

stored energy solutions for a demanding world

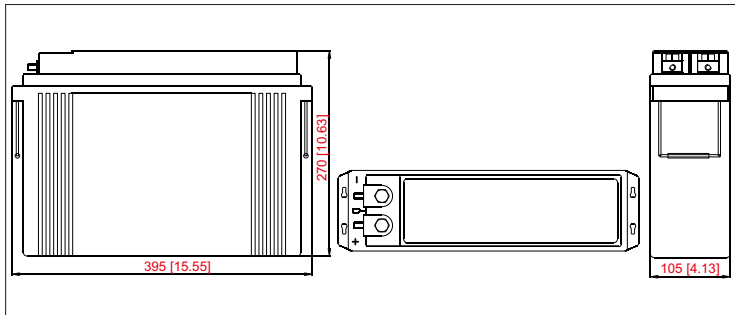


Model: **MPG12V85F**

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	MPG12V85F
Nominal Voltage	12V
Rated Capacity	85Ah (10hour rate) to 1.80V/cell @25°C(77°F)
Typical Weight	28kg
Internal Resistance	Approx 6.79mΩ
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	21.25A
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)

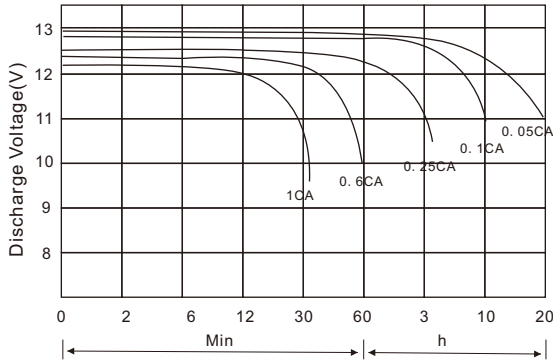
**Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)**

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	316	170	103	75	60.2	34.5	25.0	19.7	16.6	14.3	10.9	9.0	7.57	4.74	3.96
1.67V	297	164	102	74	59.8	34.3	24.6	19.6	16.5	14.2	10.8	8.9	7.56	4.70	3.93
1.70V	294	161	100	74	59.4	34.0	24.5	19.5	16.3	14.1	10.8	8.9	7.49	4.69	3.93
1.75V	271	156	99	73	58.5	33.2	24.2	19.2	16.2	13.9	10.7	8.8	7.49	4.68	3.92
1.80V	243	146	95	70	57.0	32.9	24.0	19.2	15.9	13.7	10.6	8.7	7.42	4.63	3.92
1.83V	232	133	93	68	54.5	32.5	23.2	18.3	15.3	13.2	10.3	8.4	7.06	4.62	3.85
1.85V	217	129	86	65	52.8	31.3	22.6	18.1	15.0	12.9	10.0	8.3	6.98	4.53	3.82

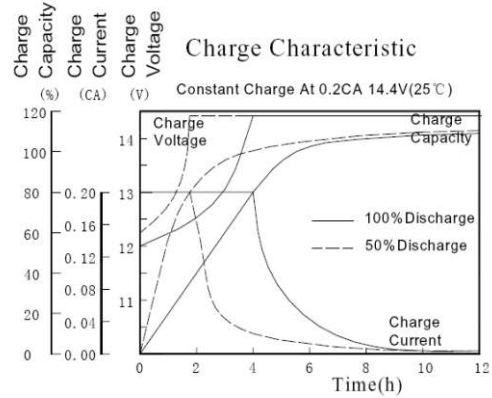
**Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)**

End voltage per cell	5min	15min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	12h	20h	24h
1.60V	529	299	186	140	113.5	65.2	47.6	37.8	31.8	27.4	21.2	17.5	14.64	9.40	7.87
1.67V	510	293	185	139	112.4	65.0	47.0	37.7	31.8	27.2	21.1	17.4	14.64	9.37	7.86
1.70V	507	290	184	139	112.4	64.8	47.0	37.5	31.3	27.0	21.0	17.2	14.54	9.34	7.85
1.75V	478	288	184	139	110.4	64.4	46.5	37.4	31.3	27.0	20.8	17.2	14.54	9.32	7.85
1.80V	439	272	179	136	110.4	64.2	46.4	37.3	30.8	26.7	20.7	17.1	14.44	9.32	7.84
1.83V	426	250	177	132	105.4	63.4	45.3	36.0	30.1	25.9	20.6	16.6	14.04	9.30	7.78
1.85V	403	244	165	126	102.4	61.3	44.1	35.5	29.4	25.4	19.9	16.5	13.94	9.12	7.72

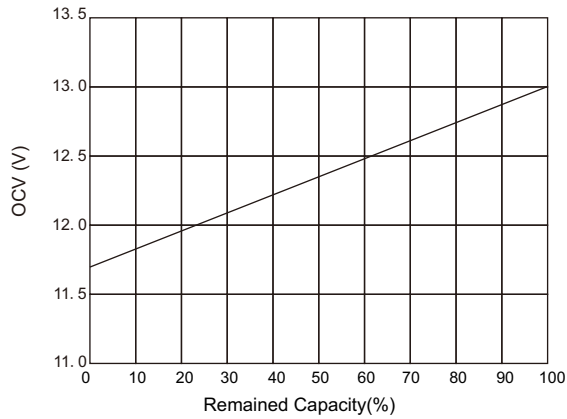
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



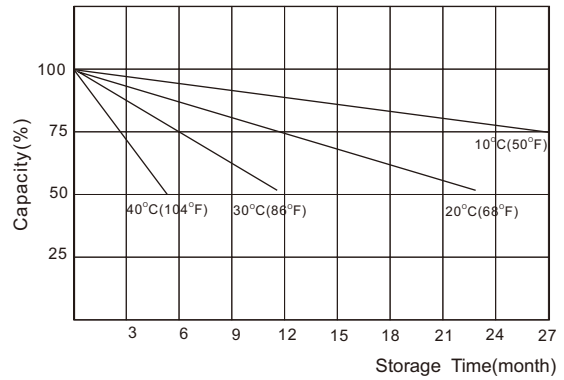
Battery Voltage Vs. Charge Time



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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