

GXDFT-55

High Temperature Gel Battery



The GXDFT-55 is a gel battery with 12 years design life designed for frequent deep cycling and for high temperature applications. The battery is made with a heavy duty Calcium Tinalloy as well as double thickness of plates; the plates are made of a special alloy designed to reduce corrosion thus resulting in the long battery life. These features also mean that batteries will operate safely and reliably in high temperature and outdoor applications.

The GXDFT-55 comes with 3 years warranty provided it is installed and have been having regular maintenance in accordance with manufacturer recommendation and specification.

Key features include:

- Maintenance-free operation
- Compact design
- Gelled Electrolyte Technology
- Stable and reliable
- High quality
- Up to 12 years design life at 25°C

Applications include:

- Alarm and security systems
- Backup power for test instruments
- UPS & DC power supplies
- Emergency Lighting
- Fire alarm and security systems
- Auto-control systems
- Electronic apparatus and equipment
- Communications power supply
- Telecommunications systems

Alpha Power Systems

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Power Systems

Product Specifications

Nominal Voltage		12V (6cells)
Nominal Capacity At 25°C		58Ah (20hr; 1.8V/cell)
		55Ah (10hr; 1.8V/cell)
		46.8Ah (5hr; 1.75V/cell)
		33Ah (1hr; 1.6V/cell)
Terminal		T3
Container Material		ABS
Maximum Discharge Current		600A (5s)
Internal Resistance		≈ 8.0mΩ
Operating Temperature Range	Discharge	-20 – 50°C
	Charge	0 – 40°C
	Storage	-20 – 40°C
	Nominal	25°C ± 3°C
Capacity Affected by Temperature	40°C	103%
	25°C	100%
	0°C	86%
		14.4 – 14.8V (25°C) Temperature coefficient -30mV/°C Initial charge current < 16.5A
Cycle Use		
Standby Use		13.5 – 13.8 (25°C) Temperature coefficient -20mV/°C No limit on initial charge current
Dimensions W x D x H		106 x 277 x 223 ± 2mm (height incl. terminals)
Weight		18kg
Self-Discharge		May be stored for up to 9 months at 25°C after which a freshening charge is required. The time interval will be shorter for higher temperatures.

