



# LPS SERIES-Solar Power

## LPS12-50 (12V50AH)

### Specification

Nominal Voltage	12V	
Nominal Capacity(100HR)	50AH	
Dimension	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container Height	170±2mm (6.69 inches)
	Total Height (with Terminal)	170±2mm (6.69 inches)
Approx Weight	Approx 14.5 Kg (32.0 lbs)	
Terminal	T6	
Container Material	ABS	
Rated Capacity	50.0 AH/0.5A	(100hr, 1.80V/cell, 25°C/77°F)
	45.0 AH/2.25A	(20hr, 1.80V/cell, 25°C/77°F)
	42.9 AH/4.29A	(10hr, 1.80V/cell, 25°C/77°F)
	37.4 AH/7.49A	(5hr, 1.75V/cell, 25°C/77°F)
	26.1 AH/26.1A	(1hr, 1.60V/cell, 25°C/77°F)
Max. Discharge Current	540A (5s)	
Internal Resistance	Approx 9.0mΩ	
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 than 13.5A. 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 batteries 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	48.8	40.5	31.5	24.9	20.2	13.1	9.92	8.13	6.87	4.80	4.11	2.18	0.98	0.490
1.80V/cell	54.1	44.6	34.0	26.5	21.3	14.0	10.5	8.52	7.22	5.04	4.29	2.25	1.00	0.500
1.75V/cell	60.0	48.9	36.6	28.3	22.9	14.7	11.1	8.90	7.49	5.19	4.38	2.30	1.01	0.505
1.70V/cell	65.6	53.4	40.2	29.6	24.2	15.4	11.6	9.27	7.79	5.38	4.52	2.34	1.03	0.512
1.65V/cell	69.4	56.3	42.3	31.4	25.1	16.0	12.0	9.59	8.06	5.52	4.62	2.40	1.04	0.519
1.60V/cell	76.1	61.1	45.0	32.5	26.1	16.6	12.4	9.90	8.35	5.67	4.72	2.46	1.06	0.524

### Constant Power Discharge (Watts/cell) 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	91.6	76.8	60.3	48.2	39.3	25.7	19.4	16.0	13.5	9.52	8.17	4.35	1.97	0.98
1.80V/cell	100.1	83.3	64.1	50.6	41.0	27.1	20.4	16.7	14.1	10.0	8.52	4.48	1.99	1.00
1.75V/cell	109.7	90.4	68.4	53.8	44.1	28.3	21.5	17.3	14.6	10.2	8.69	4.57	2.02	1.01
1.70V/cell	118.2	97.9	74.7	56.0	46.4	29.8	22.4	18.0	15.2	10.6	8.96	4.65	2.04	1.02
1.65V/cell	124.7	103.0	78.4	59.2	47.8	30.7	23.2	18.6	15.7	10.9	9.15	4.76	2.08	1.03
1.60V/cell	133.9	110.2	82.4	60.7	49.3	31.7	23.8	19.1	16.2	11.1	9.34	4.86	2.11	1.04

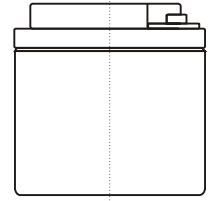
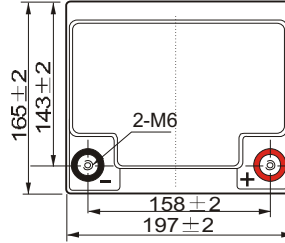
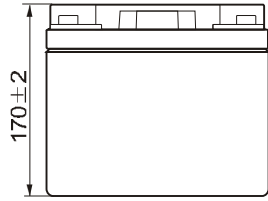
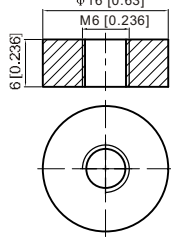
Specifications subject to change without notice.



