

stored energy solutions for a demanding world

**Narada**

Model: 48NPFC100 (23")

NPFC Series

Narada NPFC series is a complete range of 48V LiFePO<sub>4</sub> (Lithium Iron phosphate) battery products, for a wide variety of applications, such as telecom base station, UPS, renewable energy system, etc., with advanced life, standard size, light weight and strong environmental adaptability.

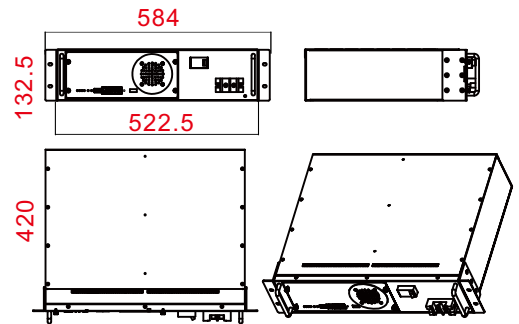


### Battery Management System(BMS)

For standard Narada lithium battery module, BMS is applied to monitor voltage, current, temperature of cells and module, take protections against over-charge, over-discharge, over-current, over-temperature, under-temperature and short circuit, etc., and provide cell balancing and current limitation during charging process to ensure a reliable safety and excellent performance.

Meantime, Narada supply customized upper computer software for BMS communication via RS232 or RS485 to set parameters or read monitoring data.

### Dimensions-mm



### Specifications

| Battery Specification      |           |                               |
|----------------------------|-----------|-------------------------------|
| Rated Voltage              |           | 48V                           |
| Rated Capacity             |           | 100Ah (0.5C to 40.5V @ 25 °C) |
| Discharge Current (Max.)   |           | 100A                          |
| Discharge End Voltage      |           | 40.5V                         |
| Charge Current (Recomm.)   |           | 20A                           |
| Charge Current (Max.)      |           | 100A                          |
| Charge Voltage             |           | 54±0.5V                       |
| Dimensions                 | Width     | 522.5 mm                      |
|                            | Depth     | 420.0 mm                      |
|                            | Height    | 132.5 mm( 3U)                 |
| Typical Weight             |           | 49.0 Kg                       |
| Layout of Front Panel      |           |                               |
| Status Indicators          |           | SOC / ALM / RUN               |
| Communication Ports        |           | RS232 / RS485*2               |
| Communication in Parallel  |           | 8 modules in maximum          |
| Reset Key                  |           | Available                     |
| Terminal Size              |           | M6 (Screw size)               |
| LCD Screen                 |           | Optional                      |
| Breaker                    |           | Available                     |
| Dry Contact                |           | NC                            |
| Operation Environments     |           |                               |
| Temperature Range          | Discharge | -20 to + 60 °C                |
|                            | Charge    | 0 to + 60 °C                  |
|                            | Storage   | 0 to + 40 °C                  |
| Temperature Recommendation | Discharge | +15 to + 35 °C                |
|                            | Charge    | +15 to + 35 °C                |
|                            | Storage   | +15 to + 30 °C                |
| Humidity                   |           | 5% to 95%                     |

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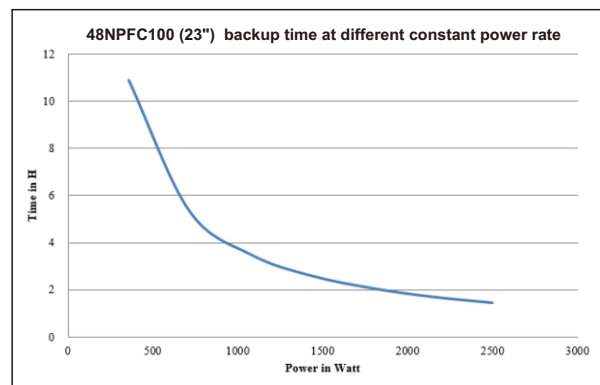
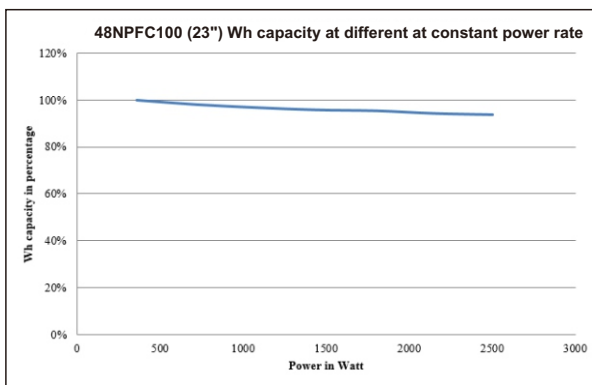
## Constant Current Discharge Characteristics (25°C,77°F)

| End voltage | Current(A)<br>Time | 0.1C  | 0.15C | 0.2C | 0.25C | 0.3C | 0.4C | 0.5C | 0.6C | 0.8C |
|-------------|--------------------|-------|-------|------|-------|------|------|------|------|------|
|             |                    | Hours |       |      |       |      |      |      |      |      |
| 46.5        |                    | 9.56  | 6.35  | 4.75 | 3.78  | 3.12 | 2.29 | 1.79 | 1.45 | 1.02 |
| 45.0        |                    | 9.76  | 6.49  | 4.85 | 3.87  | 3.21 | 2.39 | 1.89 | 1.57 | 1.15 |
| 43.5        |                    | 9.89  | 6.58  | 4.92 | 3.92  | 3.25 | 2.42 | 1.93 | 1.60 | 1.19 |
| 42.0        |                    | 9.98  | 6.64  | 4.96 | 3.96  | 3.29 | 2.45 | 1.94 | 1.61 | 1.21 |
| 40.5        |                    | 10.04 | 6.68  | 5.00 | 3.99  | 3.31 | 2.46 | 1.96 | 1.63 | 1.22 |
| 39.0        |                    | 10.08 | 6.70  | 5.02 | 4.01  | 3.33 | 2.48 | 1.97 | 1.64 | 1.22 |

## Discharge Data with Constant Power (25°C,77°F)

| End voltage | Power<br>Time | 450W  | 900W | 1350W | 1800W | 2250W | 2700W | 3150W |
|-------------|---------------|-------|------|-------|-------|-------|-------|-------|
|             |               | Hours |      |       |       |       |       |       |
| 46.5        |               | 10.35 | 5.11 | 3.36  | 2.46  | 1.92  | 1.53  | 1.27  |
| 45.0        |               | 10.55 | 5.22 | 3.45  | 2.55  | 2.02  | 1.66  | 1.40  |
| 43.5        |               | 10.66 | 5.28 | 3.49  | 2.58  | 2.06  | 1.69  | 1.43  |
| 42.0        |               | 10.75 | 5.32 | 3.52  | 2.61  | 2.07  | 1.70  | 1.45  |
| 40.5        |               | 10.79 | 5.35 | 3.54  | 2.62  | 2.09  | 1.72  | 1.46  |
| 39.0        |               | 10.82 | 5.37 | 3.55  | 2.63  | 2.09  | 1.73  | 1.47  |

## Performance Curves



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