



# PLH-Pure Lead Punched Grid PLH40FT(A) (12V38Ah)

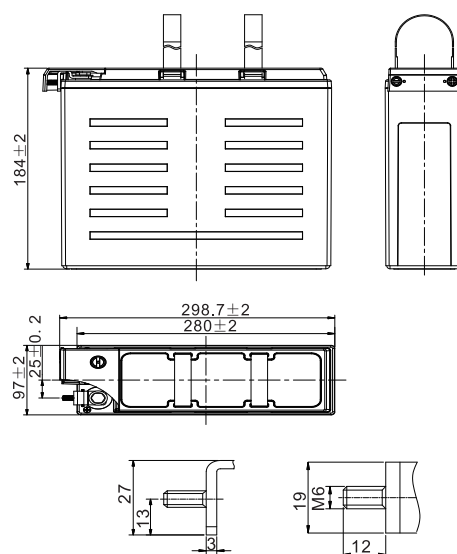


## Specifications

Rated Voltage	12V	
Nominal Capacity	C <sub>10</sub> , 1.80V/cell	38Ah
	C <sub>8</sub> , 1.75V/cell	38Ah
Dimension	Length	298.7±3mm (11.76 inches)
	Width	97±2mm (3.82 inches)
	Container Height	184±3mm (7.24 inches)
	Total Height	184±3mm (7.24 inches)
Approx. Weight	12.5 Kg (27.5 lbs)	
Terminal	M6	
Container Material	PC-ABS flame retardant jar and cover to UL94 V-0	
Rated Capacity (25°C)	42.4 Ah	(20hr, 2.12A, 1.80V/cell)
	38.0 Ah	(10hr, 3.80A, 1.80V/cell)
	34.8 Ah	(5hr, 6.96A, 1.75V/cell)
	32.4 Ah	(3hr, 10.8A, 1.75V/cell)
	27.2 Ah	(1hr, 27.2A, 1.67V/cell)
Max. Discharge Current	456A	
Internal Resistance (25°C)	Approx. 4.9mΩ(Fully charged)	
Operating Temp. Range	Discharge	-40 ~ 65°C (-40 ~ 149°F)
	Charge	0 ~ 40°C (32 ~ 104°F)
	Storage	-20 ~ 40°C (-4 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max. Charging Current(25°C)	11.4A	
Charge voltage(25°C)	Float	13.62V
	Temp. Coefficient	-3mV/cell/°C
	Equalization	14.1~14.4V
Effect of temp. to Capacity	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	<p>PLH series batteries can be stored up to 24 months at 25°C(77°F), For higher temperatures the time interval will be shorter.</p> <p>Battery needs to be given a freshening charge when the OCV approach 2.10V/cell or when the maximum storage time is reached, whichever occurs first.</p>	



## Layout



## Constant Current Discharge (Amperes) at 25 °C (77° F)

F.V/Time	10 min	15min	20min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	77.7	64.2	55.1	42.7	31.7	24.7	15.9	10.6	8.50	6.63	4.57	3.72	2.08
1.80V/cell	86.7	70.5	59.0	44.8	32.9	25.6	16.1	10.7	8.56	6.80	4.66	3.80	2.12
1.75V/cell	91.9	73.7	61.6	46.2	33.8	26.3	16.2	10.8	8.59	6.96	4.75	3.86	2.15
1.70V/cell	96.7	76.8	63.5	47.5	34.5	26.8	16.4	10.9	8.63	7.09	4.80	3.86	2.17
1.67V/cell	104.9	81.6	66.5	48.8	35.1	27.2	16.5	11.0	8.65	7.20	4.86	3.94	2.18
1.60V/cell	110.6	85.1	69.0	50.0	35.7	27.4	16.6	11.1	8.69	7.31	4.93	3.97	2.26

## Constant Power Discharge (Watts/cell) at 25 °C (77° F)

F.V/Time	10 min	15min	20min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	147.4	122.8	106.0	83.1	62.6	49.0	31.8	21.2	17.1	13.4	9.26	7.58	4.25
1.80V/cell	161.9	133.1	112.4	86.6	64.7	50.4	32.0	21.4	17.1	13.7	9.40	7.72	4.32
1.75V/cell	169.8	137.8	116.4	88.6	65.9	51.6	32.0	21.5	17.2	13.9	9.57	7.80	4.36
1.70V/cell	176.0	141.9	118.8	90.4	66.9	52.2	32.3	21.7	17.2	14.2	9.66	7.79	4.40
1.67V/cell	189.0	149.2	123.4	92.4	67.8	52.8	32.4	21.7	17.2	14.4	9.76	7.92	4.41
1.60V/cell	194.0	152.4	126.0	93.5	68.2	52.7	32.4	21.8	17.2	14.5	9.82	7.94	4.57