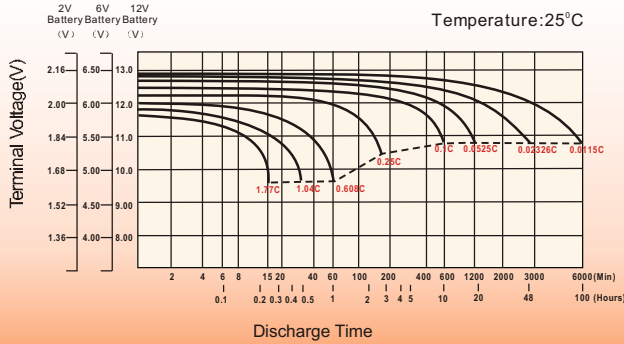
## Dimensions

### T6 Terminal

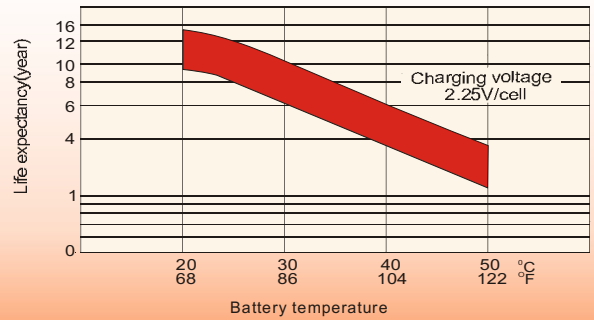
Unit: mm [inches]  
+16 [0.63]



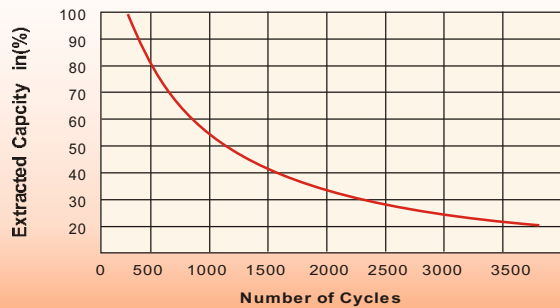
## Discharge Characteristics



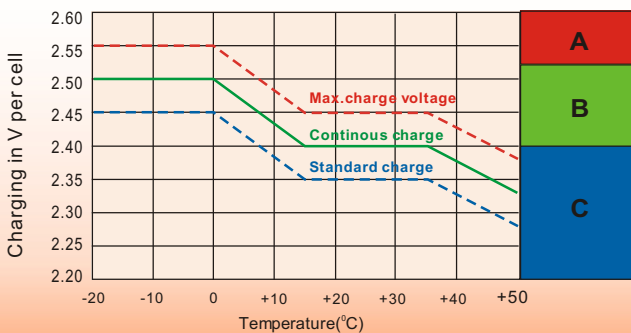
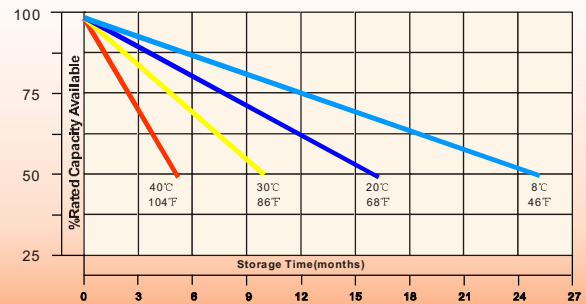
## Effect of Temperature on Long Term Float Life



## 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

## Sales Office

### China sales office:

Add: 5th Floor, Xinbaohui Bldg., Nanshan Blvd.,  
Nanshan, Shenzhen, China. 518052  
Tel: +86-755-86036060 (100 lines)  
Fax: +86-755-26067269  
E-mail: export@leoch.com  
Http://www.leoch.com

### HongKong sales office:

Add: Workshop C, 33/F, TML Tower,  
No. 3 Hoi Shing Road, Tsuen Wan,  
New Territories, Hong Kong  
Tel: +852 35786666  
Fax: +852 21170016  
E-mail: sales.hk@leoch.com

### Singapore sales office:

Add: No. 1 Tech Park Crescent,  
Singapore 638131  
Tel: +65 68416629  
Fax: +65 68443210  
Email: sales.sg@leoch.com

### North America sales office:

Add: 19751 Descartes, Unit A,  
Foothill Ranch, CA 92610, USA  
Tel: 949-588-5853  
Fax: 949-588-5966  
E-mail: sales@leoch.us  
Http://www.leoch.com

### Europe sales office:

Add: 9B Wheatstone Court, Waterwells  
Business Park, Gloucester, GL2-2AQ,  
UK United Kingdom  
Tel: +44(0) 1452 729428 / 1452 729696  
Fax: +44(0) 1452-690125  
E-mail: Sales.Europe@leoch.com