

stored energy solutions for a demanding world



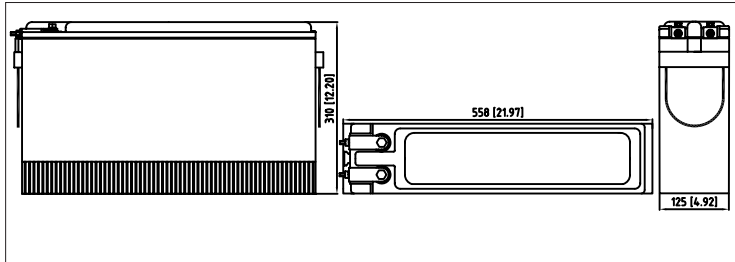
Model: **MPG12V150F**

MPG series

The MPG range VRLA batteries adopt flat plates with gel electrolyte and are designed with front terminal structure. The perfect design ensures MPG series battery the high reliability and makes the installation quite simple and safe when placed on a standard relay rack tray or in a closed cabinet. MPG range VRLA battery is designed with high energy density and suitable for 19", 23" rack or cabinet, and also offers options of top connection and side of monoblocs connection. MPG range battery can be equipped with central gas collection system according to the requirement of customer. The design float life is 12 years at 25°C(77°F).



Dimensions-mm[inch]



Specifications

Battery Model	MPG12V150F
Nominal Voltage	12V
Rated Capacity	150Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	52.0kg
Internal Resistance	Approx 4.55mΩ
Operating Temperature Range	Operation (maximum): -40°C to 50°C(-40°F to 122°F)
	Operation (recommended): 15°C to 25°C(59°F to 77°F)
	Storage: -20°C to 40°C(-4°F to 104°F)
Float Voltage	2.25V/cell@25°C(77°F)
Recommended Maximum Charging Current Limit	37.5A
Equalize and Cycle Service	2.35V~2.40V/cell@25°C(77°F)
Self Discharge	The residual capacity is above 90% after 90 days storage(25°C/77°F)
Terminal	M6 Female
Terminal Hardware Torque	8 ± 1.0Nm
Container Material	ABS (V0 optional)

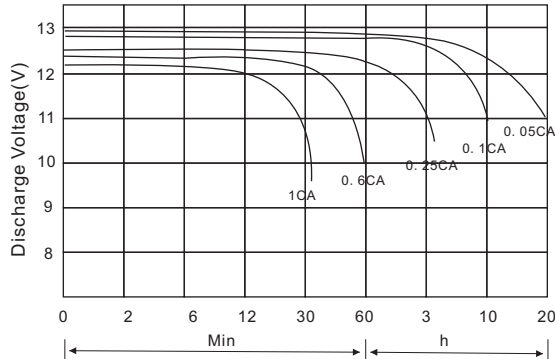
Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	586.8	314.2	190.6	138	111.2	63.7	45.9	36	30.2	26	19.9	16.28	13.67	8.59	7.17
1.67V	551.7	302.8	187.5	137	111.2	63.2	45.1	35.8	30.1	25.8	19.7	15.98	13.67	8.52	7.11
1.70V	546.5	297.7	184.4	136	110.2	62.7	44.9	35.6	29.6	25.6	19.6	15.98	13.57	8.5	7.11
1.75V	502	288.4	182.3	134.9	108.2	61.2	44.3	35.2	29.4	25.4	19.4	15.98	13.57	8.47	7.1
1.80V	450.2	268.8	175.1	129.8	105.1	60.7	44.1	35.1	28.8	24.9	19.3	15.78	13.47	8.39	7.09
1.83V	428.5	246.2	172	124.6	100.9	59.9	42.5	33.6	27.9	24.1	18.8	15.18	12.76	8.37	6.97
1.85V	401.6	239	159.7	120.5	97.9	57.7	41.4	33	27.2	23.4	18.3	15.08	12.66	8.21	6.92

