LEOCH BATTERY

High Performance Pure Lead AGM Batteries



- High Rate
- Long Standby Life
- Long Shelf Life
- Wide Ambient Temperature

About LEOCH BATTERY

Established in 1999, LEOCH BATTERY (stock code: 00842.HK) is a globally recognized leader in power solutions. Our headquarter is located in the dynamic business hub of Singapore, where we actively contribute to the development of various international industrial standards.

With an extensive global presence, LEOCH BATTERY operates 16 state-of-the-art manufacturing facilities spanning a total area of 1.5 million square meters. Our global footprint includes over 80 local service companies, and we are proud to be a home to a dedicated workforce of 16,000 employees, including more than 1,500 highly skilled R&D and technical experts.

LEOCH BATTERY is your trusted partner for industrial and commercial energy storage solutions. Our expertise covers every aspect of the industry, from cutting-edge research and development to top-notch manufacturing, robust sales, and comprehensive services. We proudly serve clients in over 130 countries and regions worldwide.

At LEOCH BATTERY, we specialize in delivering tailored power solutions for a wide spectrum of industrial and commercial applications across the globe. Our product and service portfolio is strategically designed to meet the diverse needs of our clients, including:

--Energy Storage Systems

--Telecom & Data Center Power Solutions

--Starting Power Solutions

--Motive Power Solutions

--Battery Recycling

With a commitment to excellence, innovation, and sustainability, LEOCH BATTERY is dedicated to empowering businesses around the world with reliable, cutting-edge power solutions.

Global Leader in Battery Manufacturing

16
Production Bases

3000+
Products Categories

Production Bases


Jiangsu Ⅰ, Ⅱ


Zhaoqing


Anhui UPLUS


Anhui


Sri Lanka


Malaysia


India


Anhui Dahua


Vietnam Ⅰ, Ⅱ


Anhui Lithium


Malaysia Ⅱ


Mexico

26.7GWh
Annual Capacity

130+
Regions

16000+
Employees Worldwide

PURE LEAD
THIN PLATE TECHNOLOGY

LEOCH pure lead batteries are designed using state-of-the-art Pure Lead-Thin Plate technology to provide long service life in a compact space with high energy density. The pure lead battery is suitable for applications in both wireless and fixed-line telecommunications, UPS, cable TV, utilities and general standby applications.

LEOCH pure lead batteries have both front terminal and conventional layouts of 12V blocs. The front terminal types are designed for 19" and 23" racks in industry recognized footprints. The conventional 12V types are designed to fit popular applications.

LEOCH valve-regulated lead acid batteries use special thin pure lead plates to enhance rapid charging acceptance and endurance for a superior performance in extreme environmental conditions. The continuous plate production process is also used to ensure the battery consistency and reliability.

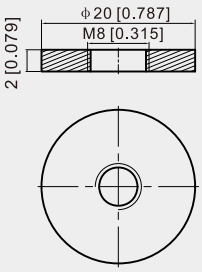
LEOCH provides the user with substantial benefits in the area of standby applications.

Key Features

- Rapid high rate charging acceptance
- Long service life
- High energy density
- 12V mono-blocs in conventional and front-access layouts
- Pure Lead-Thin Plate VRLA battery technology
- Two year shelf life
- Wide operating temperature range (-40°C~+65°C)
- Excellent high rate discharge performance

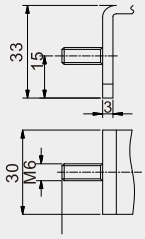
Terminals

T11 Terminal



Brass Coated With Tin; Threaded Insert
6mm STUD
Torque: 3.9~5.4 N*m

M6 Terminal



Unit: mm

Threaded M6 (T11) insert with M6/M8 front terminal adaptor

Operation

- Float operation at 2.27 V/Cell at 25°C / 77°F
- Designed for rack mounting as well as normal stands
- Minimal ventilation requirements
- Remote venting if required

