



## 6FM45G (12V45Ah)

**LONGWAY®** Standard battery is design for a general purpose by KaiYing Power. 6FM45G is a general purpose battery up to 5 years in star service or more than 260 cycles at 100% discharge in cycle service. As with all **LONGWAY®** batteries, all are rechargeable highly efficient, leak proof and maintenance free.



ISO 9001:2008 Standard



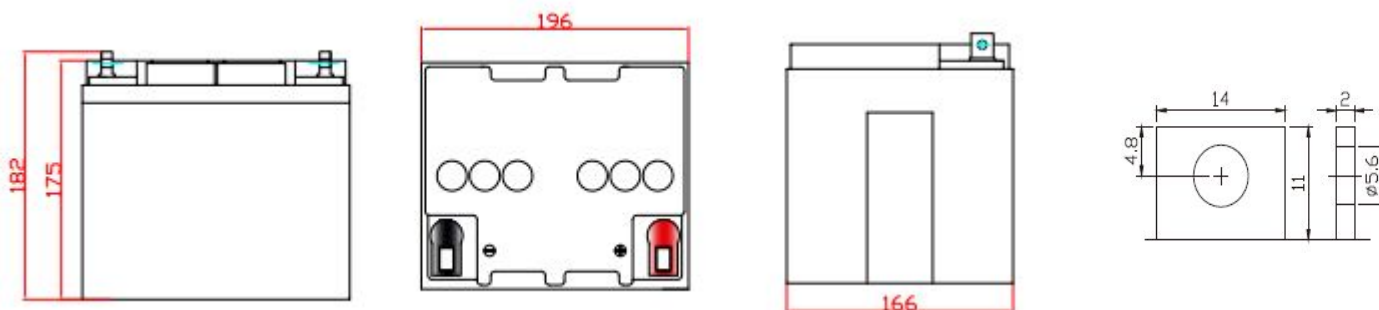
ISO 14001:2004 Standard



### Specifications:

|                                     |                                                                                                                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cells per Unit                      | 6                                                                                                                                                                                           |
| Normal Voltage                      | 12V                                                                                                                                                                                         |
| Capacity                            | 45Ah@10Hr-rate to 1.80V per cell@25°C                                                                                                                                                       |
| Weight                              | Approx.(13.7±3%) kg (30.2lbs)                                                                                                                                                               |
| Maximum Discharge Current           | 450A(5sec)                                                                                                                                                                                  |
| Internal Resistance                 | Approx. 8mΩ full charged @25°C                                                                                                                                                              |
| Operating Temperature Range         | Discharge: -20°C~60°C<br>Charge: 0°C~50°C<br>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            | 11.25A                                                                                                                                                                                      |
| 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 F21                                                                                                                                                                                |
| Container Material                  | ABS(UL94-HB)<br>*Flammability resistance of (UL94-V0) can be available upon request                                                                                                         |

### Dimensions: L196\*W166\*H176(TH182)mm



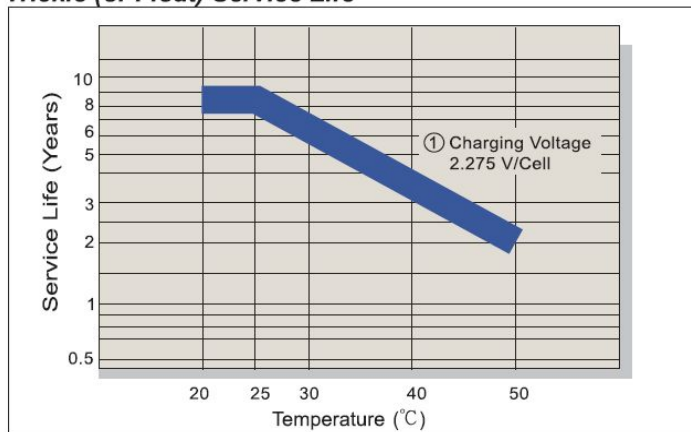
### Constant Current Discharge Characteristics (A, 25 °C)

| F.V/TIME | 5min  | 10min | 15min | 30min | 60min | 2h   | 3h   | 5h  | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|-------|-------|------|------|-----|------|------|------|
| 9.60     | 134.1 | 110.7 | 86.9  | 52.9  | 29.3  | 17.6 | 13.2 | 8.5 | 5.48 | 4.57 | 2.40 |
| 9.90     | 130.1 | 107.4 | 85.2  | 51.8  | 28.7  | 17.5 | 13.2 | 8.5 | 5.45 | 4.55 | 2.39 |
| 10.2     | 127.4 | 105.2 | 83.5  | 50.8  | 28.1  | 17.3 | 13.1 | 8.4 | 5.43 | 4.53 | 2.38 |
| 10.5     | 120.0 | 101.8 | 80.9  | 49.2  | 27.2  | 17.2 | 12.9 | 8.3 | 5.42 | 4.51 | 2.37 |
| 10.8     | 110.0 | 98.9  | 79.3  | 48.2  | 26.7  | 17.0 | 12.8 | 8.2 | 5.40 | 4.50 | 2.36 |

