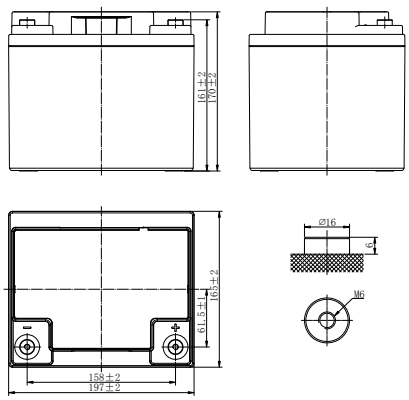
LPL Series-Long Life Standby
LPL12-45(12V45Ah)

GACELL®
The right battery

Specifications

Rated Voltage		12V
Nominal Capacity	C_{10},1.80V/cell	45Ah
Dimension	Length	197±2mm (7.76 inches)
	Width	165±2mm (6.50 inches)
	Container Height	170±2mm (6.69 inches)
	Total Height	170±2mm (6.69 inches)
Approx Weight		14.2 Kg (31.3 lbs)
Terminal		M6
Container Material		ABS
Rated Capacity(25℃)	46.8 Ah	C20(2.34A,1.80V/cell)
	45.0 Ah	C10(4.50A,1.80V/cell)
	40.6 Ah	C5(8.11A,1.75V/cell)
	36.9 Ah	C3(12.3A,1.75V/cell)
	28.4 Ah	C1(28.4A,1.60V/cell)
Max. Discharge Current		450A (5s)
Internal Resistance(25℃)		Approx 10mΩ
Operating Temp. Range	Discharge	-15 ~ 50℃ (5 ~ 122℉)
	Charge	-20 ~ 40℃ (-4 ~ 104℉)
	Storage	-15 ~ 40℃ (5 ~ 104℉)
Nominal Operating Temp. Range		25±3℃ (77±5℉)
Standby Use	Initial Charging Current less than 13.5A. Voltage 2.23V~2.27V at 25℃(77℉)Temp. Coefficient -3mV/℃	
Equalization Use	Initial Charging Current less than 13.5A.Voltage 2.35V~2.40V at 25℃(77℉)Temp. Coefficient -4mV/℃	
Cycle Use	Initial Charging Current less than 13.5A.Voltage 2.40V~2.50V at 25℃(77℉)Temp. Coefficient -5mV/℃	
Effect of temp. to Capacity	40℃ (104℉)	103%
	25℃ (77℉)	100%
	0℃ (32℉)	86%
Self Discharge	LPL series batteries may be stored for up to 6 months at 25℃(77℉) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

Layout



Constant Current Discharge (Amperes) at 25℃ (77℉)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	71.5	63.3	54.9	43.2	40.2	32.6	24.9	15.2	11.1	8.73	7.57	5.96	5.13	4.25	2.26
1.80V/cell	81.4	71.9	62.2	48.8	43.7	34.8	25.8	15.7	12.1	9.32	7.97	6.27	5.40	4.50	2.34
1.75V/cell	88.4	78.0	67.4	52.7	44.6	35.9	27.1	16.5	12.3	9.49	8.11	6.34	5.43	4.52	2.36
1.70V/cell	94.4	83.1	71.6	55.9	45.5	36.6	27.6	16.8	12.5	9.66	8.24	6.44	5.51	4.54	2.39
1.65V/cell	97.8	85.8	73.6	57.4	46.2	37.1	28.0	17.1	12.7	9.81	8.41	6.55	5.59	4.60	2.42
1.60V/cell	101.3	88.7	75.9	58.9	46.9	37.7	28.4	17.3	12.8	9.92	8.53	6.64	5.66	4.66	2.44

Constant Power Discharge (Watts/cell) at 25℃ (77℉)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	132.5	119.2	104.0	82.1	76.8	62.5	48.1	29.5	21.7	17.1	14.9	11.8	10.2	8.46	4.49
1.80V/cell	148.4	133.3	116.3	91.9	82.9	66.3	49.6	30.3	23.5	18.2	15.6	12.4	10.7	8.85	4.65
1.75V/cell	158.6	142.3	124.1	98.1	84.0	67.9	51.8	31.8	23.9	18.5	15.8	12.4	10.7	8.92	4.69
1.70V/cell	166.8	149.6	130.5	103.1	84.9	68.8	52.6	32.3	24.2	18.7	16.1	12.5	10.6	9.01	4.73
1.65V/cell	169.5	152.0	132.6	104.8	85.5	69.3	53.0	32.6	24.4	19.0	16.3	12.8	11.0	9.11	4.79
1.60V/cell	171.8	154.1	134.5	106.2	85.9	69.7	53.4	32.9	24.5	19.1	16.5	12.9	11.1	9.20	4.84

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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

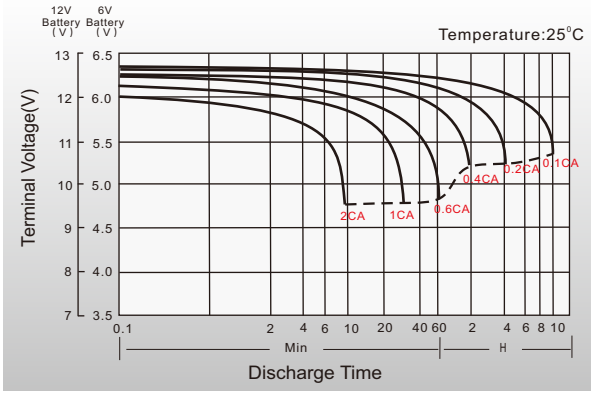
General Features

- 12 years design life(25°C)
- Grid refining technology and the thicker plates are used to extend the battery standby life and reduce the plate grid corrosion speed
- Using oxygen recombination technology: maintenance-free
- Unique vent valve design: control water losing, prevent air and spark going inside

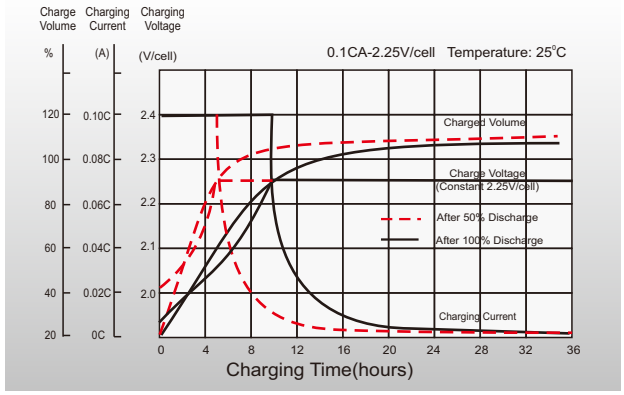
Standards

- Compliance with IEC 60896 standards, EU Battery Directive
- UL, CE Certified

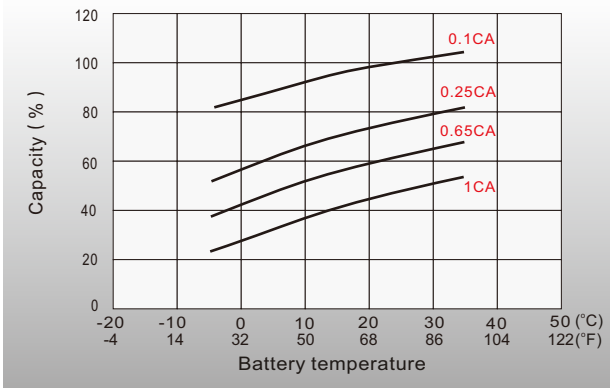
Discharge Characteristics



Float Charging Characteristics



Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life