Standards

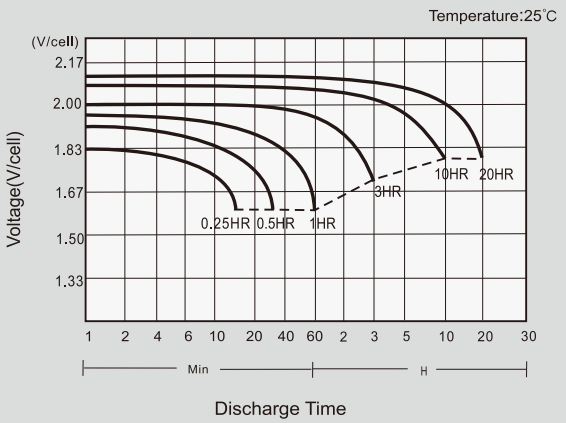
- Complied with IEC 60896-21/22:2004
- Approved as non-hazardous for shipment according to international recognized codes
- Certified with ISO9001, ISO14001, IATF16949 and UL

Design Features

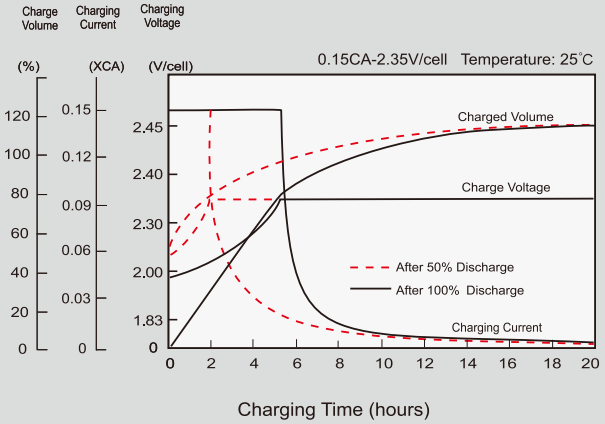
- Advanced automated production machinery to ensure consistency and reliability
- Special PC-ABS plastic materials for battery containers to give excellent high/low temperature resistance
- Advanced AGM separators to prevent short circuit and increase plate group compression rate
- Step terminal sealing structure and advanced EP ensure outstanding sealing of terminals
- COS welding and Pure Lead-Thin Plate technology designed for low internal resistance and high rate discharge
- Heat sealing technology, starved electrolyte concept for good sealing and better safe concerns
- Low self-discharging rate, 2 year shelf life @ 25°C (77°F)
- Strong M8 brass terminals for high rate discharge
- ABS co-polymer flame retardant container for UL94V-0
- Special design to prevent water loss
- Thin plate design for fast charging

