

# 1245 12V 4.5Ah (20hr)

CLD series General Purpose VRLA batteries are designed with AGM(Absorbent Glass Mat) technology. CLD series offers 5 years( $\leq 20Ah$ ) and 10 years( $\geq 20Ah$ ) full maintenance free design life. With a compact design and good reliability, this series is highly suited for security and alarm systems, UPS systems, emergency light systems and other small backup applications.

12V Voltage	4.5Ah Capacity	AGM Technolog	General Purpose
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## Features and Benefits

- Wide operating temperature range from -15°C to 50°C
- Can be used at vertical or horizontal orientation
- Balanced design for both floating and cyclic operation
- Maintenance-free operation
- Low self-discharge rate and long shelf life

## Applications

- Alarm systems
- Communication Equipments
- Control equipments
- Security systems
- Medica Equipments
- UPS systems
- Power tools
- Toys
- Emergency Power Systems
- Photovoltaic Systems
- Security Systems

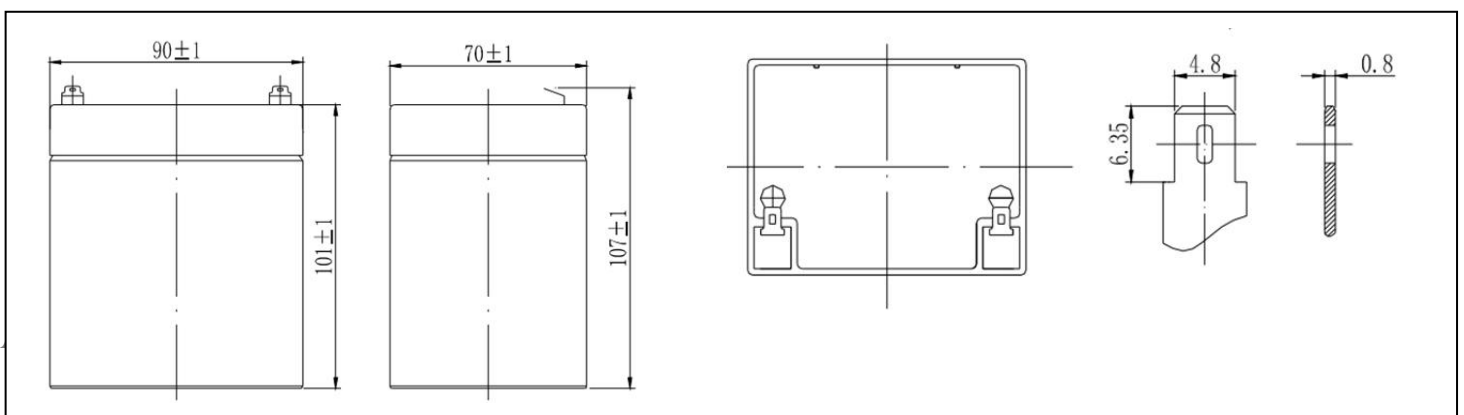
## Technical Specifications

Nominal Voltage.....	12V
Nominal Capacity(20°C)	
20hour rate(0.225A,10.5V).....	4.5Ah
10hour rate(0.43A,10.5V).....	4.3Ah
5hour rate(0.8A,10.5V).....	4.0Ah
1hour rate(2.99A,9.6V).....	2.99Ah
Dimension(mm).....	L90 x W70 x H101 x TH107mm
Approx. Weight .....	1.35kg (2.97lbs)
Terminal Type.....	F1 or F2
Internal Resistance.....	32mΩ(fully Charged @20°C)
Max.Charge Current.....	1.35A
Max.Discharge Current (5s).....	67.5A
Ambient Temperature	
Discharge.....	-15-45°C
Charge.....	-15-45°C
Storage.....	-15-45°C
Capacity Affected by Temp.(10 hr capacity)	
105% @40°C	
100% @25°C	
85% @0°C	
65% @-15°C	
Self-Discharge @20°C.....	Approx. 3% per month
Charge Voltage @20~25°C	
Float charge voltage.....	13.6V-13.8V
Equalize Charge Voltage.....	14.4V-14.9V