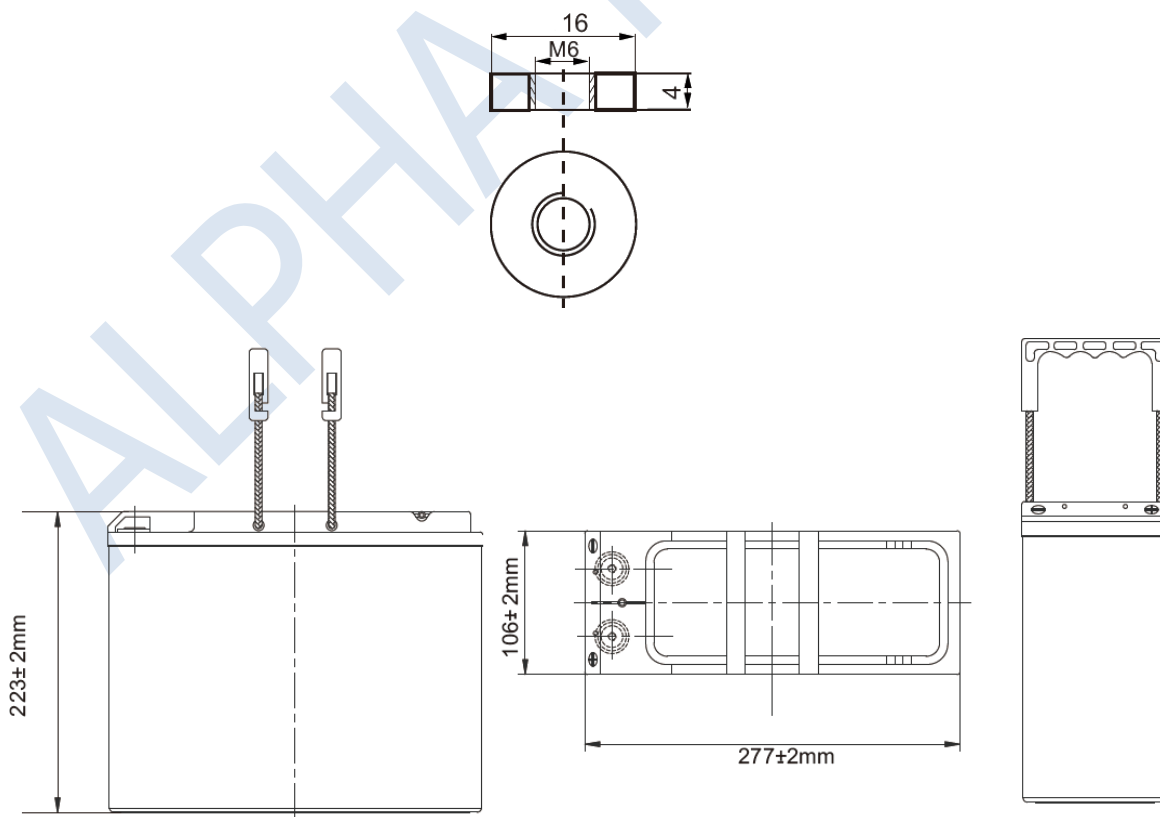
Constant Current Discharge (Amps @ 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.8V/cell	/	93.3	76.1	47.4	36.7	30.2	17.8	13.4	9.2	5.6	2.93
1.75V/cell	/	102.5	82.5	49.4	38.1	31.1	18.3	13.7	9.4	5.7	2.97
1.7V/cell	/	109.5	89.1	51.1	39.3	32.0	18.8	14.0	9.6	5.7	3.00
1.65V/cell	/	116.7	94.2	53.9	40.9	33.3	19.4	14.4	9.8	5.8	3.04
1.6V/cell	/	124.7	98.5	56.3	42.4	34.4	19.9	14.6	10.0	5.9	3.07

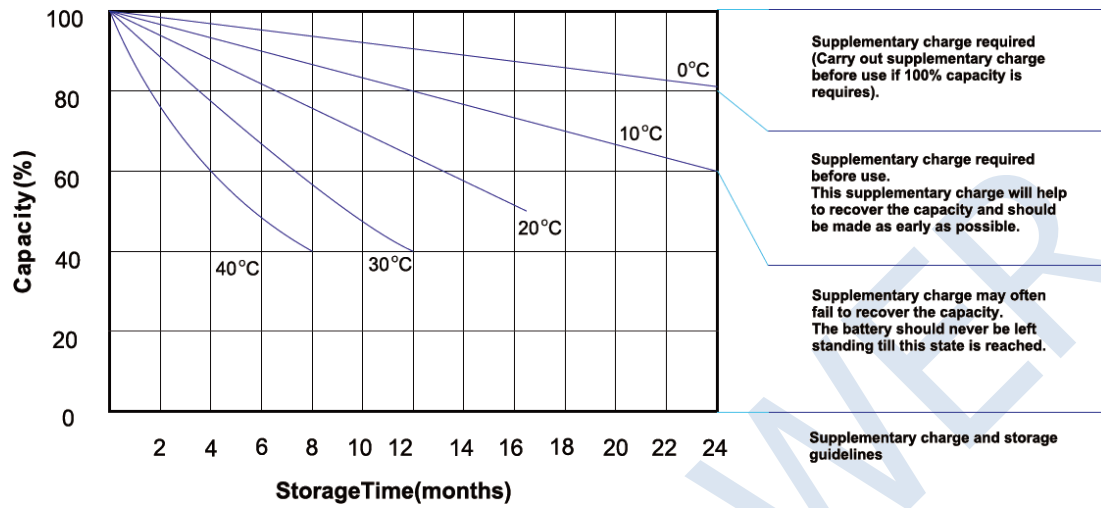
Constant Power Discharge (Watts @ 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	10h	20h
1.8V/cell	/	171.0	144.4	89.1	69.7	58.7	34.3	25.9	18.2	11.0	5.77
1.75V/cell	/	183.2	151.6	92.8	72.6	60.1	35.2	26.5	18.4	11.2	5.85
1.7V/cell	/	192.9	159.5	95.9	74.9	60.9	36.0	27.0	18.7	11.3	5.91
1.65V/cell	/	201.8	165.4	101.1	77.1	62.9	36.8	27.5	19.1	11.3	5.97
1.6V/cell	/	210.1	172.5	104.2	79.1	64.9	37.5	28.0	19.3	11.4	6.02

