

CP1270 12V 7Ah(20hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

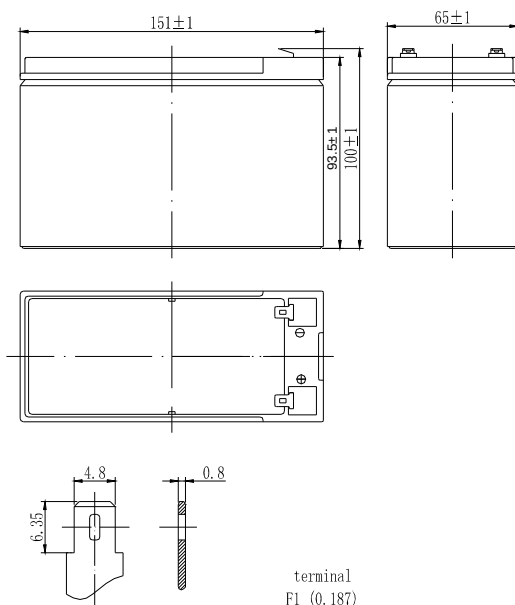
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

Length(mm / inch)	151 / 5.94
Width(mm / inch)	65 / 2.56
Height(mm / inch)	93.5 / 3.68
Total Height(mm / inch)	100 / 3.94
Approx. Weight(Kg / lbs)	2.32 / 5.12



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	3~5 years
Nominal Capacity 77°F(25°C)	
20 hour rate (0.35A, 10.5V)	7Ah
10 hour rate (0.68A, 10.5V)	6.8Ah
5 hour rate (1.13A, 10.5V)	5.65Ah
1 hour rate (4.56A, 9.6V)	4.56Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	28mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	105A(5s)
Short Circuit Current	350A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	14.5-14.9V
Maximum charging current	2.8A
Temperature compensation	-30mV/°C
Standby use	13.6-13.8V
Temperature compensation	-20mV/°C

Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	29.1	18.4	14.8	8.30	4.56	1.84	1.26	0.70	0.363
1.65V	27.5	17.5	14.2	7.90	4.40	1.80	1.22	0.69	0.359
1.70V	26.0	16.7	13.6	7.62	4.22	1.74	1.17	0.69	0.355
1.75V	24.4	15.7	13.0	7.24	4.04	1.68	1.13	0.68	0.350
1.80V	22.8	14.8	12.4	7.03	3.84	1.63	1.08	0.66	0.344

Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	52.0	35.1	27.5	15.2	11.50	8.97	5.06	3.59	2.33
1.65V	49.4	33.3	26.5	14.6	11.00	8.59	4.94	3.50	2.29
1.70V	46.9	31.6	25.4	14.0	10.50	8.23	4.80	3.40	2.25
1.75V	44.5	29.8	24.3	13.4	10.10	7.99	4.65	3.30	2.21
1.80V	41.6	28.0	23.3	12.9	9.75	7.62	4.50	3.19	2.15

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

CP1290 12V 9Ah(20hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

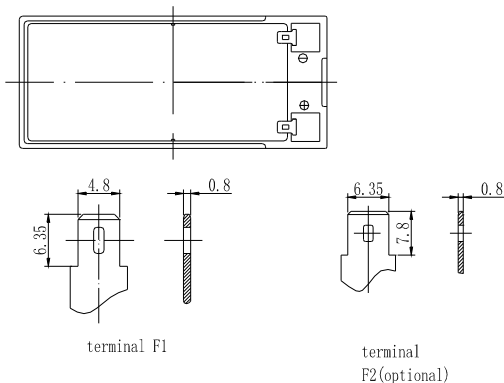
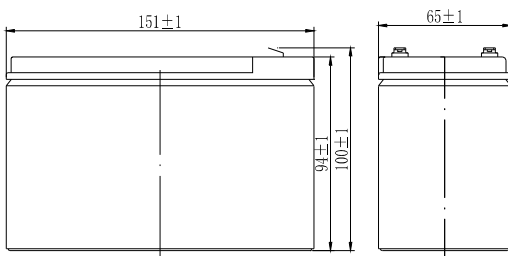
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