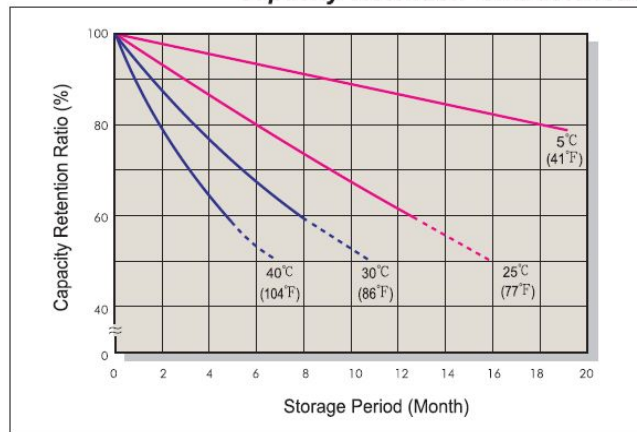
### Constant Power Discharge Characteristics (Watt, 25 °C)

| F.V/TIME | 5min | 10min | 15min | 30min | 60min | 2h  | 3h  | 5h  | 8h   | 10h  | 20h  |
|----------|------|-------|-------|-------|-------|-----|-----|-----|------|------|------|
| 9.60     | 1448 | 1209  | 965   | 593   | 333   | 204 | 156 | 100 | 65.8 | 54.5 | 28.8 |
| 9.90     | 1405 | 1173  | 936   | 581   | 327   | 203 | 155 | 100 | 65.4 | 54.3 | 28.6 |
| 10.2     | 1376 | 1148  | 916   | 570   | 320   | 201 | 153 | 99  | 65.2 | 54.1 | 28.5 |
| 10.5     | 1296 | 1112  | 888   | 552   | 310   | 199 | 152 | 98  | 65.0 | 53.9 | 28.4 |
| 10.8     | 1188 | 1079  | 871   | 541   | 304   | 197 | 150 | 97  | 64.8 | 53.7 | 28.4 |

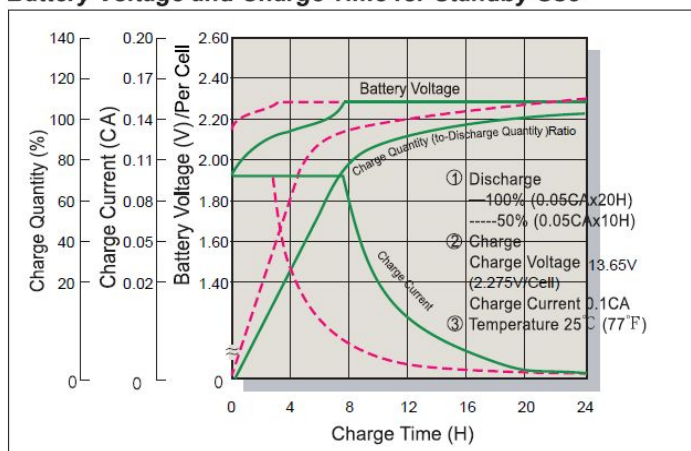
### Trickle (or Float) Service Life



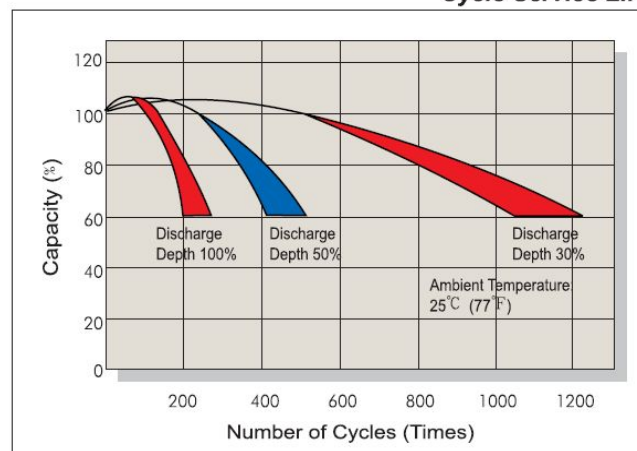
### Capacity Retention Characteristic



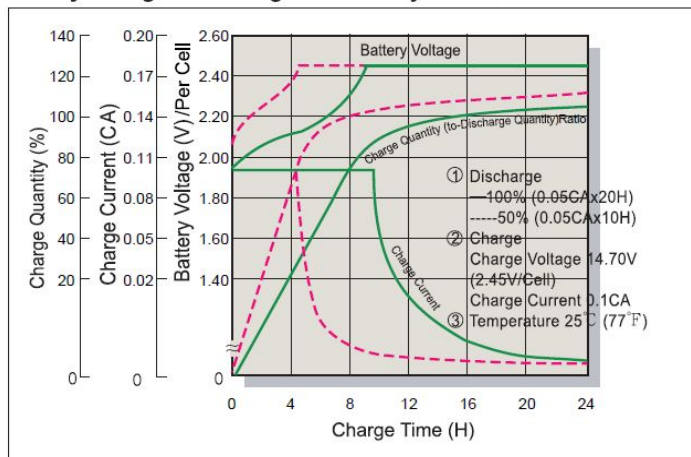
### Battery Voltage and Charge Time for Standby Use



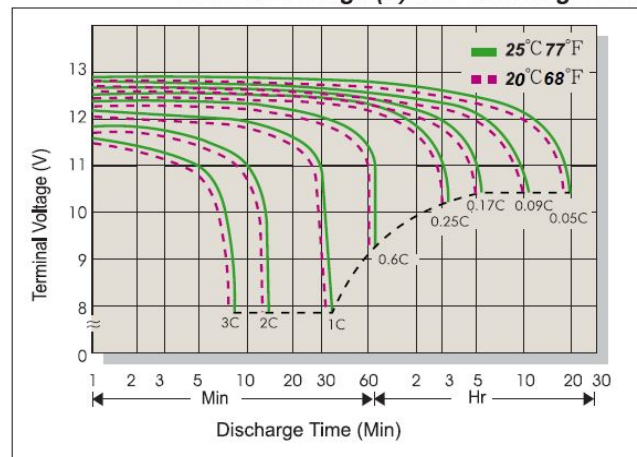
### Cycle Service Life



### 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       | 0.25C               |
| 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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