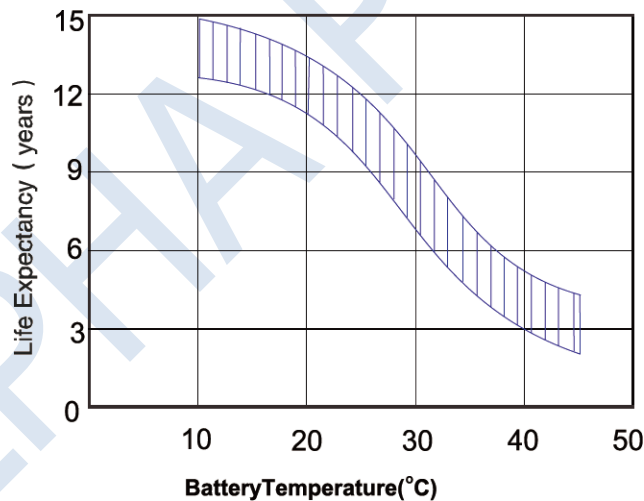
T3 Terminal



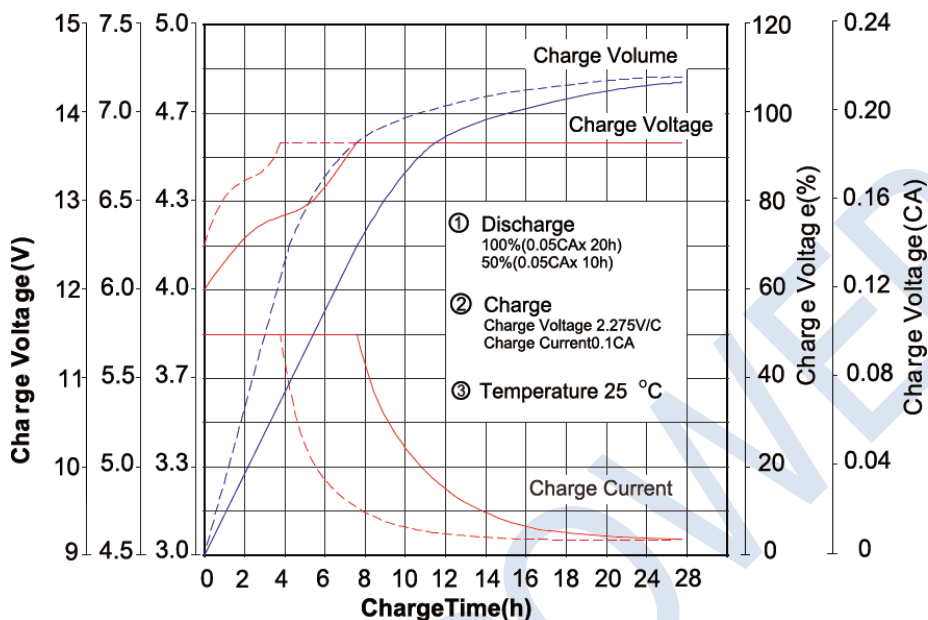
Storage Characteristics



Effect of Temperature on Long Term Float Life



Charge Characteristic Curve for Standby Use



Cycle Life in Relation to Depth of Discharge

Testing Condition

Discharging: current 0.17C (FV 1.7V/cell)

Charging: current 0.25C max, voltage 2.45V/cell

Charging volume: 125% of discharged capacity