Length(mm / inch)	151 / 5.94
Width(mm / inch)	65 / 2.56
Height(mm / inch)	100 / 3.70
Total Height(mm / inch)	100 / 3.94
Approx. Weight(Kg / lbs)	2.8 / 6.17



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	3~5 years
Nominal Capacity 77°F(25°C)	
20 hour rate (0.45A, 10.5V)	9Ah
10 hour rate (0.82A, 10.5V)	8.2Ah
5 hour rate (1.54A, 10.5V)	7.7Ah
1 hour rate (5.8A, 9.6V)	5.8Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	18mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	135A(5s)
Short Circuit Current	450A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	14.5-14.9V
Maximum charging current	3.6A
Temperature compensation	-30mV/°C
Standby use	13.6-13.8V
Temperature compensation	-20mV/°C

Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	33.0	24.2	17.0	9.90	5.80	2.33	1.60	0.87	0.47
1.65V	32.1	23.6	16.5	9.79	5.75	2.29	1.56	0.86	0.46
1.70V	30.9	22.9	16.1	9.36	5.71	2.25	1.55	0.84	0.46
1.75V	30.3	22.1	14.6	8.91	5.66	2.20	1.54	0.82	0.45
1.80V	29.6	21.0	13.9	8.45	5.51	2.14	1.53	0.82	0.44

Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	71.7	44.8	33.6	19.6	14.5	11.5	6.30	4.34	3.10
1.65V	68.3	44.3	33.1	19.1	14.2	11.2	6.23	4.29	3.04
1.70V	64.8	42.9	31.1	18.5	13.7	11	6.08	4.20	2.98
1.75V	61.4	41.1	30.2	17.6	12.9	10.7	5.94	4.08	2.92
1.80V	58.0	39.2	28.4	16.6	12.2	10.4	5.77	3.92	2.85

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

Overview

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special oneway valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Positive and negative plates in lead-calcium-tin alloy;
- Stable Quality&High Reliability;
- Sealed Construction;
- Long Service Life;
- Maintenance-Free Operation;
- Low Pressure Venting System;
- Low Self Discharge;
- U.L.Component Recognition;
- Six months shelf life at 20°C;
- Design life 10 years

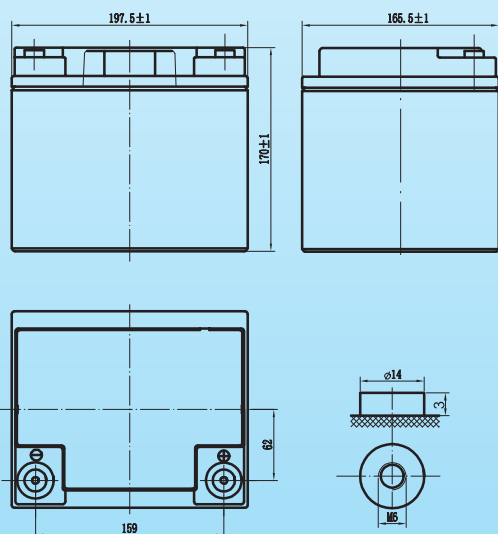
Battery Specification

Performance Characteristics	
Nominal Voltage	12V
Number of cell	6
Design Life	10years
Nominal Capacity 77°F(25°C)	
10 hour rate (4.0A, 10.8V)	40.0Ah
5 hour rate (7.00A, 10.5V)	35.0Ah
1 hour rate (25.9A, 9.6V)	25.9Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	≤9.5 mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	400A(5s)
Short Circuit Current	900A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	2.40-2.45VPC
Maximum charging current	12.0A
Temperature compensation	-30mV/°C
Standby use	2.20-2.30VPC
Temperature compensation	-20mV/°C

