

stored energy solutions for a demanding world



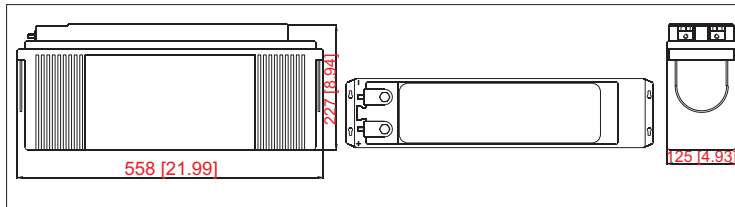
Model: **MPG12V100F**

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	MPG12V100F
Nominal Voltage	12V
Rated Capacity	100Ah (10 hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	38kg
Internal Resistance	Approx 5.77mΩ
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	25A
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)

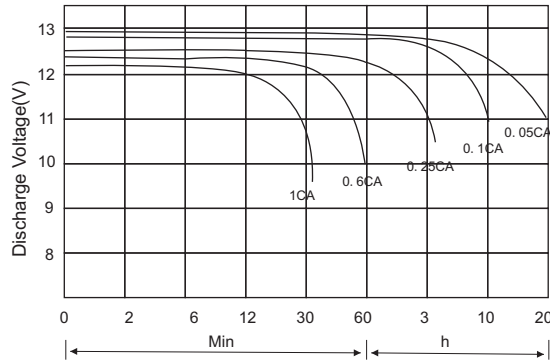
**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	365	196	118	86.1	69.5	39.8	28.8	22.7	19.1	16.4	12.6	10.4	8.73	5.47	4.57
1.67V	342	189	117	85.5	69	39.6	28.4	22.6	19	16.3	12.5	10.3	8.72	5.42	4.53
1.70V	339	186	115	84.9	68.5	39.2	28.2	22.5	18.8	16.2	12.5	10.2	8.64	5.41	4.53
1.75V	312	180	114	84.3	67.5	38.3	27.9	22.1	18.6	16	12.4	10.1	8.64	5.4	4.52
1.80V	280	168	109	80.8	65.7	38	27.7	22.1	18.3	15.7	12.3	10	8.56	5.34	4.52
1.83V	267	153	107	78.1	62.9	37.5	26.7	21.1	17.6	15.2	11.9	9.7	8.14	5.33	4.44
1.85V	250	149	100	75	60.9	36.1	26	20.8	17.2	14.8	11.6	9.6	8.05	5.23	4.41

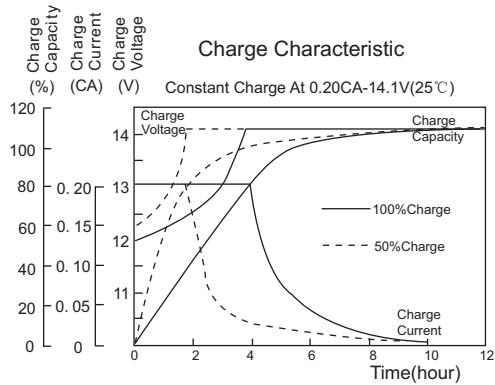
**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	616	348	217	163	132	75.9	55.4	44	37.1	31.9	24.6	20.3	17.1	10.9	9.17
1.67V	593	341	216	162	131	75.7	54.7	43.9	37.1	31.7	24.5	20.2	17.1	10.9	9.16
1.70V	590	338	215	162	131	75.4	54.7	43.7	36.5	31.5	24.4	20	16.9	10.9	9.15
1.75V	557	335	215	162	129	75	54.1	43.6	36.5	31.5	24.2	20	16.9	10.9	9.15
1.80V	511	317	209	158	129	74.7	54	43.5	35.9	31.1	24.1	19.9	16.8	10.9	9.14
1.83V	496	291	206	154	123	73.8	52.7	42	35.1	30.2	23.9	19.4	16.4	10.8	9.07
1.85V	469	284	192	147	119	71.4	51.3	41.4	34.3	29.6	23.1	19.3	16.2	10.6	9.00

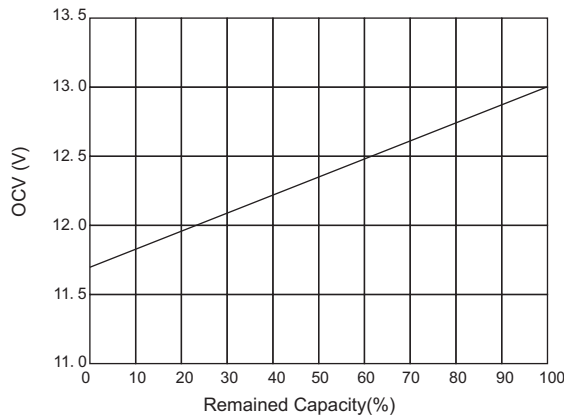
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



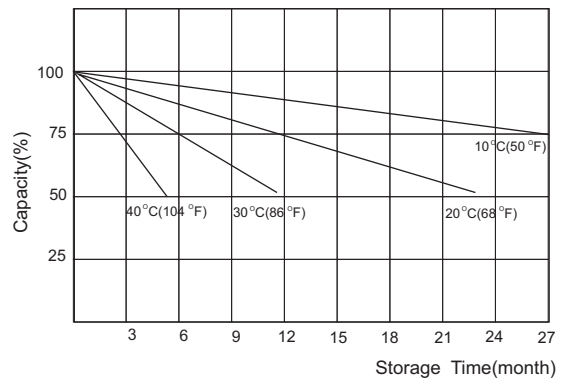
Battery Voltage Vs. Charge Time



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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