

stored energy solutions for a demanding world



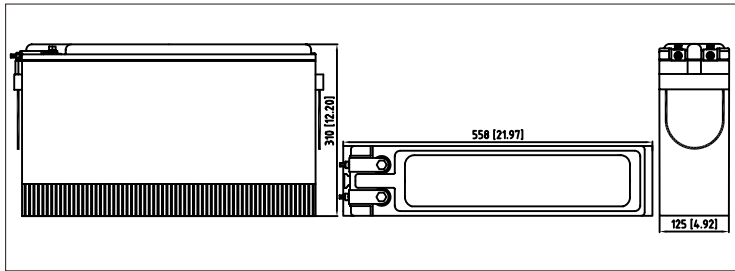
Model: **MPG12V150FA**

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.



**Dimensions--mm [inch]**



**Specifications**

Battery Model	MPG12V150FA
Nominal Voltage	12V
Rated Capacity	150Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	57.5kg
Internal Resistance	Approx 3.91mΩ
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)

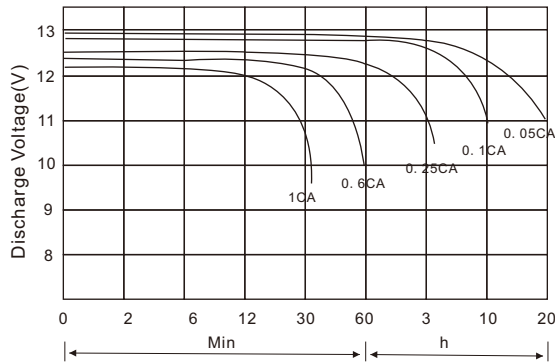
**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	1min	5min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	580	503	258	155	92.0	60.0	42.0	35.7	27.6	24.0	18.5	15.5	13.1	8.50	7.15
1.67V	538	458	243	152	89.0	59.3	41.3	35.1	27.2	23.7	18.1	15.3	13.0	8.35	7.05
1.70V	519	443	237	150	88.0	59.0	41.0	34.9	27.0	23.6	18.0	15.2	12.9	8.30	7.00
1.75V	468	399	225	147	85.0	58.0	40.2	34.2	26.5	23.3	17.9	15.1	12.7	8.20	6.90
1.80V	417	360	213	143	82.0	56.0	39.0	33.2	25.8	22.8	17.8	15.0	12.6	8.10	6.80
1.83V	385	339	206	139	78.0	55.0	38.4	32.6	25.4	22.4	17.8	14.9	12.5	8.00	6.70
1.85V	360	318	198	135	75.0	54.0	37.8	32.1	25.0	22.0	17.3	14.7	12.4	8.00	6.70

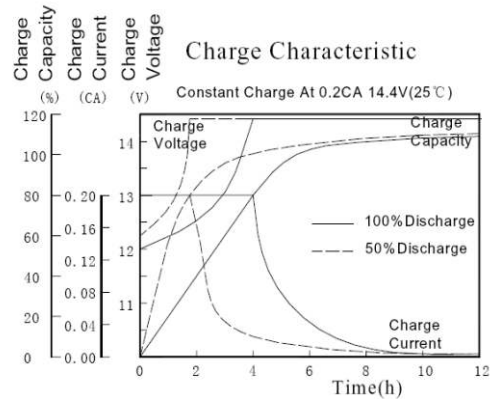
**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	1min	5min	15min	30min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	835	679	397	262	153	103	75.3	64.8	51.2	42.7	35.0	27.8	24.0	14.8	13.7
1.67V	820	673	394	260	151	103	74.6	64.1	50.5	42.2	34.7	27.5	23.6	14.6	13.4
1.70V	814	671	393	259	150	102	74.3	63.9	50.3	42.0	34.5	27.3	23.3	14.5	13.3
1.75V	793	663	390	257	148	101	73.7	63.4	50.0	41.7	34.0	27.2	23.0	14.3	13.0
1.80V	751	648	383	255	146	99.0	72.8	62.6	49.5	41.3	33.7	27.0	22.8	14.2	12.7
1.83V	708	617	376	251	143	97.0	71.0	61.1	49.0	41.0	33.3	26.8	22.7	14.0	12.3
1.85V	666	588	369	246	139	94.0	69.8	60.0	48.3	40.7	33.0	26.3	22.5	13.8	12.0

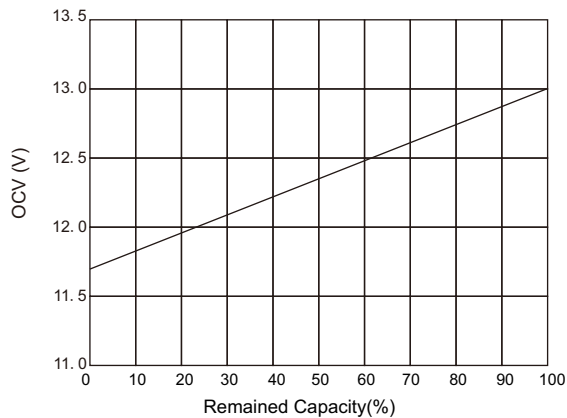
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



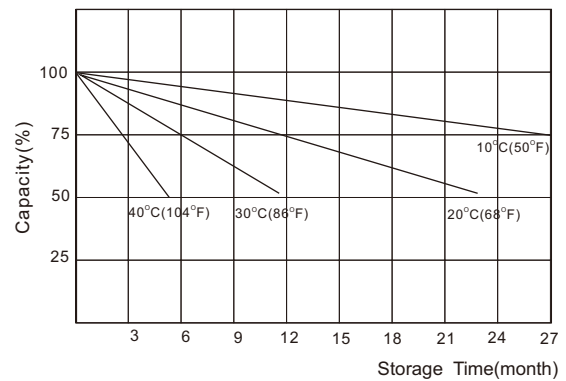
Battery Voltage Vs. Charge Time



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	2.35~2.40	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