Dimensions and Weight

Length(mm / inch)	197.5 / 7.78
Width(mm / inch)	165.5 / 6.52
Height(mm / inch)	170 / 6.69
Total Height(mm / inch)	170 / 6.69
Approx. Weight(Kg / lbs)	14.7 / 32.4

* Weight deviation: ± 5%



Discharge Constant Current (Amperes at 77°F25°C)

End Point	Volts/Cell	10min	15min	30min	45min	1h	3h	5h	10h
1.60V	93.0	73.3	42.0	31.3	25.9	10.7	7.36	4.28	
1.65V	88.4	68.9	40.7	30.6	25.6	10.4	7.24	4.22	
1.70V	83.7	66.7	39.0	30.5	25.2	10.2	7.11	4.21	
1.75V	79.1	64.9	38.0	29.3	24.9	9.95	7.00	4.07	
1.80V	71.9	58.7	36.3	28.9	23.8	9.72	6.80	4.00	

Discharge Constant Power (Watts at 77°F25°C)

End Point	Volts/Cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	177	141	92.9	70.0	55.6	31.2	23.0	15.0	
1.65V	163	128	82.9	63.8	51.2	29.1	21.7	14.1	
1.70V	155	124	80.3	60.5	50.3	28.3	20.9	13.9	
1.75V	148	120	77.7	59.3	49.5	27.8	20.6	13.7	
1.80V	140	116	75.0	58.0	48.6	27.3	20.2	13.6	

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values. All data shall be changed without notice, Vision reserves the right to explain and update the information contained hereinto.

6FM65X 12V 65Ah(20hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

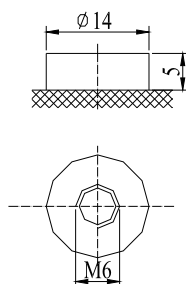
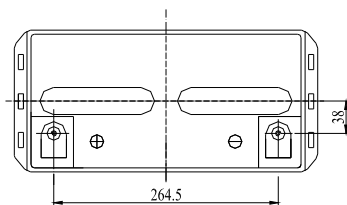
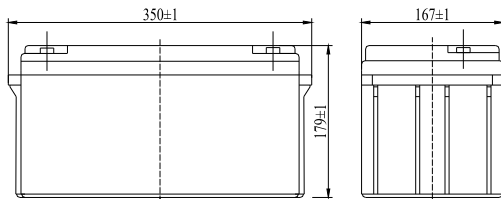
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

Length(mm / inch)	350 / 13.78
Width(mm / inch)	167 / 6.57
Height(mm / inch)	179 / 7.05
Total Height(mm / inch)	179 / 7.05
Approx. Weight(Kg / lbs)	22.2 / 48.9



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	10 years
Nominal Capacity 77°F(25°C)	
20 hour rate (3.25A, 10.5V)	65Ah
10 hour rate (6.1A, 10.5V)	61Ah
5 hour rate (10.9A, 10.5V)	54.5Ah
1 hour rate (44.2A, 9.6V)	44.2Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	6mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	650A(5s)
Short Circuit Current	1700A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	14.4-14.7V
Maximum charging current	19.5A
Temperature compensation	-30mV/°C
Standby use	13.6-13.8V
Temperature compensation	-20mV/°C

Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	215	160	125	70.5	44.2	17.2	11.6	6.47	3.37
1.65V	203	154	120	68.4	43.1	16.8	11.3	6.37	3.34
1.70V	191	143	114	66.3	42.0	16.4	11.1	6.24	3.30
1.75V	178	132	108	64.1	40.9	16.0	10.9	6.10	3.25
1.80V	165	120	100	61.8	40.0	15.7	10.7	6.00	3.20

Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	5min	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	381	282	204	122	98.0	80.8	48.7	34.5	22.8
1.65V	359	267	200	120	96.5	79.0	47.7	33.8	22.6
1.70V	337	252	197	118	94.5	77.2	46.7	33.1	22.1
1.75V	315	237	193	116	92.4	75.4	45.6	32.4	21.9
1.80V	303	220	183	114	90.0	75.5	44.4	31.7	21.7



VISION Rechargeable Products
Sealed Lead Acid Battery

www.vision-batt.com

FM Series

General purpose application

VISION FM series are designed for general purpose applications, such as UPS, telecom, electrical utilities.

