



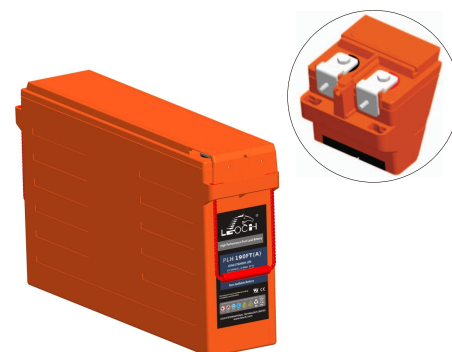
# PLH-Pure Lead Long Standby Life

## PLH190FT(A) (12V190Ah)

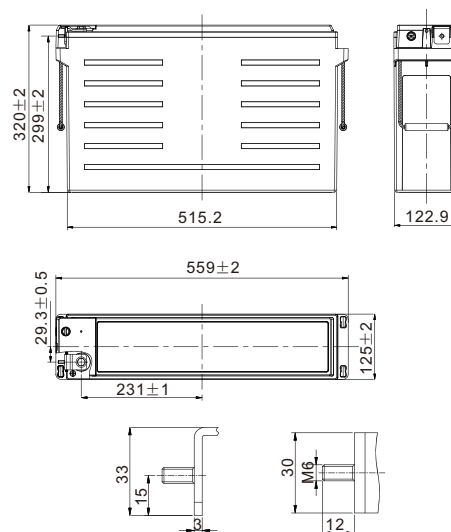


### Specifications

Rated Voltage	12V	
Nominal Capacity	C <sub>10</sub> , 1.80V/cell	190Ah
	C <sub>8</sub> , 1.75V/cell	190Ah
Dimension	Length	559±3mm (22.01 inches)
	Width	125±2mm (4.92 inches)
	Container Height	320±3mm (12.6 inches)
	Total Height	320±3mm (12.6 inches)
Approx. Weight	57.6 Kg (127.0 lbs)	
Terminal	M6	
Container Material	PC-ABS flame retardant jar and cover to UL94 V-0	
Rated Capacity (25°C)	199.6 Ah	(20hr, 9.98A, 1.80V/cell)
	190.0 Ah	(10hr, 19.0A, 1.80V/cell)
	173.0 Ah	(5hr, 34.6A, 1.75V/cell)
	166.8 Ah	(3hr, 55.6A, 1.75V/cell)
	138.9 Ah	(1hr, 138.9A, 1.67V/cell)
Max. Discharge Current	2280A	
Internal Resistance (25°C)	Approx. 3.0mΩ(Fully charged)	
Operating Temp. Range	Discharge	-40 ~ 65°C (-40 ~ 149°F)
	Charge	0 ~ 54°C (32 ~ 129°F)
	Storage	-20 ~ 40°C (-4 ~ 104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max. Charging Current(25°C)	57.0A	
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



Unit: mm

### 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	341.5	292.9	249.5	195.0	149.8	123.1	73.3	52.8	41.2	33.1	22.6	18.4	9.67
1.80V/cell	377.8	321.9	267.1	210.0	158.3	128.7	76.2	54.6	42.1	34.0	23.4	19.0	9.98
1.75V/cell	408.5	343.7	282.3	218.8	162.5	133.7	77.8	55.6	43.1	34.6	23.8	19.2	10.1
1.70V/cell	434.6	359.7	295.2	226.0	167.3	136.8	78.9	56.3	43.5	35.0	23.9	19.4	10.1
1.67V/cell	456.3	372.5	301.7	231.0	170.3	138.9	79.5	57.1	43.7	35.2	24.0	19.5	10.2
1.60V/cell	482.0	391.2	311.9	236.2	174.7	140.2	80.2	58.0	44.1	35.4	24.1	19.7	10.3

