zeus Battery Products

PC2.9-12 12V 2.9AH

SLA Battery

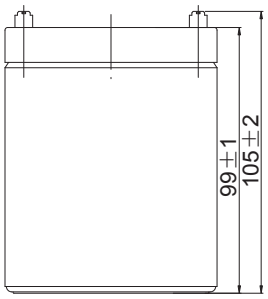
Capacity (25°C)	20HR (0.145A, 10.5V) = 2.90AH 10HR (0.275A, 10.5V) = 2.75AH 5HR (0.49A, 10.5V) = 2.45AH 1HR (1.65A, 10.5V) = 1.65AH
Operating Temperature Range	Charge = -15°C to +50°C Discharge = -20°C to +60°C Storage = -20°C to +60°C
Approx. Weight	1.20kg
Internal Resistance	Fully charged at 25°C : ≤ 33mΩ
Self Discharge	2% per month at (25°C)
Capacity Affected by Temp. (20HR)	40°C = 102% 25°C = 100% 0°C = 85% -15°C = 65%
Charge Voltage (25°C)	Cycle Use = 14.4-14.7V (-30mV/°C) Max Current = 0.87A Float Use = 13.5-13.8V (-20mV/°C)
Dimensions (Nominal)	Length: 79mm (3.11 in.) Width: 56mm (2.20 in.) Height: 99mm (3.90 in.) Total Height: 105mm (4.13 in.)

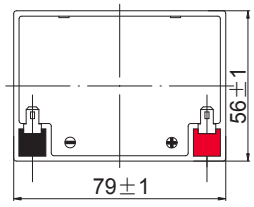
- Completely sealed, maintenance-free, low self-discharge
- State of the art AGM and grid alloy formula technology
- Non-spillable, stable quality and high reliability with excellent re-charging performance
- Floating and standby use up to: 5 years
- Cycle use: Up to 260 cycles at 100% DoD
- Cycle use: Up to 500 Cycles at 50% DoD
- Container and Cover Material – ABS UL94-HB (optional UL94-V0)
- Transportation - D.O.T., I.A.T.A. & F.A.A.

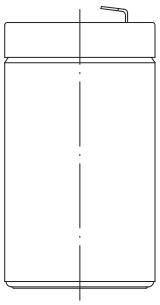
ISO14001 ISO 9001 CE MH29008

APPLICATIONS

Multipurpose	Alarm & Security System	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







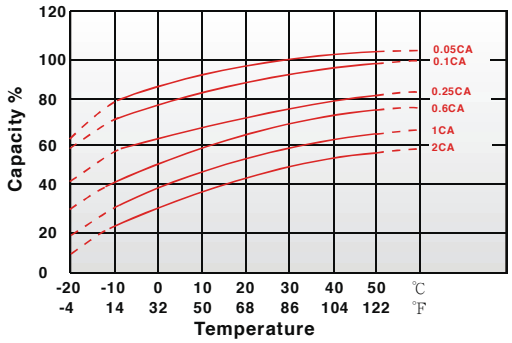
Terminal Type

F1  0.187" x 0.032" quick disconnect tabs

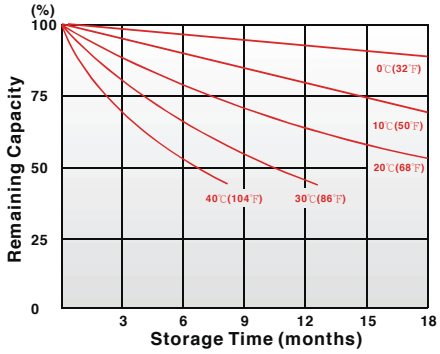
F2  0.250" x 0.032" quick disconnect tabs

REV V3

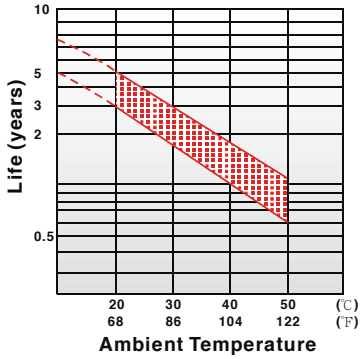
Effect of Temperature on Capacity 25°C (77°F)



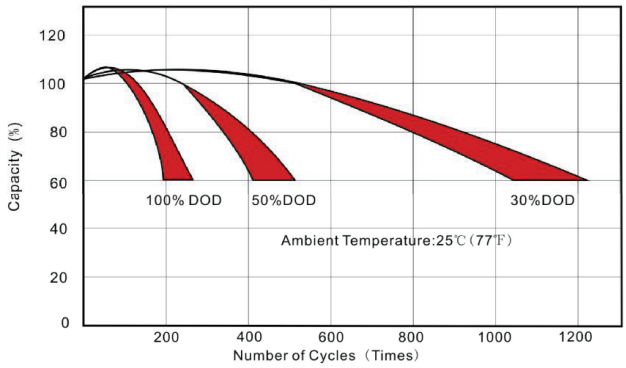
Capacity Retention Characteristic



Trickle (or Float) Service Life



Cycle Service Life



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 provides 100% specified capacity at 25°C. It will deliver 50% of its stated capacity at -20°C with 0.1C discharge current and 20% with 2C discharge current.

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	5.57	3.88	3.20	2.78	2.23	1.71	1.40	0.856	0.652	0.536	0.455	0.394	0.313	0.260	0.144
1.80V/cell	6.85	4.63	3.71	3.14	2.47	1.87	1.51	0.909	0.685	0.563	0.474	0.411	0.325	0.270	0.145
1.75V/cell	8.11	5.24	4.09	3.42	2.63	1.98	1.59	0.948	0.710	0.581	0.487	0.421	0.334	0.275	0.146
1.70V/cell	9.20	5.78	4.43	3.67	2.77	2.06	1.65	0.987	0.733	0.595	0.499	0.432	0.339	0.280	0.149
1.65V/cell	10.1	6.21	4.69	3.85	2.88	2.14	1.72	1.02	0.751	0.608	0.510	0.440	0.344	0.283	0.151
1.60V/cell	10.6	6.47	4.88	3.98	2.96	2.19	1.76	1.05	0.769	0.623	0.521	0.449	0.351	0.288	0.152

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

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	10.5	7.39	6.16	5.38	4.35	3.36	2.76	1.69	1.30	1.07	0.910	0.790	0.630	0.525	0.290
1.80V/cell	12.8	8.74	7.07	6.04	4.77	3.64	2.95	1.79	1.35	1.12	0.943	0.820	0.649	0.540	0.291
1.75V/cell	14.9	9.78	7.73	6.52	5.07	3.84	3.09	1.86	1.39	1.14	0.963	0.835	0.663	0.547	0.292
1.70V/cell	16.8	10.7	8.29	6.95	5.29	3.97	3.20	1.92	1.43	1.17	0.981	0.850	0.669	0.553	0.296
1.65V/cell	18.2	11.3	8.67	7.22	5.46	4.10	3.32	1.97	1.46	1.19	0.998	0.863	0.676	0.558	0.298
1.60V/cell	18.8	11.7	8.93	7.37	5.56	4.15	3.36	2.01	1.49	1.21	1.01	0.875	0.687	0.565	0.299

REV V3