With 10 years design life, the batteries comply to the most popular international standards, such as IEC896-2, BS6290-4, Eurobat Guide.

The battery container and cover are available both in V0 class flame retardant ABS or HBO ABS plastics.

Shenzhen Center Power Tech Co., Ltd. has come to obtain wide recognition from customers all over the world. This is not only due to the fact that our products are featured by reliable stability in quality, but also because we attach great importance to our communication with customers and our perfect understanding of customers' requirements as well.

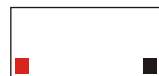
Shenzhen Center Power Tech. Co., Ltd

6FM100-X 12V 100Ah

(Edition June 2004)

General Features

- Positive and negative plates in lead-calcium-tin alloy
- Stable Quality & High Reliability
- Sealed Construction
- Long Service Life
- Maintenance-Free Operation
- Low Pressure Venting System
- Low Self Discharge
- U. L. Component Recognition
- Six months shelf life at 20°C
- Design life 10 years



Dimensions and Weight

	SI Units	English Units
Length	330mm	13.0inch
Width	171mm	6.73inch
Height	215mm	8.46inch
Total Height	222mm	8.74inch
Approx. Weight	32.0Kg	70.6lbs

Performance Characteristics

- Nominal Voltage 12V
- Number of cell 6
- Nominal Capacity 77°F(25°C)
 - 10 hour rate (10.0A, 10.8V) 100Ah
 - 5 hour rate (17.5A, 10.5V) 87.5Ah
 - 1 hour rate (66.2A, 9.60V) 66.2Ah
- Internal Resistance
 - Fully Charged battery 77°F(25°C) 5mOhms
- Self-Discharge
 - 3% of capacity declined per month at 20°C(average)
- Operating Temperature Range
 - Discharge -20~60°C
 - Charge -10~60°C
 - Storage -20~60°C
- Max. Discharge Current 77°F(25°C) 900A(5s)
- Short Circuit Current 2100A
- Charge Methods: Constant Voltage Charge 77°F(25°C)
 - Cycle use 14.4-14.7V
 - Maximum charging current 30A
 - Temperature compensation -30mV/°C
- Standby use 13.6-13.8V
 - Temperature compensation -20mV/°C



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VISION Rechargeable Products Sealed Lead Acid Battery

www.vision-batt.com

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

General purpose application

VISION FM series are designed for general purpose applications, such as UPS, telecom, electrical utilities.

With 10 years design life, the batteries comply to the most popular international standards, such as IEC896-2, BS6290-4, Eurobat Guide.

The battery container and cover are available both in V0 class flame retardant ABS or HBO ABS plastics.

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Shenzhen Center Power Tech. Co., Ltd

6FM120-X 12V 120 Ah

General Features

- Positive and negative plates in lead-calcium-tin alloy
- Stable Quality & High Reliability
- Sealed Construction
- Long Service Life
- Maintenance-Free Operation
- Low Pressure Venting System
- Low Self Discharge
- U. L. Component Recognition
- Six months shelf life at 20°C
- Design life 10 years



Dimensions and Weight

	SI Units	English Units
Length	410mm	16.1inch
Width	176mm	6.93inch
Height	227mm	8.94inch
Total Height	227mm	8.94inch
Approx. Weight	38.0Kg	83.8lbs