### Complied standards

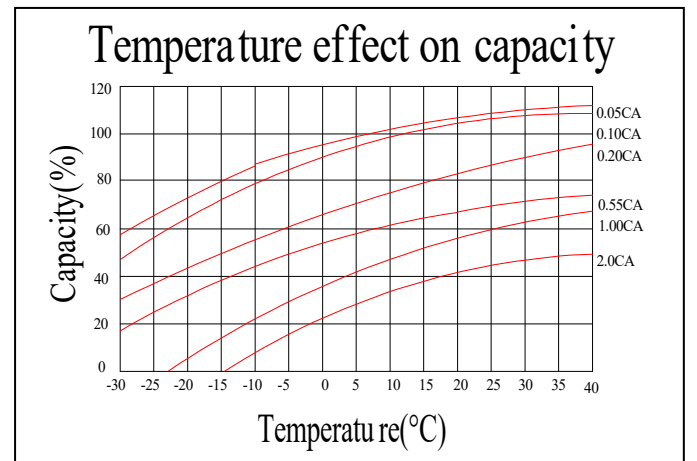
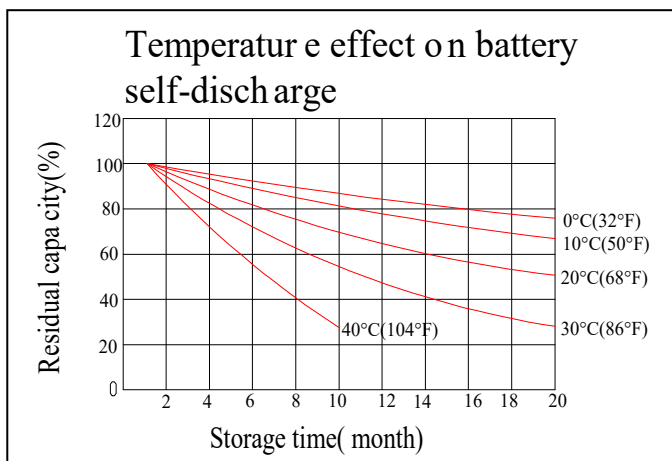
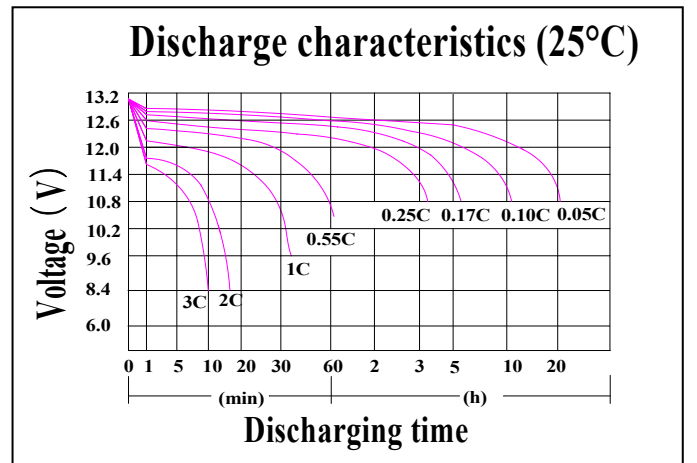
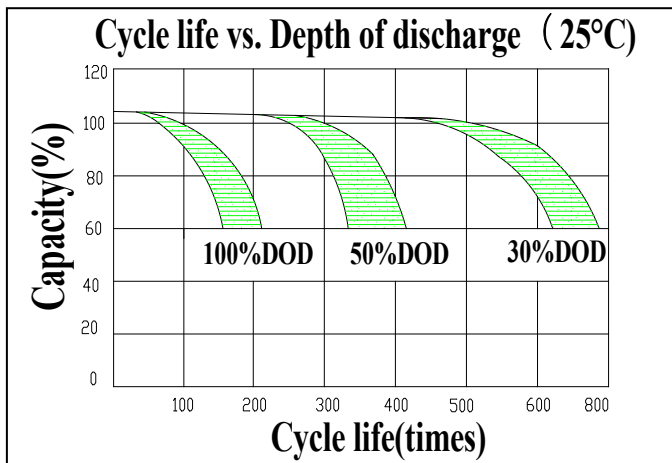
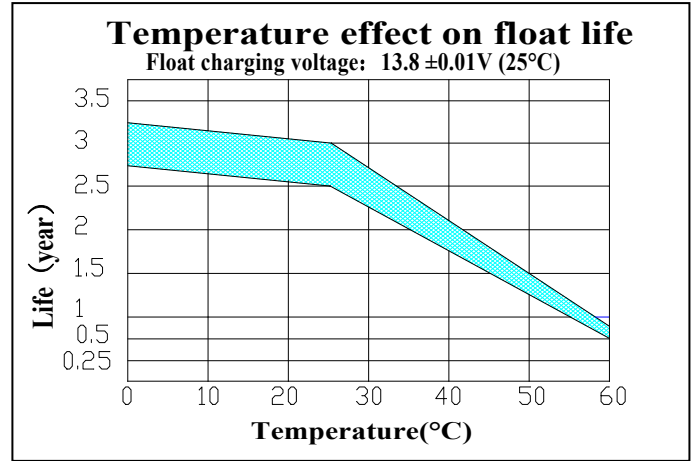
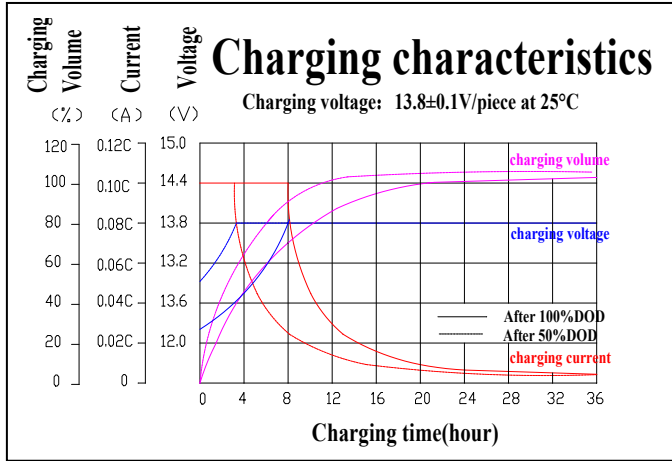
- IEC 60896-21/22
- JIS C8704
- GB/T19639

