



# TPD12-40 12V40Ah

## MAINTENANCE-FREE RECHARGEABLE BATTERY FOR HIGH RATE USE

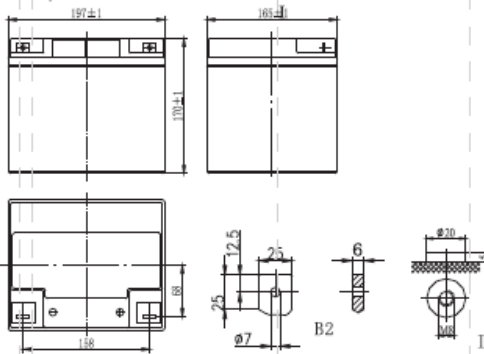


### General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

### Dimensions and Weight

|                          |                |
|--------------------------|----------------|
| Length(mm / inch)        | 197 / 7.76     |
| Width(mm / inch)         | 165 / 6.50     |
| Height(mm / inch)        | 170 / 6.69     |
| Total Height(mm / inch)  | 170 / 6.69     |
| Approx. Weight(Kg / lbs) | 13.5 / 29.8    |
| Standard Terminal        | B <sub>2</sub> |
| Optional Terminal        | I              |



### Specification

|  |            |
|--|------------|
| Nominal Voltage                                    | 12V        |
| Number of cell                                     | 6          |
| Design Life  | 10 years   |
| Nominal Capacity 77°F(25°C)                        |            |
| 20 hour rate (2A, 10.5V)                           | 40Ah       |
| 10 hour rate (3.9A, 10.5V)                         | 39Ah       |
| 5 hour rate (6.97A, 10.5V)                         | 34.85Ah    |
| 1 hour rate (25.9A, 9.6V)                          | 25.9Ah     |
| Internal Resistance                                |            |
| Fully Charged battery 77°F(25°C)                   | 9.5mOhms   |
| Self-Discharge                                     |            |
| 3% of capacity declined per month at 20°C(average) |            |
| Operating Temperature Range                        |            |
| Discharge  | -20~60°C   |
| Charge   | -10~60°C   |
| Storage  | -20~60°C   |
| Max. Discharge Current 77°F(25°C)                  | 400A(5s)   |
| Short Circuit Current                              | 900A       |
| Charge Methods: Constant Voltage Charge 77°F(25°C) |            |
| Cycle use  | 14.4-14.7V |
| Maximum charging current                           | 12A        |
| Temperature compensation                           | -30mV/°C   |
| Standby use  | 13.6-13.8V |
| Temperature compensation                           | -20mV/°C   |

### Discharge Constant Current (Amperes at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 1h   | 3h    | 5h   | 10h  | 20h  |
|----------------------|------|-------|-------|-------|------|-------|------|------|------|
| 1.60V                | 138  | 93.0  | 75.2  | 42.0  | 25.9 | 10.60 | 7.37 | 4.05 | 2.07 |
| 1.65V                | 129  | 88.4  | 71.4  | 40.7  | 25.6 | 10.40 | 7.24 | 4.00 | 2.05 |
| 1.70V                | 119  | 83.7  | 68.6  | 39.3  | 25.2 | 10.20 | 7.11 | 3.95 | 2.03 |
| 1.75V                | 110  | 79.1  | 64.9  | 38.0  | 24.9 | 9.95  | 6.97 | 3.90 | 2.00 |
| 1.80V                | 101  | 75.2  | 58.7  | 37.7  | 24.5 | 9.72  | 6.80 | 3.80 | 1.95 |

### Discharge Constant Power (Watts at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h   | 2h   | 3h   | 5h   |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V                | 250  | 170   | 132   | 85.5  | 63.0  | 52.0 | 28.5 | 21.6 | 14.3 |
| 1.65V                | 233  | 163   | 128   | 82.9  | 61.8  | 51.2 | 27.6 | 21.3 | 14.1 |
| 1.70V                | 215  | 155   | 124   | 80.3  | 60.5  | 50.3 | 26.7 | 20.9 | 13.9 |
| 1.75V                | 198  | 148   | 120   | 77.7  | 59.3  | 49.5 | 25.6 | 20.6 | 13.7 |
| 1.80V                | 186  | 140   | 116   | 75.0  | 58.0  | 48.6 | 26.7 | 20.2 | 13.6 |

