

stored energy solutions for a demanding world

**Narada**

## Model: 48NPFC160

## 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)

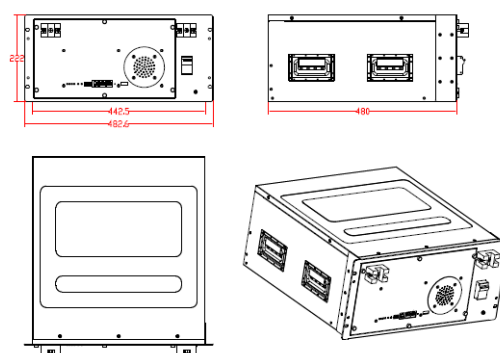
For standard Narada lithium battery module, BMS is applied to monitor voltage, current, temperature of cells and module, take protections against over-charge, over-discharge, over-current, over-temperature, under-temperature and short circuit, etc., and provide cell balancing and current limitation during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

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

### Specifications



### Dimensions-mm



Battery Specification		15S
Rated Voltage		48V
Rated Capacity		160Ah (0.2C to 40.5V @ 25 C)
Discharge Current (Max.)		100A
Discharge End Voltage		40.5V
Charge Current (Recomm.)		30A
Charge Current (Max.)		100A
Charge Voltage		54.0±0.5V
Dimensions	Width	442.5 mm
	Depth	480 mm
	Height	222 mm
Typical Weight		70.0Kg
Layout of Front Pannel		
Status Indicators		SOC / ALM / RUN
Communication Ports		RS232 / RS485*2
Communication in Parallel		8 modules in parallel maximum
Reset Key		Available
Terminal Size		M8 (Screw size)
LCD Screen		Optional
Breaker		Available
Dry contact		Available
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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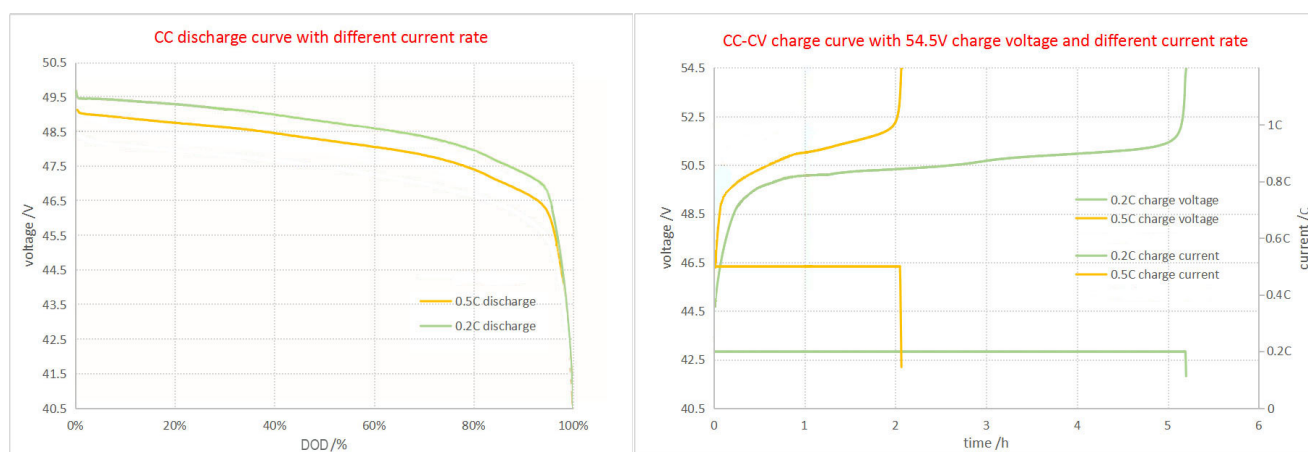
### Constant Current Discharge Characteristics /for one module (25°C,77°F)

End voltage	Current(A)	0.1C	0.2C	0.33C	0.5C	0.62C /100A
	Time					
		Hours				
46.5V		9.73	4.85	2.93	1.88	1.49
45.0V		9.92	4.96	3.00	1.96	1.55
43.5V		10.05	5.03	3.05	2.00	1.58
42.0V		10.13	5.07	3.08	2.01	1.59
40.5V		10.18	5.10	3.09	2.03	1.60

### Discharge Data with Constant Power /for one module (25°C,77°F)

End voltage	Power	480W	960W	1580W	2300W	3800W	4400W
	Time						
	Hours						
46.5V	15.14	7.51	4.48	2.96	1.60	1.31	
45.0V	15.42	7.66	4.62	3.12	1.80	1.51	
43.5V	15.59	7.75	4.68	3.16	1.84	1.55	
42.0V	15.70	7.82	4.72	3.20	1.86	1.56	
40.5V	15.76	7.85	4.75	3.21	1.87	1.58	

### Performance Curves



#### Disclaimers of warranties:

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All the data in datasheet is valid for single module operation. For parallel operation please ask Narada technical for guidelines.

Any datasheet issued previously is invalid when new version releases.