PERFORMANCE CHARACTERISTICS

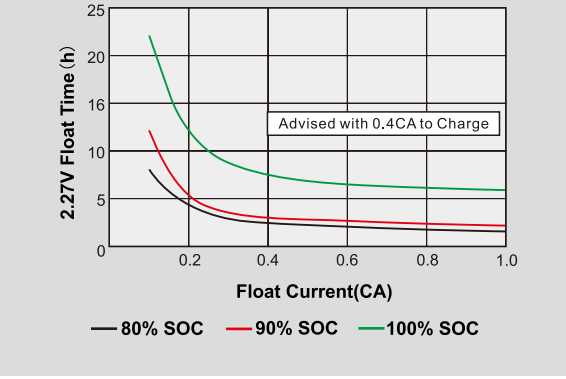
Discharge Characteristics



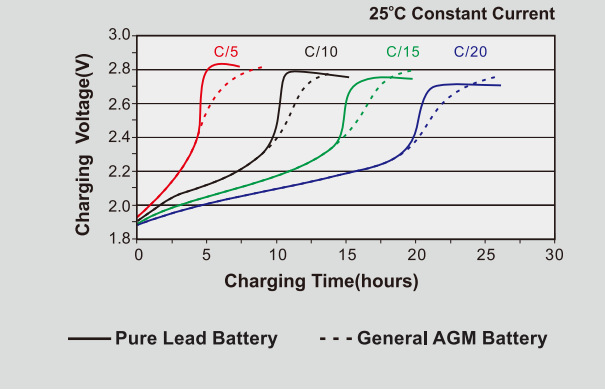
Charging Characteristics



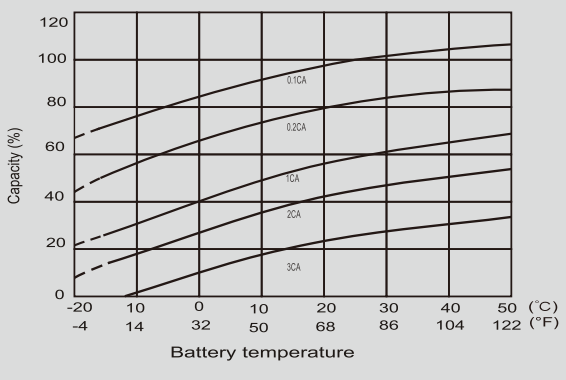
Float Current vs Float Time



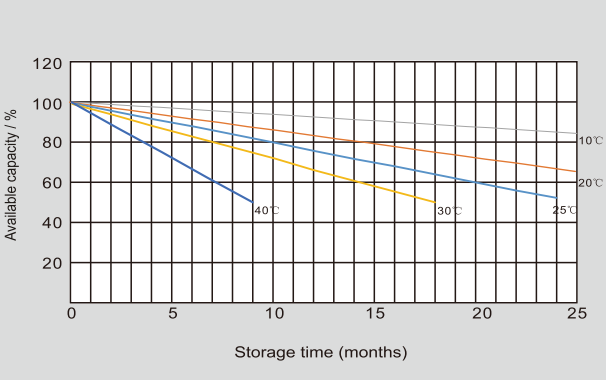
Voltage Profiles @25°C Constant Current Charging



Effects of Temperature on Capacity



Self Discharge Characteristics



PLH SERIES

LONG STANDBY LIFE

Typical Applications

- Telecommunication
- Uninterruptible Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency lighting
- Railway signal
- Aircraft signal
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply
- Auto control system
- Network Communication

PLH Series Models and Parameters

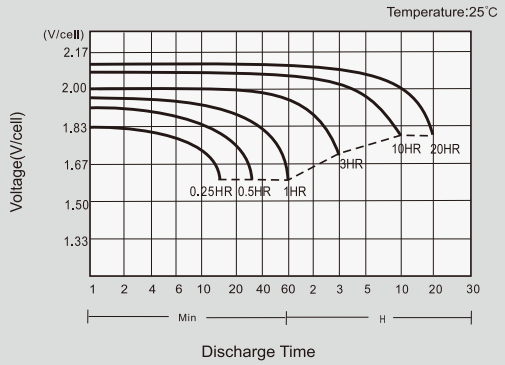
External Model	Voltage (V)	Rated Capacity	Dimension (mm)				Weight (kg/lbs)	Terminal Type
		C_{10} (Ah) @1.80V/cell	Length	Width	Height	Total Height		
PLH40FT(A)	12	38	298.7	97	184	184	12.5/27.6	M6
PLH62FT(A)	12	62	298.7	97	267	267	19.1/43.0	M6
PLH90FT(A)	12	90	405.4	108	287	287	28.7/63.3	M6
PLH100FT(A)	12	100	405.4	108	287	287	30.8/67.9	M6
PLH110FT(A)	12	110	559	125	227	227	36.5/80.5	M6
PLH150FT(A)	12	150	559	125	277	277	48.0/105.8	M6
PLH170FT(A)	12	170	559	125	320	320	54.2/119.5	M6
PLH190FT(A)	12	190	559	125	320	320	57.6/127.0	M6
PLH210FT(A)	12	210	559	125	328	328	60.5/133.4	M6

General Features

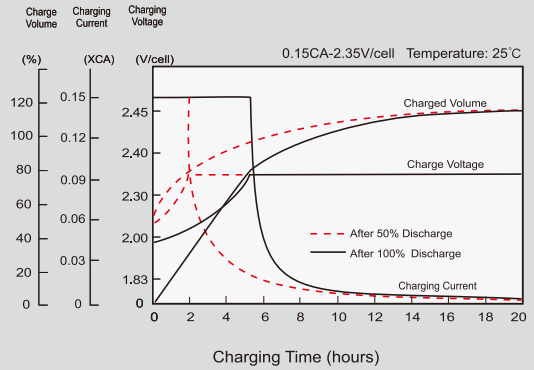
- Long float life for telecommunication applications.
- A design life up to 20 years with Pure Lead-Thin Plate and punching technologies.
- Unique vent valve design minimizes water loss and prevents air and spark going inside.
- Maintenance free with oxygen recombination technology.

