

## 12HRL36



The Narada High Rate range of VRLA batteries and provide reliable battery backup to any High Rate UPS application.

All Narada High Rate series batteries use optimized plate technology and a patented post design offering exceptional service life.



### Technical Features:

- ◆ Flame Retardant ABS Cover and Container, UL94 V-0, LOI>28%
- ◆ Epoxy TPS design for high reliability post seal
- ◆ 6 months of storage at 77°F (25°C) with a capacity > 80%
- ◆ Initial capacity at 100%
- ◆ Low pressure one-way flame arresting valve(s) UL1989
- ◆ Absorbent Glass Mat (AGM) Sealed Technology, Recombination efficiency of 99.9%

### Compliance and Safety:

- ◆ **ISO 9001:2000 and ISO 14001:2004 certified production facilities**
- ◆ UL Recognized Component 924, for use in or with listed UL1778, UL1989 and UL924 systems
- ◆ IEC60896-21/22
- ◆ BS6290 part 4 / Eurobatt guide
- ◆ **TL9001 / ISO9001(TUV) Quality System**
- ◆ Battery installation compliant with: EN 50272-2
- ◆ All batteries meet or exceed IEEE Recommended practices

### Transportation:

- ◆ Classified as Nonspillable UN 2800 and meet the Nonspillable criteria listed in DOT-CFR Title 49, 171-189 (d) (3) (i) and (ii) and exempt from CFR 49, Subchapter C requirements
- ◆ Meets transportation conditions of IMDG exemption 238, IATA/ICAO Special Provision A67 (Not Restricted)

wpc @ 15 min 1.67 vpc / 77°F (25°C)	36 watts
wpc @ 5 min 1.60 vpc / 77°F (25°C)	65 watts
Ah @ 20hr 1.75 vpc / 77°F (25°C)	8.4 Ah

Nominal Voltage	12V
Float Charge Voltage @25°C (2.23 – 2.27vpc)	13.4 – 13.6
Max. Charge Current (A) (5 hour rate @ 1.75vpc)	2.5 Amps

Electrolyte Absorbed H <sub>2</sub> SO <sub>4</sub>	1.300
--	-------

Short Circuit Current (A)	160 Amps
Internal Resistance (mΩ)	18.0 mΩ

Terminal Type	Torque
F2	N/A

Dimension	in	mm
Length	5.94	151
Length Base	5.91	150
Width	2.55	65
Overall Height	3.94	100

	Lbs.	Kg
Weight	5.4	2.45

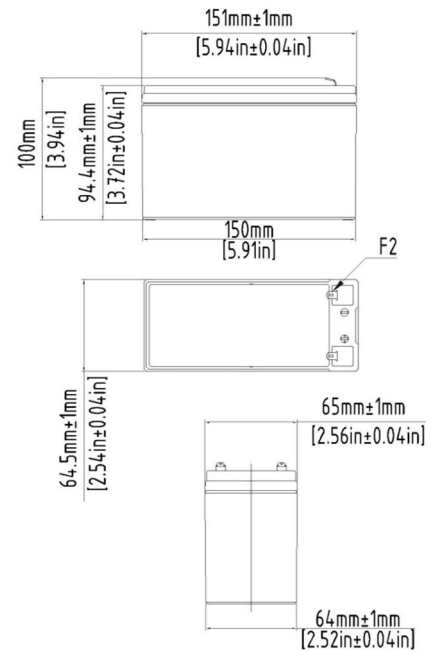
## Operating Parameters

Float Charging Voltage	13.5V / 2.25vpc @ 77°F (25°C)
Equalize /Cycle	14.0V – 14.3V 2.33Vpc to 2.38Vpc @ 77°F (25°C)
See Operations and Maintenance Manual for specific guidelines and recharge times	

Charging Temperature Compensation	-2 mV/cell/°F > 77°F (-3.6 mV/cell /°C > 25°C)
	+2 mV/cell/°F < 77°F (+3.6 mV/cell/°C < 25°C)

Maximum AC Ripple (Charger)	0.5% RMS, 1.5% peak-to-peak for float charge voltage for best results
-----------------------------	---

Operating Temperature Range	
Nominal	+74°F (24°C) to 80°F (27°C)
Charge	-20°F (-28°C) to +122°F (50°C)
Discharge	-40°F (-40°C) to +140°F (60°C)
Storage Temperature Range	-4°F (-20°C) to +104°F (40°C)



## Constant Power Discharge Watts per cell (25°C, 77°F)

End Cell Voltage	5min	10min	15min	20min	30min	40min	50min	1h	2h
1.60V	65.0	44.8	37.1	28.3	20.5	17.0	14.1	11.5	6.7
1.67V	60.2	42.9	36.0	26.9	19.9	16.8	14.0	11.3	6.7
1.70V	57.0	41.8	35.3	26.4	19.6	16.6	13.8	11.2	6.6
1.75V	55.7	40.3	34.3	25.4	19.2	16.2	13.5	11.1	6.5
1.80V	53.8	38.4	33.3	24.6	18.5	15.6	13.1	10.9	6.4
1.83V	51.8	36.6	32.1	24.1	18.0	15.2	12.8	10.7	6.3
1.85V	49.20	35.8	31.1	23.5	17.5	15.0	12.6	10.5	6.2

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

End Cell Voltage	5min	15min	30min	1h	2h	4h	8h	10h	20h
1.60V	38	21.8	11.0	6.2	3.36	1.80	0.95	0.77	0.41
1.67V	36	21.0	10.6	6.1	3.33	1.78	0.95	0.77	0.41
1.70V	34	20.4	10.4	6.0	3.31	1.77	0.94	0.76	0.41
1.75V	33	19.7	10.1	5.8	3.25	1.75	0.93	0.75	0.40
1.80V	32	19.1	9.6	5.7	3.19	1.72	0.91	0.74	0.40
1.83V	30	18.0	9.3	5.5	3.14	1.70	0.90	0.73	0.39
1.85V	38	21.8	11.0	6.2	3.12	1.69	0.89	0.72	0.38

China: **Narada**  
 NARADA POWER SOURCE CO.,LTD.  
 No.459 Wensan Road, Hangzhou, Zhejiang, P.R.China  
 Tel:+86-571-28827013 Fax:+86-571-85126942  
 Website:www.en.naradabattery.com E-mail: intl@narada.biz

**MP Narada** MPI-Narada  
 44 Oak St  
 Newton, MA 02464  
 Tel: 800-982-4339  
 sales@mpinarada.com www.mpinarada.com