## Dimensions



# 1245 12V 4.5Ah (20hr)

## Performance Characteristics



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## Battery Discharge

Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	15.3	9.90	7.45	4.95	3.47	2.99	1.86	1.27	0.85	0.57	0.47	0.25
1.65V	15.1	9.72	7.31	4.86	3.40	2.94	1.82	1.25	0.83	0.56	0.46	0.24
1.70V	14.8	9.54	7.18	4.77	3.34	2.89	1.79	1.23	0.82	0.55	0.45	0.24
1.75V	14.5	9.36	7.04	4.68	3.28	2.83	1.76	1.20	0.80	0.54	0.45	0.23
1.80V	14.0	9.00	6.77	4.50	3.15	2.72	1.69	1.16	0.77	0.52	0.43	0.23

Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	29.5	19.1	14.3	9.53	6.67	5.76	3.57	2.45	1.63	1.10	0.91	0.48
1.65V	29.0	18.7	14.1	9.36	6.55	5.66	3.51	2.40	1.60	1.08	0.89	0.47
1.70V	28.5	18.4	13.8	9.18	6.43	5.56	3.44	2.36	1.57	1.06	0.87	0.46
1.75V	27.9	18.0	13.6	9.01	6.31	5.45	3.38	2.32	1.54	1.04	0.86	0.45
1.80V	26.9	17.3	13.0	8.66	6.06	5.24	3.25	2.23	1.48	1.00	0.82	0.43

## Battery Construction

Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	ABS (UL94-V0 optional)	Flame Si-Rubber and aging resistance	Copper No.250 (No.187 optional)	Advanced AGM separator for high pressure cell design	Dilute high purity sulphuric acid	Two layers epoxy resin seal