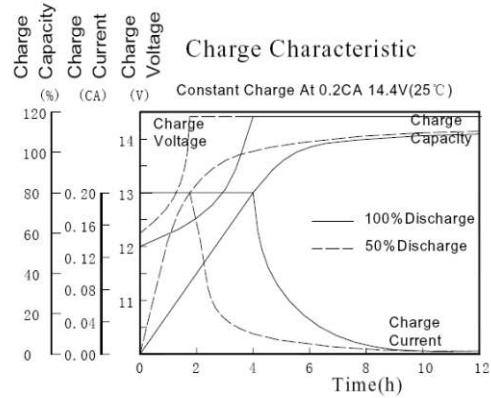
Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	976.4	551	342.4	256	207.1	119.3	87.1	68.8	58.1	50	38.7	31.61	26.66	17.07	14.31
1.67V	940.4	540.7	339.3	255	206	119.3	85.9	68.7	58.1	49.7	38.4	31.41	26.66	16.97	14.31
1.70V	934.2	534.6	339.3	254	206	118.3	85.9	68.4	57.2	49.3	38.2	31.21	26.36	16.97	14.21
1.75V	883.7	530.4	338.3	254	203	118.3	85.1	68.4	57.1	49.2	37.7	31.11	26.36	16.97	14.21
1.80V	810.6	501.7	330.1	247.9	202	117.3	84.8	68.2	56.2	48.7	37.7	31.01	26.36	16.97	14.21
1.83V	785.9	459.5	326	240.7	193.8	116.3	82.9	65.7	55	47.3	37.3	30.2	25.55	16.87	14.11
1.85V	744.7	448.2	303.4	230.5	187.7	112.2	80.6	64.9	53.6	46.4	36.2	30	25.25	16.56	14.01

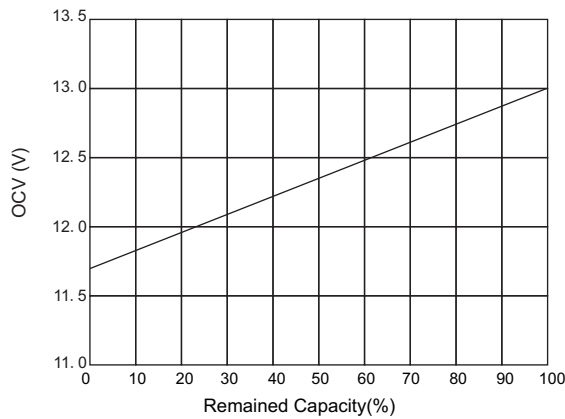
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



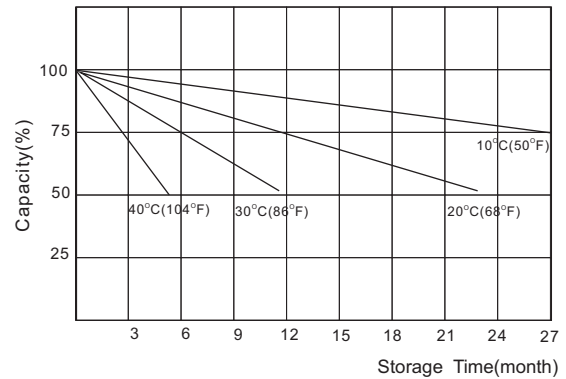
Battery Voltage Vs. Charge Time



Relationship of OCV Vs. State of Charge



Capacity Retention Characteristic



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle	25°C	2.40	2.35~2.45	0.25C
Standby	25°C	2.25	2.23~2.27	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.80	1.70	1.55	1.30
Discharge Current (A)	0.2C ≥ (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

NARADA POWER SOURCE CO.,LTD.

9F, Building A, No. 50 Zijinghua Road, Hangzhou, China
 Tel:+86-571-28827013 Fax:+86-571-28828290
 Website:www.naradabattery.com E-mail: intl@narada.biz

NARADA ASIA PACIFIC PTE.LTD.

65 Ubi Crescent #07-05 HOLA centre, Singapore
 Tel: +65-6848 1191 Fax: +65-6749 3498
 E-mail: sales@narada.com.sg

NARADA EUROPE (UK) LIMITED

Spectrum House, Dunstable Road, Redbourn,
 St. Albans, Herts AL3 7PR
 Tel: +44 (0)845 371 7095 Fax:+44 (0)845 612 2031
 E-mail: sales@naradaeurope.com

