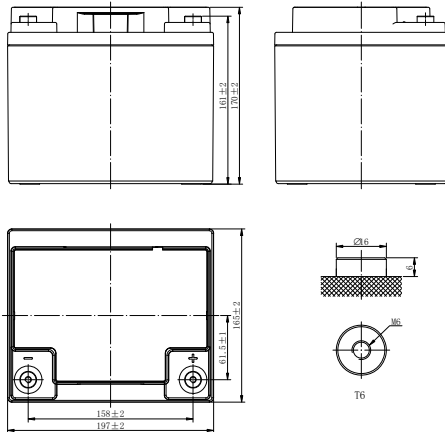


# LPL SERIES-LONG LIFE STANDBY

## LPL12-38 (12V41Ah)



### CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Capacity (25°C)	C <sub>10</sub> , 1.80V/cell	41Ah
Dimension	Length	197mm (7.76inches)
	Width	165mm (6.50inches)
	Container Height	170mm (6.69inches)
	Total Height	170mm (6.69inches)
Approx Weight	14.2kg (31.3lbs)	
Terminal	T6(M6)	
Container Material	ABS (UL94 HB or V-0 optional)	
Short-circuit current	1025A	
Internal Resistance (25°C)	Approx 9 mΩ (Fully charged)	
Operating Temp. Range	Discharge	-15~50°C (5~122°F)
	Charge	-20~40°C (-4~104°F)
	Storage	-15~40°C (5~104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max.Charging Current (25°C)	0.3C	
Charge voltage (25°C)	Standby Use	Cycle Use
	2.25-2.30V/cell	2.35-2.40V/cell
Temp. Coefficient	-3mV/cell/°C	-5mV/cell/°C
	40°C (104°F)	103%
Effect of temp. to Capacity	25°C (77°F)	100%
	0°C (32°F)	86%
	≤3% per month at 25°C (77°F). LPL series batteries may be stored 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.	
Self Discharge		

### DISCHARGE TABLE

Constant Current Discharge (Amperes) at 25°C (77°F)																
F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	85.4	63.7	53.0	44.6	34.3	25.6	21.6	16.2	12.9	9.45	7.79	6.51	5.66	4.59	3.84	2.06
1.80V/cell	99.5	75.1	61.7	51.4	38.7	28.6	23.9	17.8	14.1	10.3	8.40	7.02	6.07	4.92	4.10	2.18
1.75V/cell	108.5	80.5	65.2	53.9	40.5	29.8	24.8	18.3	14.6	10.5	8.61	7.18	6.20	5.01	4.16	2.20
1.70V/cell	117.5	85.9	69.0	56.8	42.3	30.9	25.7	19.0	15.0	10.9	8.83	7.33	6.32	5.10	4.23	2.23
1.67V/cell	122.7	89.0	71.2	58.3	43.4	31.6	26.2	19.3	15.2	11.1	8.95	7.43	6.40	5.15	4.26	2.24
1.60V/cell	135.3	96.4	76.3	62.1	45.8	33.3	27.5	20.1	15.9	11.4	9.17	7.65	6.58	5.28	4.36	2.29

Constant Power Discharge (Watts/cell) at 25°C (77°F)																
F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	162.2	121.9	101.9	86.0	66.3	49.6	42.0	31.6	25.3	18.4	15.3	12.8	11.1	9.08	7.59	4.09
1.80V/cell	186.2	142.1	117.3	98.1	74.2	55.0	46.2	34.4	27.4	20.1	16.5	13.8	11.9	9.70	8.10	4.32
1.75V/cell	200.0	150.4	122.8	101.8	77.1	56.9	47.6	35.3	28.2	20.5	16.8	14.0	12.1	9.80	8.21	4.35
1.70V/cell	213.0	158.3	128.3	106.2	79.7	58.5	48.9	36.4	28.8	21.0	17.1	14.3	12.4	10.0	8.33	4.41
1.67V/cell	220.3	162.9	132.7	108.4	81.2	59.6	49.7	36.8	29.2	21.2	17.3	14.5	12.5	10.1	8.38	4.44
1.60V/cell	236.8	172.7	138.5	113.6	84.6	62.0	51.6	38.0	30.3	22.0	17.9	14.8	12.8	10.3	8.56	4.53