### 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	647.5	560.5	480.0	379.7	295.6	243.6	145.7	105.5	82.4	66.5	46.5	37.5	19.7
1.80V/cell	705.2	607.9	509.1	406.1	311.0	253.5	151.2	108.9	84.2	68.6	47.3	38.6	20.3
1.75V/cell	755.0	642.7	533.5	419.9	316.9	261.8	153.7	110.9	86.0	69.2	47.9	38.8	20.5
1.70V/cell	790.7	664.0	552.0	429.9	324.3	267.0	155.9	111.8	86.6	69.8	47.9	39.0	20.6
1.67V/cell	822.0	690.5	560.0	437.9	329.0	269.6	156.5	113.1	87.0	70.0	48.1	39.1	20.6
1.60V/cell	845.3	700.5	569.2	442.0	333.3	269.9	158.5	114.8	87.5	70.5	48.3	39.8	20.6



# PLH-Pure Lead Long Standby Life

## PLH190FT(A) (12V190Ah)



### Applications

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

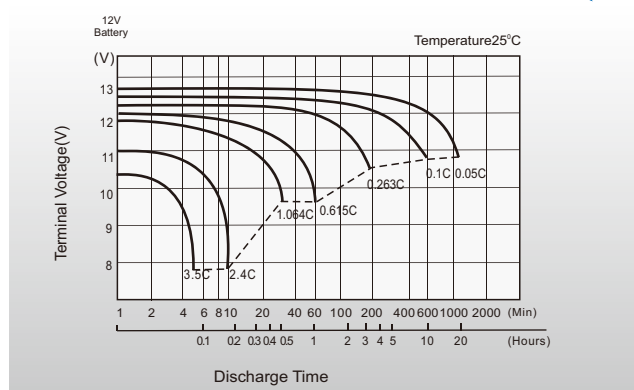
### General Features

- 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

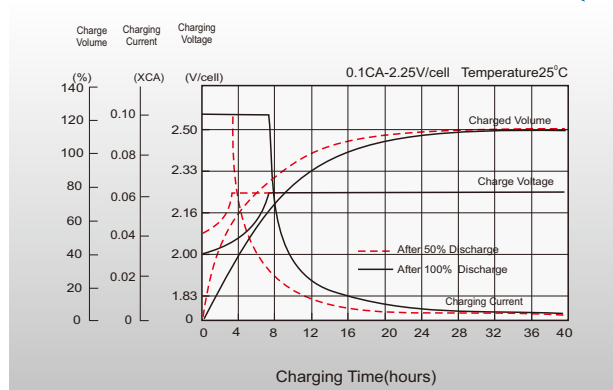
### Standards

- Compliance with IEC 60896 standards
- Classified as "Very Long Life" according to Eurobat
- CE, UL Certified
- Manufactured in Leoch@IATF16949, OHSAS 18001,ISO 9001 and ISO 14001 certified production facilities

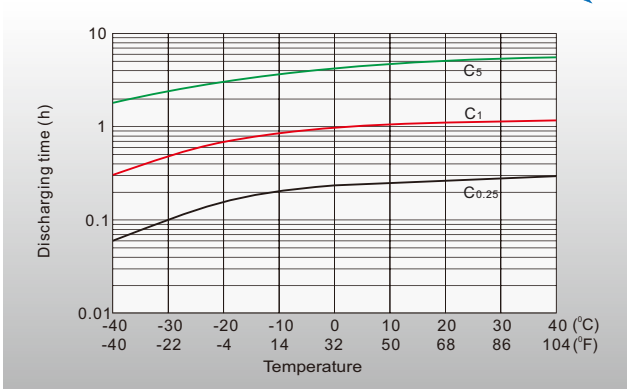
### Discharge Characteristics



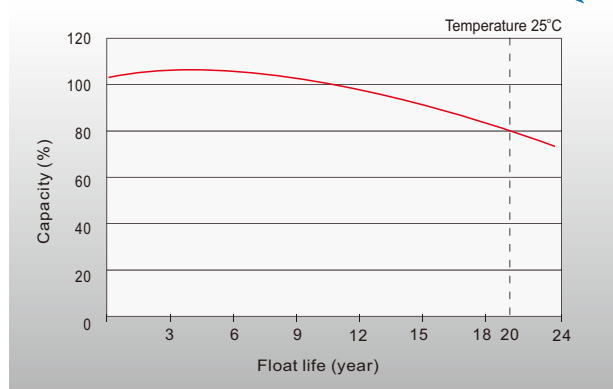
### Float Charging Characteristics



### Effects of Temperature on Discharging Time



### Float Life



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