

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.



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, Standard for -cells

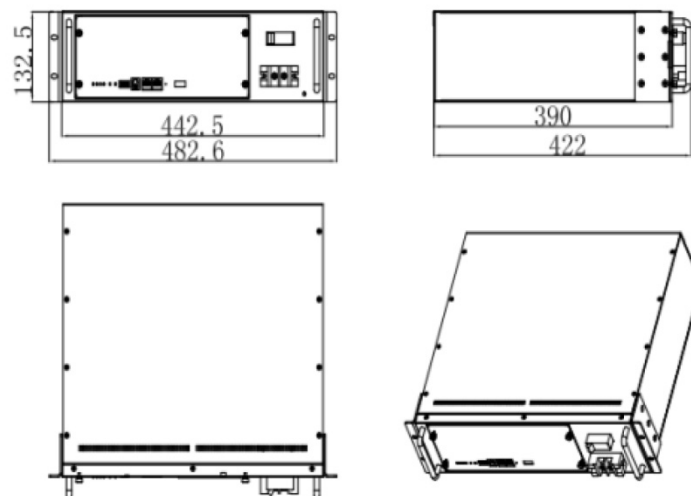
NEBS Level 1 Certified GR-1089 / GR-63

UN3800

Specifications

Battery Specification		
Rated Voltage		48V
Rated Capacity		50Ah (C ₁₀ 0.2C to 40.5V @ 25°C)
Discharge Current (Max.)		50A
Discharge End Voltage		40.5V
Charge Current (Recomm.)		10A
Charge Current (Max.)		50A
Charge Voltage		54±0.5V
Dimensions	Width	442.5 mm
	Depth	390.0 mm
	Height	132.5 mm (3U)
Typical Weight		28.5 Kg
Layout of Front Pannel		
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) (M8 optional)
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%

Dimensions—mm



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

48NFC50

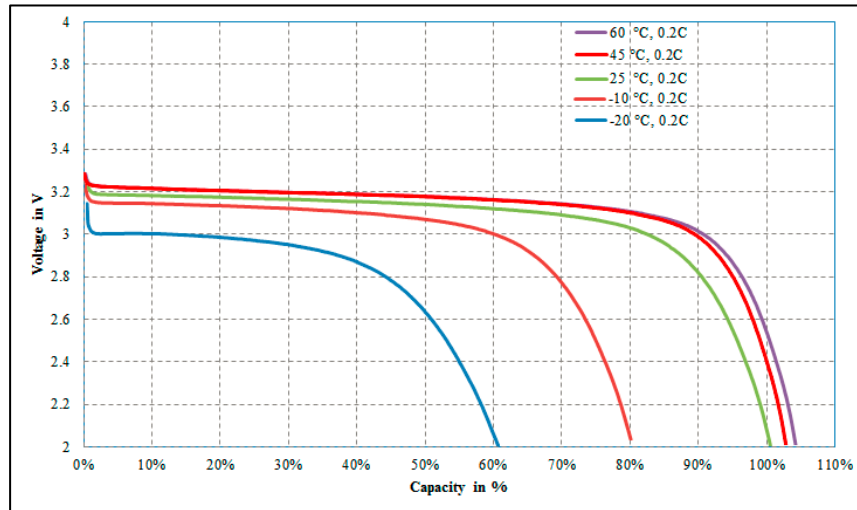
End	10	8	5	4	3.5	2.5	2	1.5	1
46.5V	4.8	6.0	9.5	11.1	11.9	17.8	21.0	27.7	34.4
45.0V	4.9	6.1	9.7	11.3	12.1	19.1	23.5	33.7	43.9
44.1V	4.9	6.1	9.8	11.5	12.3	19.4	23.9	34.6	45.2
43.5V	5.0	6.2	9.9	11.6	12.4	19.6	24.3	35.4	46.4
42.0V	5.0	6.2	9.9	11.6	12.4	19.8	24.6	36.1	47.5
40.5V	5.0	6.3	10.0	11.7	12.5	20.0	24.9	36.6	48.2

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

48NFC50

End	10	8	5	4	3.5	2.5	2	1.5	1
46.5V	245	300	480	610	675	655	1100	1414	1934
45.0V	250	307	491	625	692	682	1167	1534	2227
44.1V	251	309	494	629	696	686	1181	1549	2264
43.5V	252	311	497	633	700	690	1192	1561	2294
42.0V	254	313	500	637	706	697	1200	1587	2334
40.5V	255	314	503	640	709	701	1209	1601	2348

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

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

info@mpinarada.com www.mpinarada.com

