

# LPS SERIES-Solar Power

## LPS12-20 (12V20.7AH)

### Specification

Nominal Voltage	12V	
Nominal Capacity(100HR)	20.7AH	
Dimension	Length	181.5±1mm (7.14 inches)
	Width	77±1mm (3.03 inches)
	Container Height	167.5±1mm (6.59 inches)
	Total Height (with Terminal)	167.5±1mm (6.59inches)
	Approx Weight	Approx 6.0 Kg (13.2 lbs)
Terminal	T3 / T12	
Container Material	ABS	
Rated Capacity	20.7AH/0.207A	(100hr ,1.80V/cell,25°C/77°F)
	18.9AH/0.945A	(20hr ,1.80V/cell,25°C/77°F)
	18.0AH/1.80A	(10hr,1.80V/cell,25°C/77°F)
	16.0AH/3.20A	(5hr,1.75V/cell,25°C/77°F)
	11.0AH/11.0A	(1hr,1.60V/cell,25°C/77°F)
Max. Discharge Current	216A (5s)	
Internal Resistance	Approx 15.0mΩ	
Operating Temp.Range	Discharge	-15~50°C (5~122°F)
	Charge	0~40°C (32~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than5.4A.Voltage	
	14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage	
	13.5V~13.8V at 25°C(77°F)Temp. Coefficient -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Leoch LPS series battery may be stored for up to 6 months at 25°C(77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	



### Applications

- ◆ Green energy systems (solar, wind, hydro, etc)
- ◆ Solar power stations
- ◆ Telecommunications installations
- ◆ Measurement stations
- ◆ Pump systems
- ◆ Signal station
- ◆ Survey and Mapping system
- ◆ Emergency lighting
- ◆ Railway crossing
- ◆ Traffic lights
- ◆ Street lightening
- ◆ Lawn lamp
- ◆ Street signs
- ◆ SOS pillars
- ◆ Alarm installations
- ◆ Weekend cottage camping
- ◆ Caravans
- ◆ Boats or buoys



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

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h	48h	100h
1.85V/cell	20.6	17.1	13.3	10.5	8.52	5.58	4.19	3.43	2.90	2.03	1.72	0.916	0.412	0.203
1.80V/cell	22.8	18.8	14.3	11.2	8.98	5.94	4.42	3.60	3.05	2.13	1.80	0.945	0.419	0.207
1.75V/cell	25.3	20.6	15.4	12.0	9.69	6.22	4.68	3.76	3.20	2.19	1.84	0.965	0.426	0.209
1.70V/cell	27.7	22.5	16.9	12.5	10.2	6.56	4.89	3.91	3.33	2.27	1.90	0.984	0.431	0.212
1.65V/cell	29.3	23.8	17.9	13.3	10.6	6.79	5.07	4.05	3.40	2.33	1.94	1.007	0.438	0.215
1.60V/cell	32.1	25.8	19.0	13.7	11.0	7.07	5.24	4.18	3.52	2.39	1.98	1.031	0.446	0.217

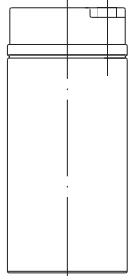
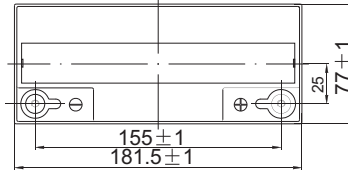
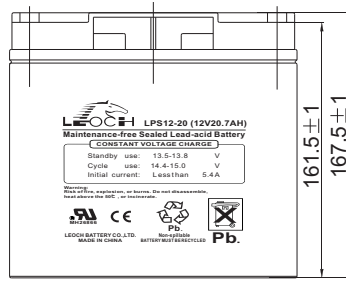
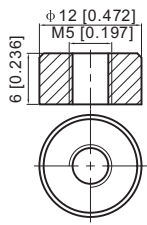
### Constant Power Discharge (Watts) at 25 °C (77°F)

F.V/Time	15min	20min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h	48h	100h
1.85V/cell	38.8	32.6	25.6	20.4	16.7	11.0	8.24	6.77	5.74	4.04	3.45	1.83	0.829	0.407
1.80V/cell	42.5	35.3	27.2	21.4	17.4	11.6	8.65	7.06	6.00	4.23	3.59	1.89	0.839	0.416
1.75V/cell	46.5	38.3	29.0	22.8	18.7	12.1	9.12	7.35	6.29	4.34	3.67	1.93	0.851	0.418
1.70V/cell	50.1	41.5	31.7	23.7	19.7	12.7	9.52	7.65	6.53	4.50	3.78	1.96	0.860	0.423
1.65V/cell	52.9	43.7	33.3	25.1	20.3	13.1	9.85	7.90	6.66	4.61	3.86	2.01	0.875	0.429
1.60V/cell	56.8	46.7	35.0	25.7	20.9	13.5	10.11	8.11	6.86	4.72	3.94	2.05	0.889	0.432

