



VRLA BATTERY

General purpose application series

UP12-4.5 (12v4.5AH)



Characteristics

Nominal Voltage		12V
Nominal Capacity (20 hour rate)		4.5Ah
Capacity 25°C (77°F)	10 hour rate (0.43A)	4.3Ah
	5 hour rate (0.80A)	4.0Ah
	1 hour rate (2.97A)	2.97Ah
Internal Resistance	Full Charged Battery 25°C	≤32mΩ
Capacity affected by Temperature (10 hour)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Self-Discharge 25°C (77°F)	after 3 month storage	90%
	after 6 month storage	80%
Capacity	after 12 month storage	62%
Charge (Constant Voltage) 25°C (77°F)	Float	Initial Charging Current Less than 1.35A Voltage 13.6-13.8V
	Cycle	Initial Charging Current Less than 1.35A Voltage 14.4-15.0V

Packaging

Battery Dimensions	Length	90mm
	Width	70mm
	Height	101mm
	Total Height	107mm
Box Dimensions	Length	389mm
	Width	200mm
	Height	147mm
Quantity Per Box		10 pcs per box
Net weight Per Cell		1.44 kg±50g
Net weight Per Box		14.4kg
Gross Weight		14.6kg

Discharge Constant Current per Cell (Amperes at 77°F/25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
16.50	14.85	9.90	7.45	4.95	3.47	2.97	1.86	1.27	0.85	0.57	0.47	0.25
16.20	14.58	9.72	7.31	4.86	3.40	2.92	1.82	1.25	0.83	0.56	0.46	0.24
15.90	14.31	9.54	7.18	4.77	3.34	2.86	1.79	1.23	0.82	0.55	0.45	0.24
15.60	14.04	9.36	7.04	4.68	3.28	2.81	1.76	1.20	0.80	0.54	0.45	0.23
15.00	13.50	9.00	6.77	4.50	3.15	2.70	1.69	1.16	0.77	0.52	0.43	0.23

Discharge Constant Power per Cell (Watts at 77°F/25°C)

F.V/Time	5min	10min	15min	30min	45min	1h	2h	3h	5h	8h	10h	20h
1.60V	28.59	19.06	14.34	9.53	6.67	5.72	3.57	2.45	1.63	1.10	0.91	0.48
1.65V	28.07	18.71	14.08	9.36	6.55	5.61	3.51	2.40	1.60	1.08	0.89	0.47
1.70V	27.55	18.36	13.82	9.18	6.43	5.51	3.44	2.36	1.57	1.06	0.87	0.46
1.75V	27.03	18.02	13.56	9.01	6.31	5.41	3.38	2.32	1.54	1.04	0.86	0.45
1.80V	25.99	17.33	13.04	8.66	6.06	5.20	3.25	2.23	1.48	1.00	0.82	0.43

Note The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact us www.upowa.co for the latest information.

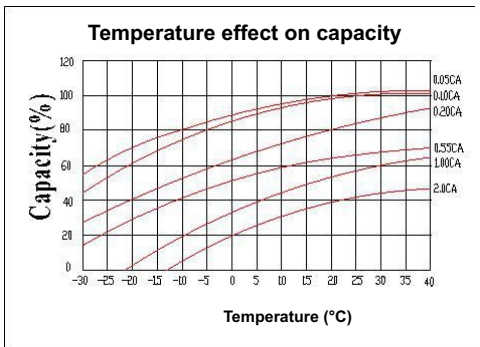
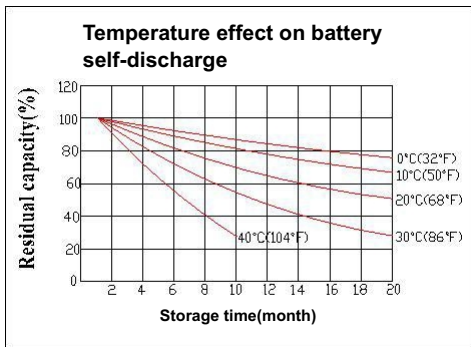
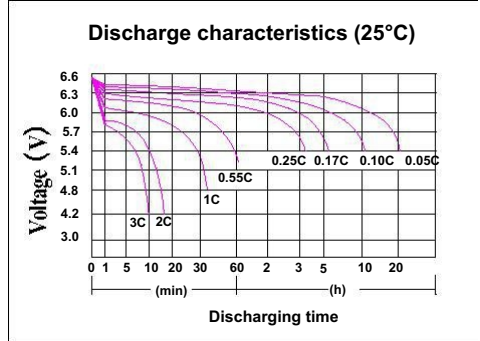
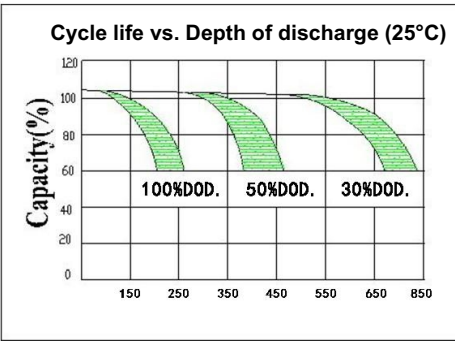
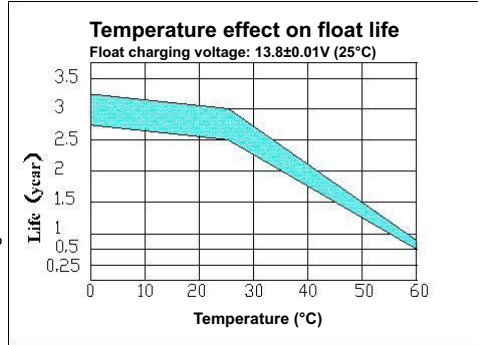
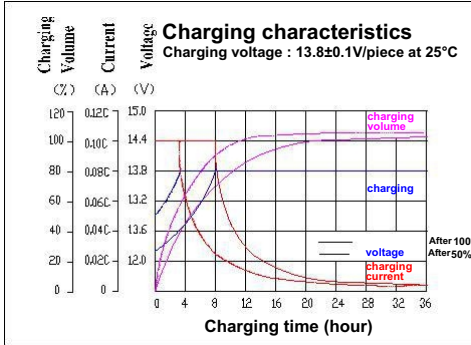
BATTERIES

SOLAR & INVERTERS

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Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Si-Rubber	Copper	Fiberglass	Sulfuric acid