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## Applications

- Telecommunication
- Railway signal
- Alarm and security system
- Power station systems
- Emergency power supply

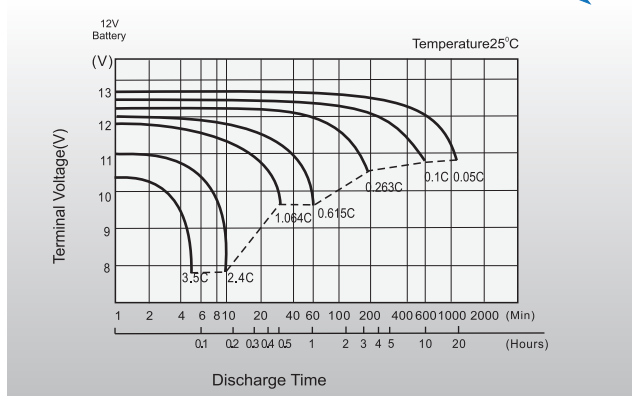
## General Features

- 20 years design life(25°C)
- Premium ABS+PC jar & covers, Flame Retardant to UL94 V-0
- High-rate performance, high energy density
- High quality AGM separators minimize electrical resistance to allow high current discharging properties

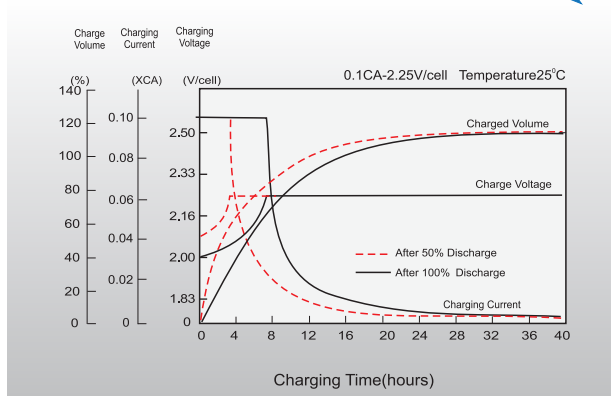
## Standards

- Meets Telcordia® NEBS™ Level III, GR63 Requirements
- Classified as "Very Long Life" according to Eurobat IEC 60896-21 & 22
- CE, UL Certified
- Manufactured in LEOCH® IATF16949, OSHAS 18001, ISO 9001 and ISO 14001 Certified Production Facilities

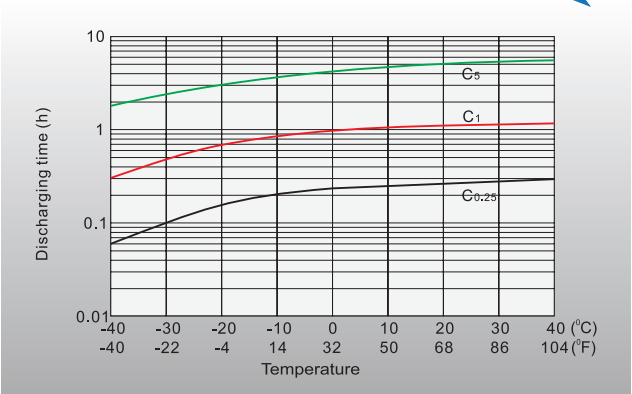
## Discharge Characteristics



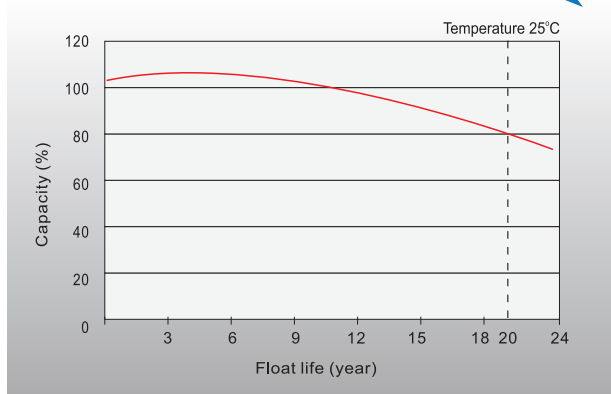
## Float Charging Characteristics



## Effects of Temperature on Discharging Time



## Float Life



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