PLH Series Performance Characteristics

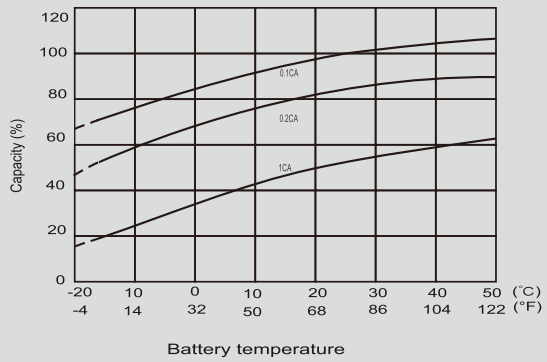
Discharge Characteristics



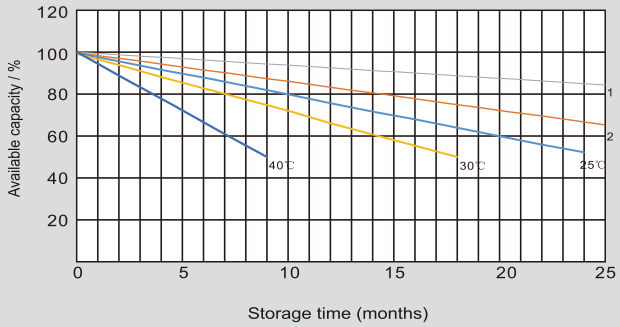
Charging Characteristics



Effects of Temperature on Discharging Time



Self Discharge Characteristics



PLX SERIES

HIGH RATE

General Features

- Excellent high rate discharge performance for emergency backup power supply, particularly UPS.
- Outstanding high rate discharge performance and high rate charge capability with Thin Plate Pure Lead technology to provide high energy density.
- High quality AGM separators minimize internal resistance to allow high current discharging properties.

Typical Applications

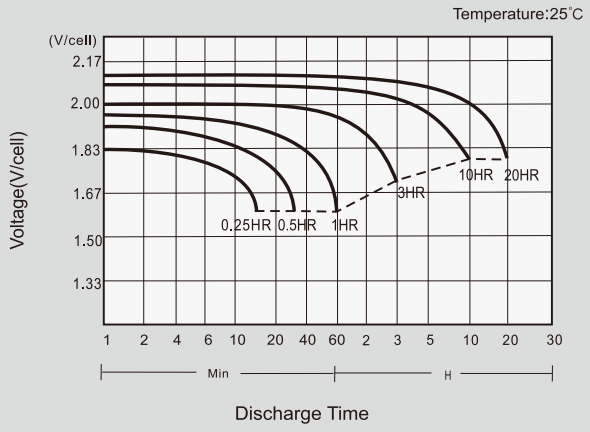
- UPS (High rate)
- High power backup supply
- Emergency power supply
- Starting system
- Power tools
- Emergency lighting
- Electrical starting

PLX Series Models and Parameters

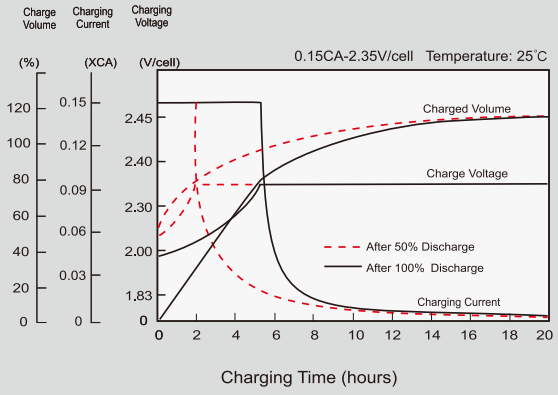
Exeternal Model	Voltage (V)	Rated Capacity		Dimension (mm)				Weight (kg/lbs)	Terminal Type
		W_{15}(W/cell) @1.67V/cell	C_{10} (Ah) @1.80V/cell	Length	Width	Height	Total Height		
PLX12-260FT(A)	12	260	62	298.7	97	267	267	19.5/43.9	M6
PLX12-400FT(A)	12	400	100	405.4	108	287	287	31.5/69.4	M6
PLX12-450FT(A)	12	450	110	559	125	227	227	37.7/83.1	M6
PLX12-620FT(A)	12	620	150	559	125	277	277	48.5/106.9	M6
PLX12-700FT(A)	12	715	190	559	125	320	320	58.0/127.9	M6
PLX12-730FT	12	730	200	571	125	320	320	61.0/134.5	M6
PLX12-330	12	330	80	260	168	208	211	25.6/56.4	T6(M6)
PLX12-360	12	360	90	306	168	207	210	30.0/66.1	T6(M6)
PLX12-420	12	420	100	340.9	170	213.2	215.7	33.5/73.9	T8(M6)
PLX12-500	12	500	125	340.9	170	273.2	275.7	41.7/91.9	T8(M6)
PLX12-540	12	540	135	340.9	170	273.2	275.7	43.5/95.9	T8(M6)
PLX12-620	12	620	150	340.9	170	273.2	275.7	44.8/98.8	T8(M6)

