

Narada HELiON™ NPFC series 48V LiFePO₄ battery modules are ideally suited for telecom base station, OSP, and renewable energy applications.

NPFC series offer long cycle life, small size, reduced weight, and simplified installation as 19"/23" rack mountable modules.

NPFC chemistry makes it one of the safest technologies, suitable for high and low temperature operation and capable of 1C and higher discharge rates.

HELiON
LI-ION ENERGY



Technical Features:

- Simple installation and load/charge system integration (Pos/Neg termination)
- Advanced intelligent lithium battery management technology
- Energy transfer patented technology provides high cell utilization efficiency for prolong system operational life.
- Configuration flexibility, support parallel connection expansion up to 16 modules

BMS - Alarming

- System monitoring of voltage, current, temperature of cells and module. Built in protection against; over-current on discharge and recharge, over-temperature, low temperature, low and high voltage, and short circuit.
- BMS maintenance and service communication via RS232 or RS485
- 2 levels of remote alarming through dry contacts

Compliance

UL1642, Standard for Lithium Batteries

UL2054, Standard for Household and Commercial Batteries

EN 61000-6-1:2007, Electromagnetic compatibility (EMC)

EN 61000-6-3:2007+A1:2011, Electromagnetic compatibility (EMC)

IEC 62133:2012, Battery Safety Testing

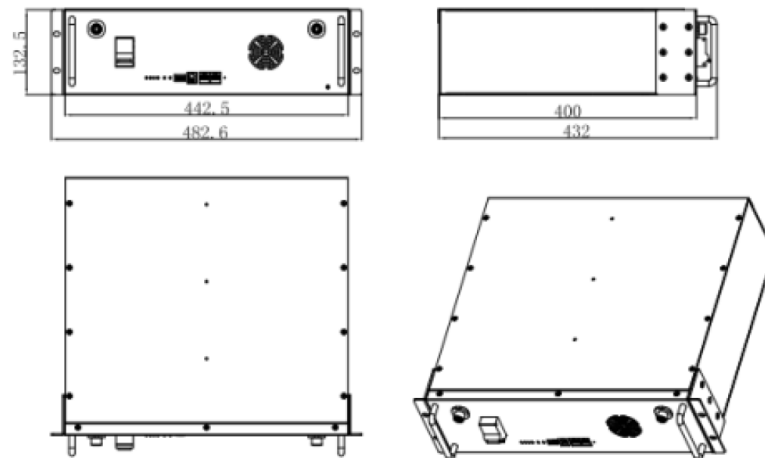
UL1973

UN3800

Specifications

Battery Specification		15S
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±0.5V
Dimensions	Width	443 mm
	Depth	400 mm
	Height	133 mm
Typical Weight		42 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		M8 (Screw size)
LCD Screen		Optional
Breaker		Optional
Dry Contact		Optional
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%

Dimensions—mm



Constant Current Discharge Rates @25C in Hours (Amps)

48NPFC100

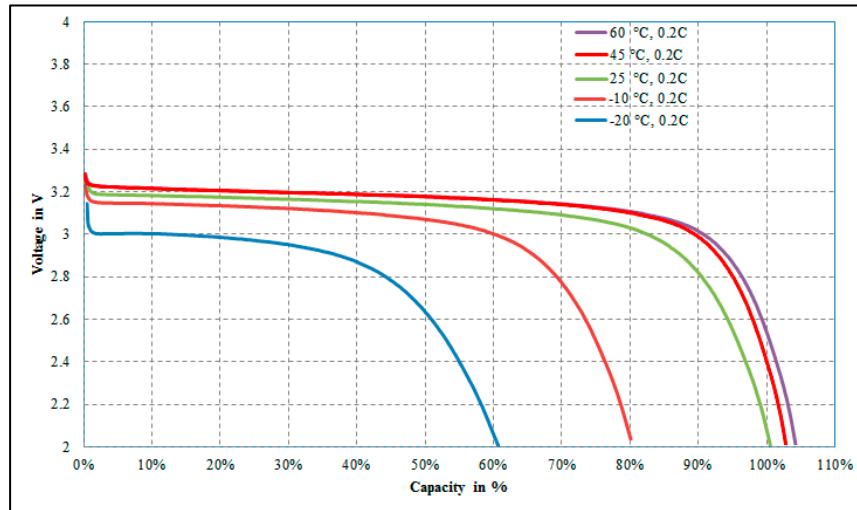
End	10	8	5	4	3.5	2.5	2	1.5	1
46.5V	9.6	12.0	19.0	22.2	23.8	35.6	42.0	55.4	68.8
45.0V	9.8	12.2	19.4	22.6	24.2	38.2	47.0	67.4	87.8
44.1V	9.8	12.2	19.6	23.0	24.6	38.8	47.8	69.2	90.4
43.5V	10.0	12.4	19.8	23.2	24.8	39.2	48.6	70.8	92.8
42.0V	10.0	12.4	19.8	23.2	24.8	39.6	49.2	72.2	95.0
40.5V	10.0	12.6	20.0	23.4	25.0	40.0	49.8	73.2	96.4

Constant Power Discharge Rates @25C in Hours (Watts)

48NPFC100

End	10	8	5	4	3.5	2.5	2	1.5	1
46.5V	490	600	960	1220	1350	1310	2200	2828	3868
45.0V	500	614	982	1250	1384	1364	2334	3068	4454
44.1V	502	618	988	1258	1392	1372	2362	3098	4528
43.5V	504	622	994	1266	1400	1380	2384	3122	4588
42.0V	508	626	1000	1274	1412	1394	2400	3174	4668
40.5V	510	628	1006	1280	1418	1402	2418	3202	4696

Discharge - Temperature vs. Percent Capacity %



Cycles - Temperature vs. Depth of Discharge

Temp (°C)	Depth of Discharge (DoD)				
	100%	80%	60%	40%	20%
25	2000	3500	6000	12000	24000
35	1600	2800	4800	9600	19200
45	1200	2100	3600	7200	14400

China: **Narada**
 NARADA POWER SOURCE CO.,LTD.
 No.459 Wensan Road, Hangzhou, Zhejiang, P.R.China

MPI-Narada MPI-Narada
 44 Oak St
 Newton, MA 02464
 Tel: 800-982-4339

info@mpinarada.com www.mpinarada.com

