

# **Pure Lead SLA Battery**

Capacity (25°C)	20HR (7.10A, 10.5V) = 142AH 10HR (13.7A, 10.5V) = 137AH 5HR (25.8A, 10.5V) = 129AH 1HR (94.6A, 10.5V) = 94.6AH
Operating Temperature Range	Charge -20°C to 60°C (-4°F to 140°F) Discharge -40°C to 65°C (-40°F to 149°F) Storage = -20°C to 40°C (-4°C to 104°F)
Approx. Weight	43.5 kg (95.9 lbs)
Max. Discharge [A]	1620A
Self Discharge	2% per month at (25°C)
Capacity Affected by Temp. (20HR)	40°C (104°F) = 103% 25°C (77°F) = 100% 0°C (32°F) = 86% -15°C (5°F) = 65%
Charge Voltage (25°C)	Cycle Use = 14.1-14.4V (-3mV/cell/°C) Max Current = 40.5A Float Use = 13.62V(-3mV/cell/°C)
Dimensions (Nominal)	Length: 340.9 mm (13.42 in) Width: 170 mm (6.69 in) Height: 273 mm (10.76 in) Total Height: 276 mm (10.85 in)

- Completely sealed, maintainance-free, low self-discharge
- High-rate performance, high energy density
- State of the art Pure Lead Punched Grid PLPG technology
- Non-spillable, stable quality and high reliability with excellent re-charging performance
- Floating and standby use up to: 20 yrs (25°C)
- Container and Cover Material is ABS/PC Flame Retardant to UL94-V0
- · CE, UL certified
- Transportation- D.O.T., I.A.T.A. & F.A.A.



M6 Terminals





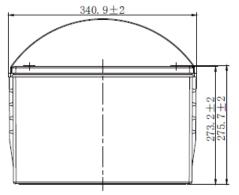


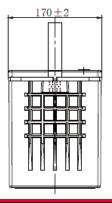
## APPLICATIONS

Multipurpose **Telecommunications UPS Medical Equipment** 

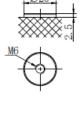
**Electric Vehicle Comm. Power Supply Elec. Power System (EPS) Emergency Backup Power** 

**DC Power Supply Auto Control System Traffic Control Signaling Emergency Lighting** 



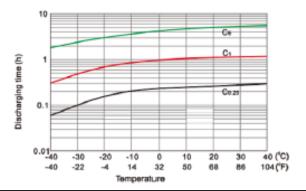


Note: Terminal Torque Values in-Ib(Nm):97.28-130.0(11-14.7)

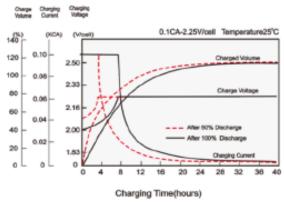


REV B

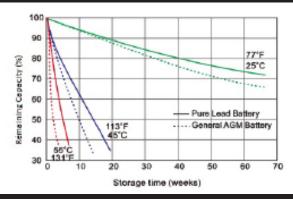
# Effects of Temperature on Discharge Time



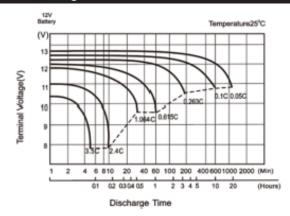
## **Float Charging Characteristics**



### **Self Discharge Characteristics**



### **Discharge Characteristics**



#### Regular Charge / Float Charge / Storage

- Charging voltage temperature compensation needs to be applied when temperature is below 0°C and above +45°C.
- Charging in temperatures below 0°C, the charge current should not exceed 0.1C as the core battery temperature can increase rapidly and damage the battery.
- During floating charge or when in storage, the life of the battery is cut in half for every 8°C temperature rise over 25°C.

#### Discharge

- · Discharging at elevated temperatures improves performance of the battery yet shortens its life due to accelerated aging.
- · Low temperature affects the battery internal resistance and lowers its capacity.
- The battery will operate in temperature lower than -20°C when fully charged.
- The battery provides 100% specified capacity at 25°C. At -40°C the battery will deliver 35% of its stated capacity @10HR discharge rate and 10% of its stated capacity @1HR discharge rate.

