



GEL BATTERY

MAIN NEW ENERGY CO.,LTD

Front Terminal Series

Application:

- For standard 19 inch or 23 inch power cabinets
- Network connection equipment of communication system
- Power system of special network or local area network
- UPS, standby power supply
- Power station systems
- Marine systems

Specifications

Battery Model	12V85G
Nominal Voltage	12V
Rated Capacity	85Ah (10 hour rate) to 1.80V/cell
Typical Weight	28kg
Internal Resistance	Approx 6.79mΩ
Temperature Ranges	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
Terminal	M6 Female
Terminal Hardware Torque	10± 1.0Nm
Dimensions	395*105*270mm

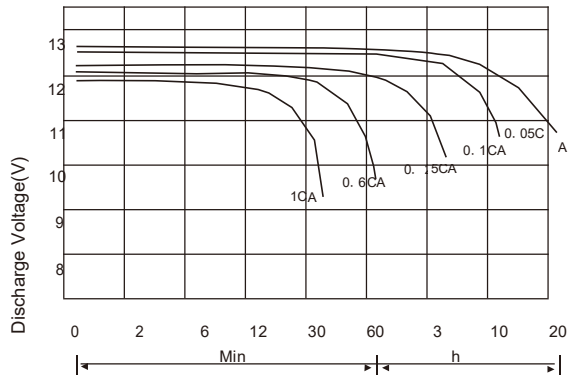
Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)

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

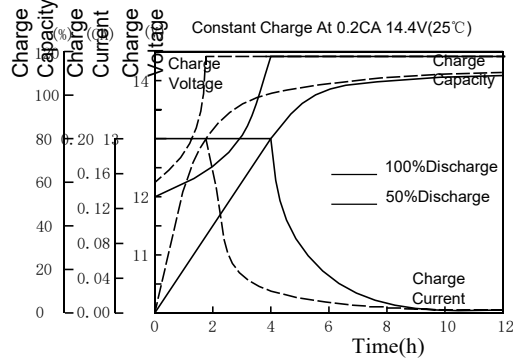
Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)

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

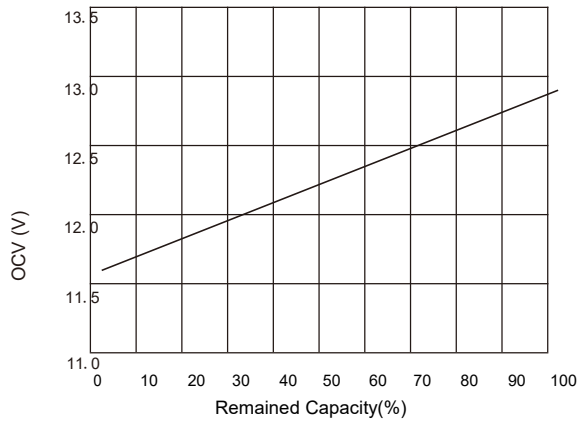
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



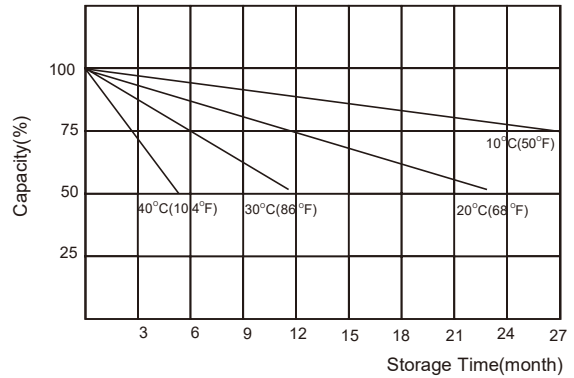
Battery Voltage Vs. Charge Time Charge Characteristic



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