PLX Series Performance Characteristics

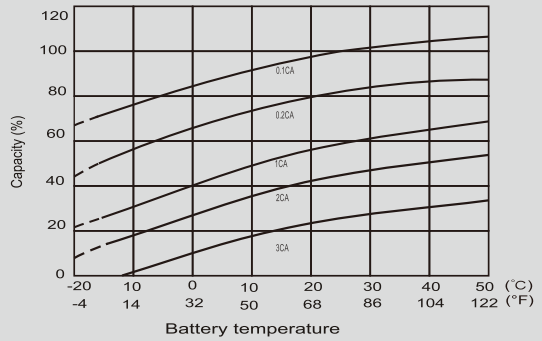
Discharge Characteristics



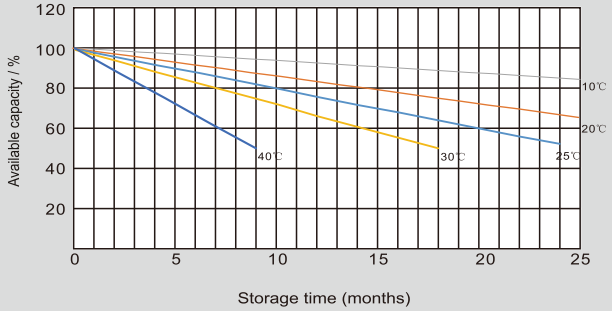
Charging Characteristics



Effects of Temperature on Capacity



Self Discharge Characteristics



HXP SERIES

HIGH RATE

General Features

- Utlizes TPPL technology, thin positive grids and unique manufacturing process to maximize corrosion resistance and service life while increasing energy density.
- Specifically designed for high-rate discharge applications.
- COS welding, TTP and ABS heat sealing - Low internal resistance and Low self-discharging rate.

Typical Applications

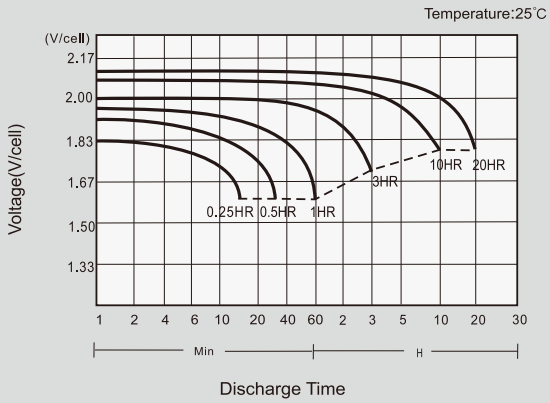
- Data centre
- UPS high power backup supply
- Power tools
- Emergency power supply
- Starting system