F.V/Time   Smin   10min   15min   30min   1h   2h   3h   4h   5h   8h   10h   20h	10% 01 113 3	10% of its stated capacity (with it discharge rate.											
1.85V/cell         325.6         269.1         216.4         153.9         88.4         48.6         35.9         27.9         24.1         16.2         13.2         6.89           1.80V/cell         375.8         310.2         241.2         164.4         92.0         50.9         37.4         29.0         25.2         16.8         13.5         7.02           1.75V/cell         410.8         339.6         261.3         175.0         94.6         52.4         38.4         29.8         25.8         17.0         13.7         7.10           1.70V/cell         442.6         367.2         278.0         181.7         98.2         53.1         39.1         30.3         26.1         17.2         13.9         7.16           1.67V/cell         494.0         386.8         285.0         189.0         100.4         54.1         39.6         30.7         26.4         17.4         14.0         7.22           1.60V/cell         533.9         393.3         308.0         192.7         102.1         54.9         40.1         31.1         26.7         17.5         14.0         7.27           Constant Power Discharge (W) at 25°C (77°F)           F.V/Time         5	Constant Current Discharge (A) at 25°C (77°F)												
1.80V/cell         375.8         310.2         241.2         164.4         92.0         50.9         37.4         29.0         25.2         16.8         13.5         7.02           1.75V/cell         410.8         339.6         261.3         175.0         94.6         52.4         38.4         29.8         25.8         17.0         13.7         7.10           1.70V/cell         442.6         367.2         278.0         181.7         98.2         53.1         39.1         30.3         26.1         17.2         13.9         7.16           1.67V/cell         494.0         386.8         285.0         189.0         100.4         54.1         39.6         30.7         26.4         17.4         14.0         7.22           1.60V/cell         533.9         393.3         308.0         192.7         102.1         54.9         40.1         31.1         26.7         17.5         14.0         7.27           Constant Power Discharge (W) at 25°C (77°F)           Constant Power Discharge (W) at 25°C (77°F)           F.V/Time         5min         10min         15min         30min         1h         2h         3h         4h         5h         8h         10h	F.V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.75V/cell         410.8         339.6         261.3         175.0         94.6         52.4         38.4         29.8         25.8         17.0         13.7         7.10           1.70V/cell         442.6         367.2         278.0         181.7         98.2         53.1         39.1         30.3         26.1         17.2         13.9         7.16           1.67V/cell         494.0         386.8         285.0         189.0         100.4         54.1         39.6         30.7         26.4         17.4         14.0         7.22           1.60V/cell         533.9         393.3         308.0         192.7         102.1         54.9         40.1         31.1         26.7         17.5         14.0         7.27           Constant Power Discharge (W) at 25°C (77°F)           E.V/Time         5min         10min         15min         30min         1h         2h         3h         4h         5h         8h         10h         20h           1.85V/cell         645.3         526.2         425.7         305.8         177.0         97.8         72.4         56.7         49.1         33.2         27.2         14.3           1.80V/cell         739.2	1.85V/cell	325.6	269.1	216.4	153.9	88.4	48.6	35.9	27.9	24.1	16.2	13.2	6.89
1.70V/cell         442.6         367.2         278.0         181.7         98.2         53.1         39.1         30.3         26.1         17.2         13.9         7.16           1.67V/cell         494.0         386.8         285.0         189.0         100.4         54.1         39.6         30.7         26.4         17.4         14.0         7.22           1.60V/cell         533.9         393.3         308.0         192.7         102.1         54.9         40.1         31.1         26.7         17.5         14.0         7.27           Constant Power Discharge (W) at 25°C (77°F)           EV/Time         5min         10min         15min         30min         1h         2h         3h         4h         5h         8h         10h         20h           1.85V/cell         645.3         526.2         425.7         305.8         177.0         97.8         72.4         56.7         49.1         33.2         27.2         14.3           1.80V/cell         739.2         600.7         469.7         324.1         182.9         101.6         75.1         58.6         51.1         34.2         27.6         14.5           1.75V/cell         795.8	1.80V/cell	375.8	310.2	241.2	164.4	92.0	50.9	37.4	29.0	25.2	16.8	13.5	7.02