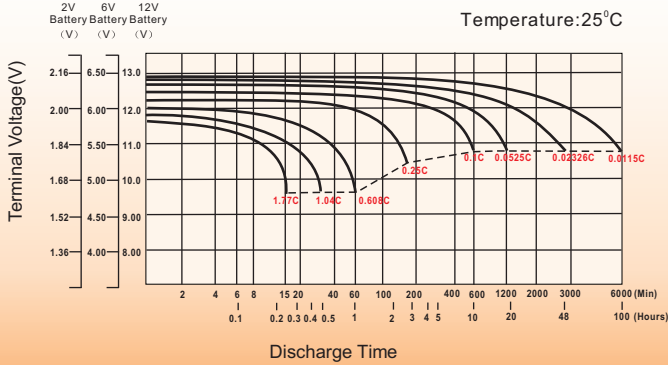
## Dimensions

### T12Terminal

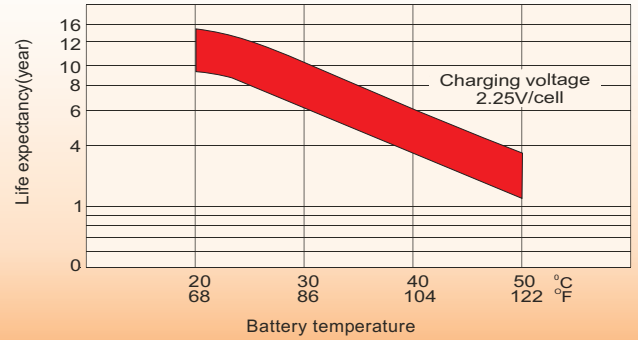
Unit: mm [inches]



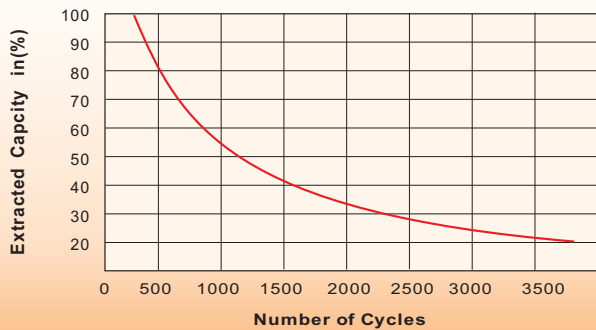
## Discharge Characteristics



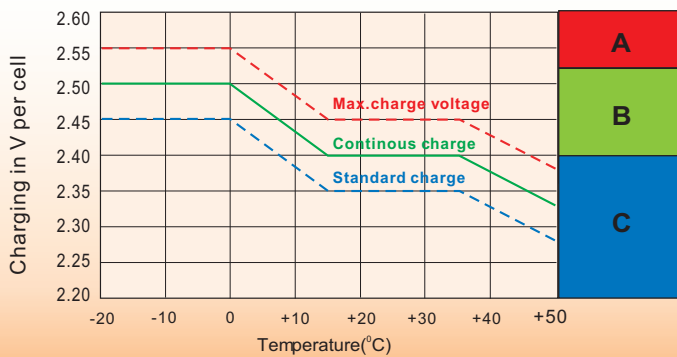
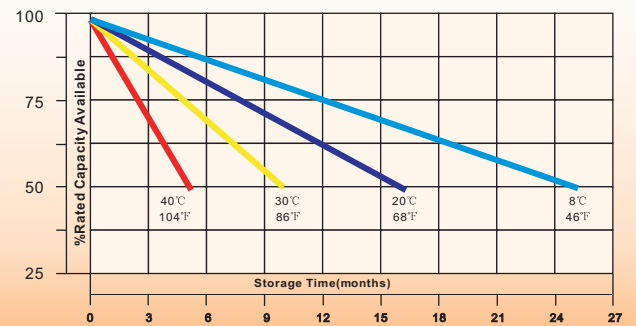
## Effect of Temperature on Long Term Float Life



## Cycle Service Life



## Self-Discharge at Different Temperatures



## Charge Mode

- A** With switch regulator (two-step controller) charge on curve max.charge voltage for max.2 hrs/day then switch over to continuous charge
- B** Standard charge without switching
- C** Boost charge (Equalizing charge with external generator) charge on curve continuous charge for max. 5 hrs/month, then switch over to curve Standard charge

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