zeus Battery Products

PCPL90-12FT 12V 90AH

Pure Lead SLA Battery

Capacity (25°C)	20HR (4.77A, 10.5V) = 95.4AH 10HR (9.18A, 10.5V) = 91.8AH 5HR (16.6A, 10.5V) = 83.0AH 1HR (59.1A, 10.5V) = 59.1AH
Operating Temperature Range	Charge = -15°C to +55°C Discharge = -40°C to +65°C Storage = -20°C to +60°C
Approx. Weight	28.7 kg (63 lbs)
Max. Discharge	1080 A
Self Discharge	2% per month at (25°C)
Capacity Affected by Temp. (20HR)	40°C = 103% 25°C = 100% 0°C = 86% -15°C = 65%
Charge Voltage (25°C)	Cycle Use = 14.1- 14.4V (-30/mV/°C) Max Current = 90A Float Use = 13.6V (-20mV/°C)
Dimensions (Nominal)	Length: 405mm (15.94 in) Width: 108mm (4.25 in) Height: 287mm (11.3 in) Total Height: 287mm (11.3 in)

- Completely sealed, maintenance-free, low self-discharge
- 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 years
- Cycle use: Up to 600 cycles at 100% DoD
- Cycle use : Up to 1100 Cycles at 50% DoD
- Container and Cover Material – PC/ABS UL94-V0
- Transportation - D.O.T., I.A.T.A. & F.A.A.

Terminal Detail

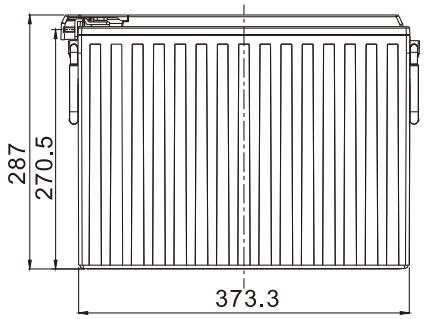
ISO14001 ISO 9001 CE MH29008

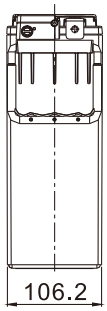
APPLICATIONS

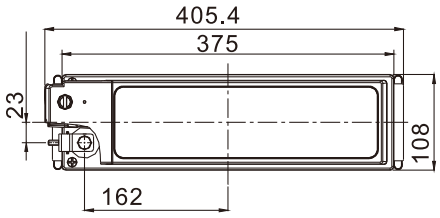
Multipurpose	Electric Vehicle	DC Power Supply
Telecommunications	Comm. Power Supply	Auto Control System
UPS	Elec. Power System (EPS)	Traffic Control Signaling
Medical Equipment	Emergency Backup Power	Emergency Lighting

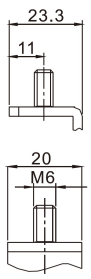
Terminal Type

■ Terminal M









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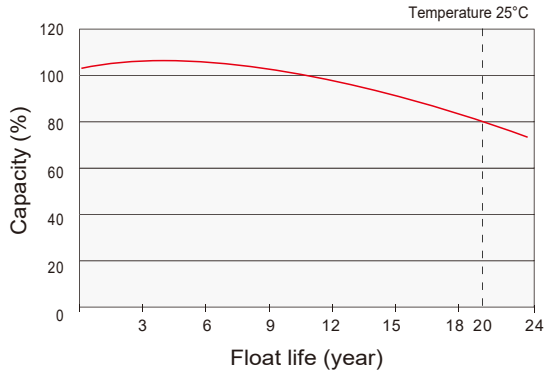
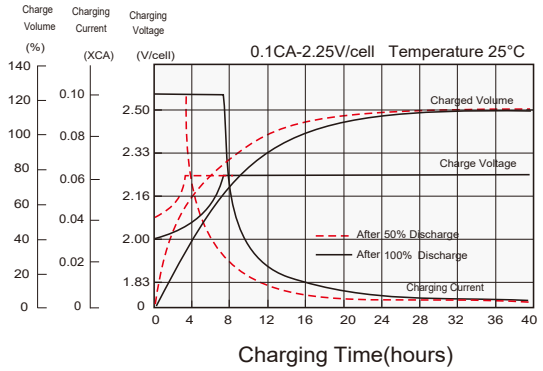
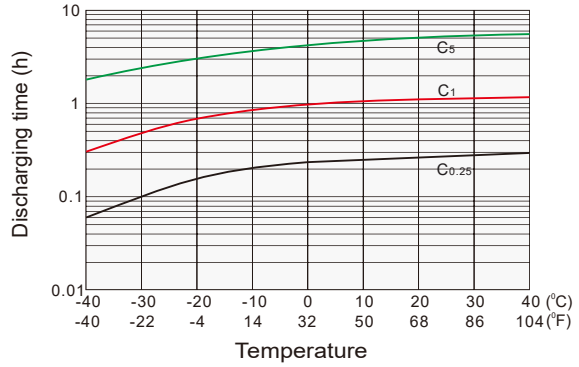
Float Life



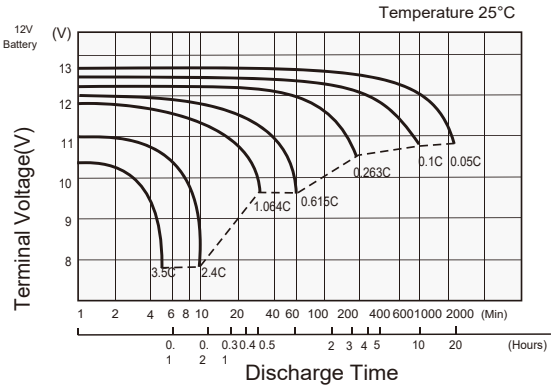
Float Charging Characteristics



Effect of Temperature on Discharging Time



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.

Constant Current Discharge (A) at 25°C (77°F)

F.V/Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	174.2	145.4	99.2	54.7	35.3	25.1	20.1	16.2	10.7	8.92	4.61
1.80V/cell	195.8	162.6	104.0	57.0	36.6	26.1	20.3	16.4	11.0	9.00	4.72
1.75V/cell	213.0	171.4	110.8	59.1	37.7	26.8	20.6	16.6	11.3	9.18	4.77
1.70V/cell	227.4	181.3	115.2	60.6	38.4	27.0	20.8	16.7	11.3	9.36	4.84
1.67V/cell	242.4	188.6	119.3	62.3	38.9	27.8	21.0	17.2	11.5	9.72	4.88
1.60V/cell	256.0	197.4	120.4	63.4	39.2	28.1	21.1	17.5	11.7	9.90	4.96

Constant Power Discharge (W) at 25°C (77°F)

F.V/Time	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	332.3	278.1	193.1	108.4	70.4	50.3	40.4	32.7	21.7	18.2	9.42
1.80V/cell	367.5	306 9	201.1	112.3	72.5	52.1	40.7	33.0	22.2	18.3	9.62
1.75V/cell	395.8	320.5	212.6	115.9	74.3	53.1	41.2	33.3	22.8	18.6	9.69
1.70V/cell	416.1	334.9	219.2	118.1	75.2	53.2	41.4	33.4	22.7	18.9	9.82
1.67V/cell	439.2	344 9	226.0	121.0	76.0	54.5	41.7	34.3	23.1	19.5	9.88
1.60V/cell	451.5	353.4	225.2	122.0	75.8	54.6	41.5	34.6	23.3	19.8	10.0

REV A