Performance Characteristics

- Nominal Voltage 12V
- Number of cell 6
- Nominal Capacity 77°F(25°C)
 - 10 hour rate (12.0A, 10.8V) 120Ah
 - 5 hour rate (20.0A, 10.5V) 100Ah
 - 1 hour rate (71.6A, 9.60V) 71.6Ah
- Internal Resistance
 - Fully Charged battery 77°F(25°C) 4.3mOhms
- Self-Discharge
 - 3% of capacity declined per month at 20°C(average)
- Operating Temperature Range
 - Discharge -20~60°C
 - Charge -10~60°C
 - Storage -20~60°C
- Max. Discharge Current 77°F(25°C) 950A(5s)
- Short Circuit Current 2250A
- Charge Methods: Constant Voltage Charge 77°F(25°C)
 - Cycle use 14.4-14.7V
 - Maximum charging current 36A
 - Temperature compensation -30mV/°C
- Standby use 13.6-13.8V
 - Temperature compensation -20mV/°C

Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

6FM200X 12V 200Ah(10hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.



Battery Construction

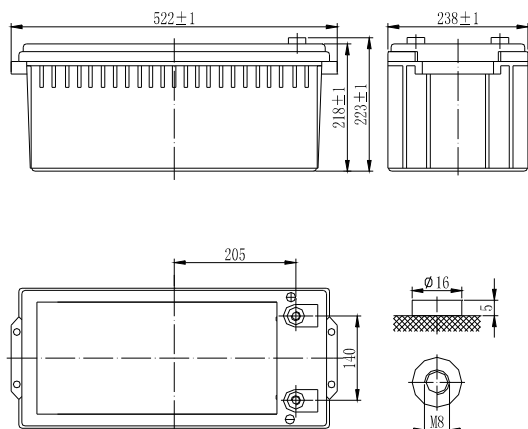
Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

Length(mm / inch)	522 / 20.55
Width(mm / inch)	238 / 9.37
Height(mm / inch)	218 / 8.58
Total Height(mm / inch)	223 / 8.78
Approx. Weight(Kg / lbs)	65 / 143.3



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life	10 years
Nominal Capacity 77°F(25°C)	
10 hour rate (20.0A, 10.8V)	200Ah
5 hour rate (36.7A, 10.5V)	183.5Ah
1 hour rate (138A, 9.6V)	138Ah
Internal Resistance	
Fully Charged battery 77°F(25°C)	3mOhms
Self-Discharge	
3% of capacity declined per month at 20°C(average)	
Operating Temperature Range	
Discharge	-20~60°C
Charge	-10~60°C
Storage	-20~60°C
Max. Discharge Current 77°F(25°C)	1000A(5s)
Short Circuit Current	3500A
Charge Methods: Constant Voltage Charge 77°F(25°C)	
Cycle use	14.4-14.7V
Maximum charging current	60A
Temperature compensation	-30mV/°C
Standby use	13.6-13.8V
Temperature compensation	-20mV/°C

Discharge Constant Current (Amperes at 77°F25°C)

End Point Volts/Cell	10min	15min	30min	1h	3h	5h	10h	20h
1.60V	440	358	210	138	53.1	39.0	20.5	10.70
1.65V	414	337	203	135	52.0	38.2	20.4	10.65
1.70V	390	316	195	132	51.0	37.5	20.3	10.60
1.75V	364	295	188	129	49.8	36.7	20.2	10.55
1.80V	334	274	180	126	48.4	35.9	20.0	10.5

Discharge Constant Power (Watts at 77°F25°C)

End Point Volts/Cell	10min	15min	30min	45min	1h	2h	3h	5h
1.60V	756	611	402	287	266	145	103	74.3
1.65V	719	591	387	282	261	142	102	73.7
1.70V	681	572	372	276	256	139	100	73.1
1.75V	641	553	357	270	250	136	98.8	72.6
1.80V	609	520	342	265	245	132	97.7	72.0

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.