### Constant Current Discharge (Amperes) at 20°C (68°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	81.3	60.7	50.5	42.5	32.7	24.4	20.6	15.7	12.5	9.17	7.56	6.32	5.50	4.46	3.73	2.00
1.80V/cell	94.8	71.5	58.6	49.0	36.8	27.2	22.7	17.3	13.7	10.0	8.16	6.82	5.89	4.77	3.98	2.12
1.75V/cell	103.3	76.7	62.1	51.3	38.6	28.4	23.6	17.8	14.2	10.2	8.36	6.97	6.02	4.86	4.04	2.14
1.70V/cell	111.9	81.8	65.6	54.1	40.2	29.4	24.4	18.4	14.6	10.6	8.57	7.12	6.14	4.95	4.11	2.17
1.67V/cell	116.9	84.8	67.8	55.5	41.3	30.1	25.0	18.7	14.8	10.8	8.69	7.21	6.21	5.00	4.14	2.17
1.60V/cell	128.9	91.8	72.7	59.1	43.6	31.7	26.2	19.5	15.4	11.1	8.90	7.43	6.39	5.13	4.23	2.22

### Constant Power Discharge (Watts/cell) at 20°C (68°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	1.5h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	154.5	116.1	97.0	81.9	63.1	47.2	40.0	30.7	24.6	17.9	14.9	12.4	10.8	8.82	7.37	3.97
1.80V/cell	177.3	135.3	111.7	93.4	70.7	52.4	44.0	33.4	26.6	19.5	16.0	13.4	11.6	9.42	7.86	4.19
1.75V/cell	190.5	143.2	117.0	97.0	73.4	54.2	45.3	34.3	27.4	19.9	16.3	13.6	11.7	9.51	7.97	4.22
1.70V/cell	202.9	150.8	122.2	101.1	75.9	55.7	46.6	35.3	28.0	20.4	16.6	13.9	12.0	9.71	8.09	4.28
1.67V/cell	209.8	155.1	126.4	103.2	77.3	56.8	47.3	35.7	28.3	20.6	16.8	14.1	12.1	9.81	8.14	4.31
1.60V/cell	225.5	164.5	131.9	108.2	80.6	59.0	49.1	36.9	29.4	21.4	17.4	14.4	12.4	10.0	8.31	4.40

## APPLICATIONS

- UPS and EPS
- Emergency light
- Railway signal and aircraft signal system
- Marine and power stations
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply, DC power supply

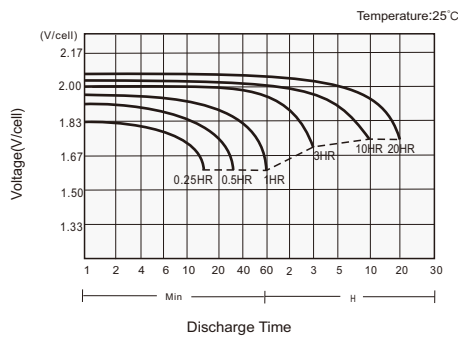
## GENERAL FEATURES

- 10~12 years design life (25°C)
- Lead calcium alloy, sealed design, no watering required
- Puncture resistant micro-porous glass mat separators extend life
- Unique technology optimizes power capacity, cell consistency, and long-term reliability
- Designed for a wide range of applications

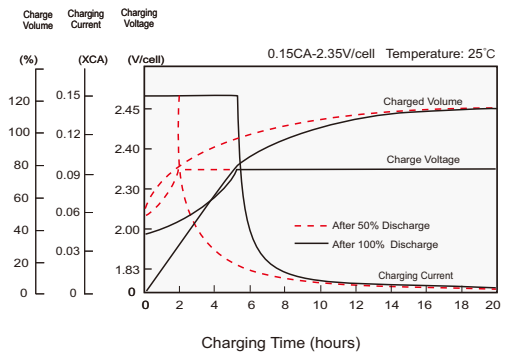
## STANDARDS

- Compliance with IEC 60896 standards, EU Battery Directive
- Classified as "Very Long Life" according to Eurobat
- UL, CE Approved
- Manufactured in Leoch@IATF 16949, ISO 45001, ISO 9001 and ISO 14001 certified production facilities

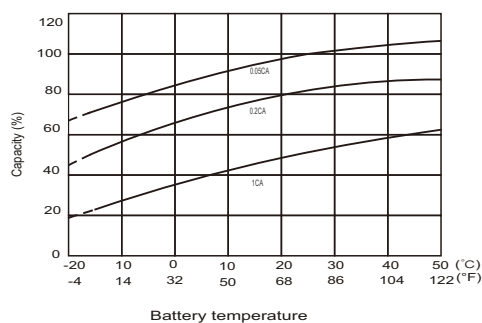
### Discharge Characteristics



### Charging Characteristics



### Effects of Temperature on Capacity



### Self Discharge Characteristics

