

stored energy solutions for a demanding world

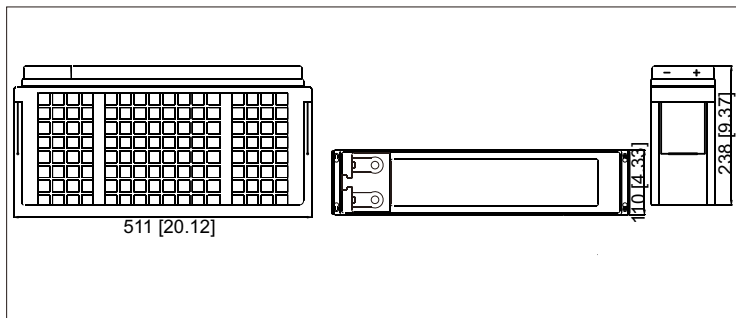


Model: **MPG12V105F**

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	MPG12V105F
Nominal Voltage	12V
Rated Capacity	100Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	34.0kg
Internal Resistance	Approx 5.45mΩ
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	27.5A
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	375	202	122	89	71.3	40.9	29.6	23.3	19.7	16.9	12.9	10.6	8.97	5.62	4.69
1.67V	353	195	120	88	70.9	40.7	29.1	23.1	19.6	16.8	12.8	10.5	8.96	5.57	4.65
1.70V	349	192	118	87	70.3	40.4	28.9	23.0	19.3	16.5	12.7	10.5	8.87	5.56	4.65
1.75V	321	186	117	87	69.3	39.3	28.6	22.8	19.2	16.4	12.6	10.4	8.87	5.55	4.64
1.80V	288	173	112	83	67.5	39.0	28.4	22.7	18.8	16.1	12.5	10.3	8.80	5.49	4.63
1.83V	274	158	110	80	64.6	38.5	27.5	21.7	18.1	15.5	12.2	9.9	8.37	5.48	4.56
1.85V	257	153	103	77	62.5	37.0	26.7	21.4	17.7	15.2	11.8	9.9	8.26	5.38	4.52

**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	628	354	221	166	133.5	77.1	56.3	44.6	37.6	32.4	25.1	20.7	17.35	11.13	9.32
1.67V	604	348	219	165	133.5	76.9	55.6	44.5	37.6	32.2	25.0	20.5	17.35	11.13	9.32
1.70V	600	344	219	165	132.5	76.6	55.6	44.3	37.1	32.0	24.8	20.3	17.25	11.03	9.30
1.75V	568	342	218	164	130.5	76.2	55.0	44.3	37.1	31.9	24.6	20.3	17.15	11.03	9.30
1.80V	521	323	213	160	130.5	76.0	54.8	44.2	36.4	31.6	24.5	20.2	17.15	11.03	9.28
1.83V	505	296	211	156	125.5	75.0	53.6	42.6	35.6	30.7	24.3	19.7	16.65	11.03	9.22
1.85V	478	289	196	149	121.5	72.6	52.1	42.0	34.8	30.1	23.6	19.6	16.45	10.83	9.14

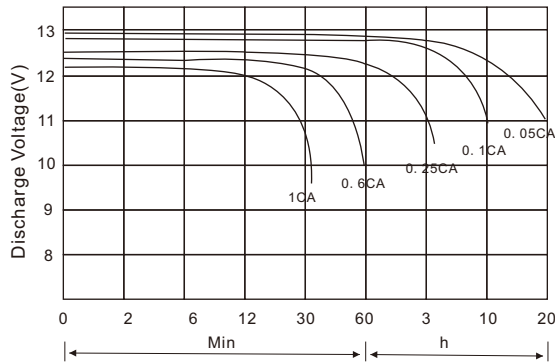
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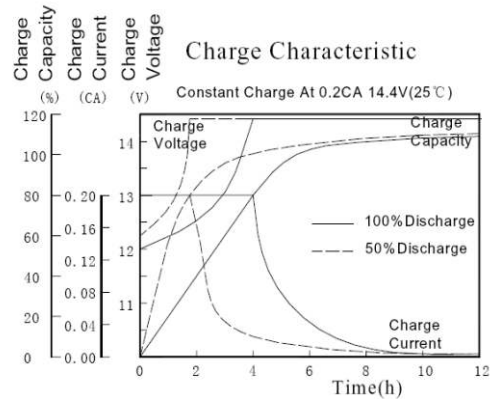
Model: **MPG12V105F**

MPG series

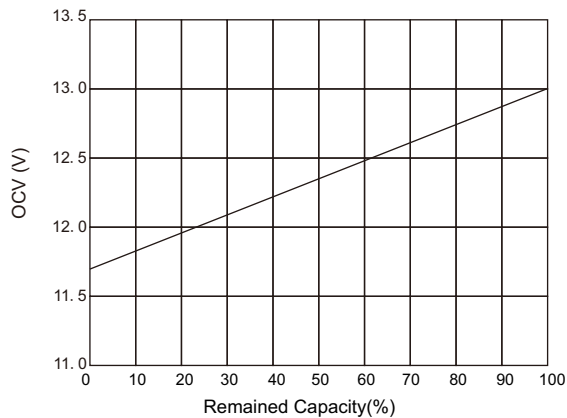
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



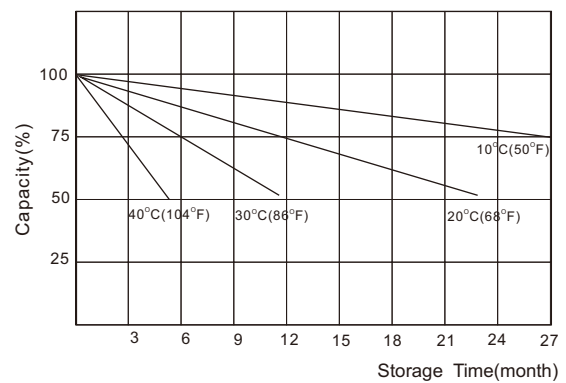
Battery Voltage Vs. Charge Time



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

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