HXP Series Models and Parameters

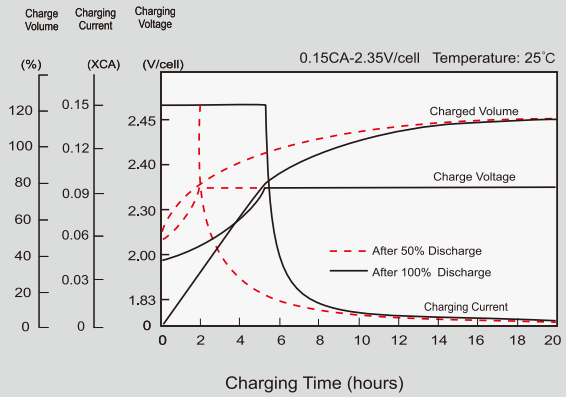
External Model	Voltage (V)	W15(W/cell) @1.67V/cell	C10(Ah) @1.80V/cell	Dimension (mm)				Weight (kg/lbs)	Terminal Type
				Length	Width	Height	Total Height		
HXP12-210	12	210	50	229	138	200	203	16.5/36.4	T6(M6)
HXP12-300	12	312.4	80	260	168	208	211	24.9/54.9	T6(M6)
HXP12-350	12	375.4	90	306	168	207	210	29.5/65.0	T6(M6)
HXP12-400	12	424.3	100	340.9	170	213.2	215.7	33.2/73.2	T8(M6)
HXP12-540	12	550	135	340.9	170	273.2	275.7	43.5/95.9	T8(M6)

HXP Series Performance Characteristics

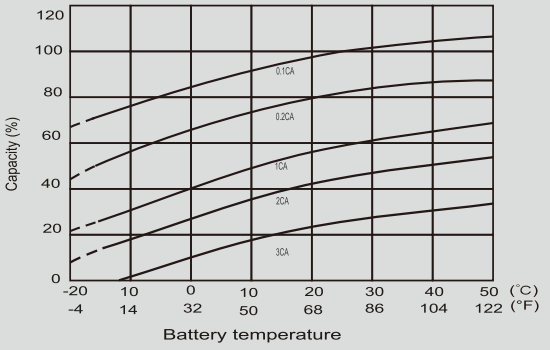
Discharge Characteristics



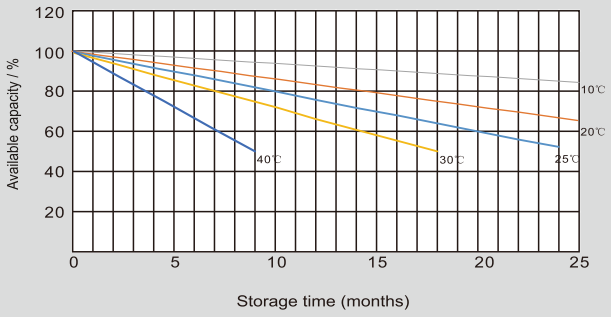
Charging Characteristics



Effects of Temperature on Capacity



Self Discharge Characteristics



Operating Conditions & Warranty

1. Charge and discharge:

- All charging and discharging need to be controlled and confirmed by data recorders.
- The permissible continuous AC ripple voltage at the battery terminals shall not exceed 1.5% peak to peak of the float charge voltage, and all not exceed 4% peak to peak instantaneously at anytime.

2. Temperature:

Warranty is limited to temperature not exceeding 25°C (77°F). Above 25°C (77°F), temperature compensation shall be required as designed battery life performance is not guaranteed.

- Warranty period will be reduced 50% for every 10°C (50°F) increase in average operating temperature of 25°C(77°F)
- Any battery temperature shall not exceed 45°C (113°F) for more than 30 days.

3. The vent caps can not be tampered with or removed.

4. The batteries can not be contaminated by any external objects.

5. Warranty does not cover damage due to neglecting or abusing such as improper installation, freezing, fire, flooding, or any acts of nature.

LEOCH BATTERIES

6. Registration, installation and periodic inspection reports need to be maintained by the end user and made available to LEOCH on request as required to support any warranty claim. At least once in six month, users shall complete an inspection report including records of surface temperatures, and float voltages. These records must be maintained for warranty claim purposes.

7. All maintenance should be performed as recommended in the Leoch Battery Service Manual.

8. The warranty period shall be adjusted based on actual operating conditions such as temperature and frequency of charge/discharge cycles as published by Leoch.

9. Storage batteries or systems shall be provided with a freshening charge every 5-6 months, prior to final installation. Storage: a dry area with ambient temperature no higher than 25°C (77°F) is required (in a UPS application).

10. Deep discharging is not recommended for normal life calculation. We reserve the right to track BMS data record which can reflect the usage of the batteries. The extreme condition (high ambient and operational temperature, higher discharging rate) will lower the battery life.

BATTERY CARE AND MAINTENANCE

ISO14001 ISO9001 ISO45001

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