1.67V/cell         494.0         386.8         285.0         189.0         100.4         54.1         39.6         30.7         26.4         17.4         14.0         7.22           1.60V/cell         533.9         393.3         308.0         192.7         102.1         54.9         40.1         31.1         26.7         17.5         14.0         7.27           Constant Power Discharge (W) at 25°C (77°F)           F.V/Time Smin 10min 15min 30min 1h 2h 30min 1h 2h 3h 4h 5h 8h 10h 20h 20h 33.2         8h 10h 20h 33.2         27.2         14.3           1.85V/cell 645.3         526.2         425.7         305.8         177.0         97.8         72.4         56.7         49.1         33.2         27.2         14.3           1.80V/cell 739.2         600.7         469.7         324.1         182.9         101.6         75.1         58.6         51.1         34.2         27.6         14.5           1.75V/cell 795.8         651.4         504.5         341.7         186.7         103.9         76.6         59.9         51.9         34.5         27.9         14.6           1.70V/cell 838.4         696.5         530.4         351.2         192.4         104.6         77.5         60.5         52.	1.75V/cell	410.8	339.6	261.3	175.0	94.6	52.4	38.4	29.8	25.8	17.0	13.7	7.10
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F.V/Time         5min         10min         15min         30min         1h         2h         3h         4h         5h         8h         10h         20h           1.85V/cell         645.3         526.2         425.7         305.8         177.0         97.8         72.4         56.7         49.1         33.2         27.2         14.3           1.80V/cell         739.2         600.7         469.7         324.1         182.9         101.6         75.1         58.6         51.1         34.2         27.6         14.5           1.75V/cell         795.8         651.4         504.5         341.7         186.7         103.9         76.6         59.9         51.9         34.5         27.9         14.6           1.70V/cell         838.4         696.5         530.4         351.2         192.4         104.6         77.5         60.5         52.3         34.6         28.1         14.6           1.67V/cell         920.0         728.2         540.0         363.5         195.5         105.9         78.0         61.0         52.5         34.9         28.1         14.6	1.60V/cell	533.9	393.3	308.0	192.7	102.1	54.9	40.1	31.1	26.7	17.5	14.0	7.27
F.V/Time         5min         10min         15min         30min         1h         2h         3h         4h         5h         8h         10h         20h           1.85V/cell         645.3         526.2         425.7         305.8         177.0         97.8         72.4         56.7         49.1         33.2         27.2         14.3           1.80V/cell         739.2         600.7         469.7         324.1         182.9         101.6         75.1         58.6         51.1         34.2         27.6         14.5           1.75V/cell         795.8         651.4         504.5         341.7         186.7         103.9         76.6         59.9         51.9         34.5         27.9         14.6           1.70V/cell         838.4         696.5         530.4         351.2         192.4         104.6         77.5         60.5         52.3         34.6         28.1         14.6           1.67V/cell         920.0         728.2         540.0         363.5         195.5         105.9         78.0         61.0         52.5         34.9         28.1         14.6													
1.85V/cell     645.3     526.2     425.7     305.8     177.0     97.8     72.4     56.7     49.1     33.2     27.2     14.3       1.80V/cell     739.2     600.7     469.7     324.1     182.9     101.6     75.1     58.6     51.1     34.2     27.6     14.5       1.75V/cell     795.8     651.4     504.5     341.7     186.7     103.9     76.6     59.9     51.9     34.5     27.9     14.6       1.70V/cell     838.4     696.5     530.4     351.2     192.4     104.6     77.5     60.5     52.3     34.6     28.1     14.6       1.67V/cell     920.0     728.2     540.0     363.5     195.5     105.9     78.0     61.0     52.5     34.9     28.1     14.6		Constant Power Discharge (W) at 25°C (77°F)											
1.80V/cell     739.2     600.7     469.7     324.1     182.9     101.6     75.1     58.6     51.1     34.2     27.6     14.5       1.75V/cell     795.8     651.4     504.5     341.7     186.7     103.9     76.6     59.9     51.9     34.5     27.9     14.6       1.70V/cell     838.4     696.5     530.4     351.2     192.4     104.6     77.5     60.5     52.3     34.6     28.1     14.6       1.67V/cell     920.0     728.2     540.0     363.5     195.5     105.9     78.0     61.0     52.5     34.9     28.1     14.6	F.V/Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.75V/cell     795.8     651.4     504.5     341.7     186.7     103.9     76.6     59.9     51.9     34.5     27.9     14.6       1.70V/cell     838.4     696.5     530.4     351.2     192.4     104.6     77.5     60.5     52.3     34.6     28.1     14.6       1.67V/cell     920.0     728.2     540.0     363.5     195.5     105.9     78.0     61.0     52.5     34.9     28.1     14.6	1.85V/cell	645.3	526.2	425.7	305.8	177.0	97.8	72.4	56.7	49.1	33.2	27.2	14.3
1.70V/cell     838.4     696.5     530.4     351.2     192.4     104.6     77.5     60.5     52.3     34.6     28.1     14.6       1.67V/cell     920.0     728.2     540.0     363.5     195.5     105.9     78.0     61.0     52.5     34.9     28.1     14.6	1.80V/cell	739.2	600.7	469.7	324.1	182.9	101.6	75.1	58.6	51.1	34.2	27.6	14.5
1.67V/cell 920.0 728.2 540.0 363.5 195.5 105.9 78.0 61.0 52.5 34.9 28.1 14.6	1.75V/cell	795.8	651.4	504.5	341.7	186.7	103.9	76.6	59.9	51.9	34.5	27.9	14.6
	1.70V/cell	838.4	696.5	530.4	351.2	192.4	104.6	77.5	60.5	52.3	34.6	28.1	14.6
1.60V/cell 967.7 730.0 578.0 366.8 197.0 106.6 78.2 61.0 52.5 34.9 28.2 14.7	1.67V/cell	920.0	728.2	540.0	363.5	195.5	105.9	78.0	61.0	52.5	34.9	28.1	14.6
	1.60V/cell	967.7	730.0	578.0	366.8	197.0	106.6	78.2	61.0	52.5	34.9	28.2	14.7

REV B