



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	12V100G
Nominal Voltage	12V
Rated Capacity	100Ah (10 hour rate) to 1.80V/cell
Typical Weight	38kg
Internal Resistance	Approx 5.77mΩ
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	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	558*125*227mm

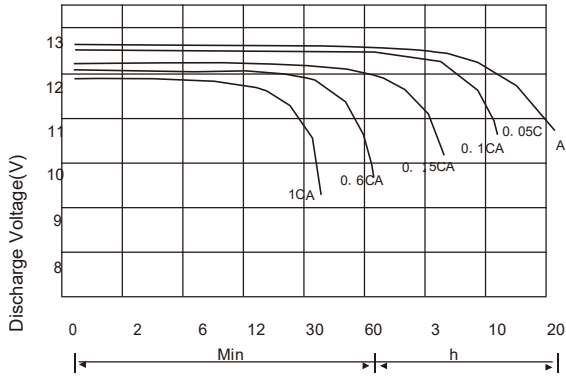
Constant Current Discharge Characteristics Units: Amperes (25°C, 77°F)

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

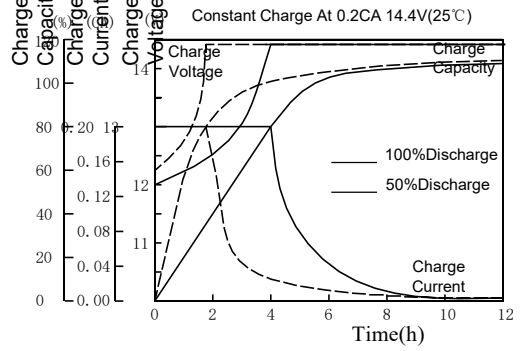
Discharge Data with Constant Power Units: Watts per cell (25°C, 77°F)

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

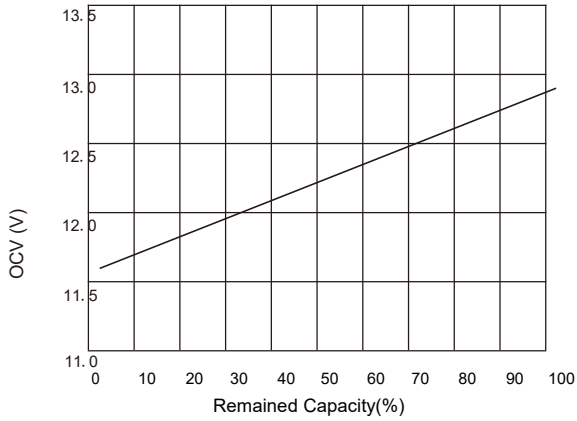
Terminal Voltage(V) Vs. Discharge Time (25°C, 77°F)



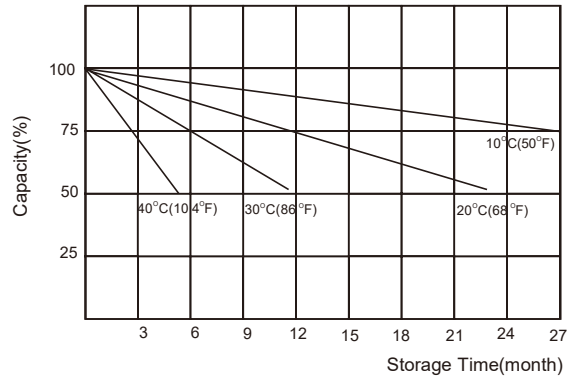
Battery Voltage Vs. Charge Time Charge Characteristic



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

