cycle Use   | 25°C(77°F)             | 2.45      | 2.40~2.50       | 0.25 C              |
| Standby     | 25°C(77°F)             | 2.275     | 2.25~2.30       |                     |

### Discharge Current VS. Discharge Voltage

| Final Discharge Voltage V/cell | 1.75       | 1.70       | 1.65       | 1.60       |
|--------------------------------|------------|------------|------------|------------|
| Discharge Current (A)          | 0.2C > (A) | 0.2C < (A) | 0.5C < (A) | (A) > 1.0C |

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