



AGM TECHNOLOGY
ABT Thunder TM...W Series

TM12-180W

12V 35Ah(20hr)

High Rate Discharge

The ABT Thunder TM...W VRLA are batteries according to Eurobat Classification and specially designed for applications which need high power backup.

Thunder TM...W is the premium plus VRLA battery for UPS and diesel start application.

Mechanical Characteristics

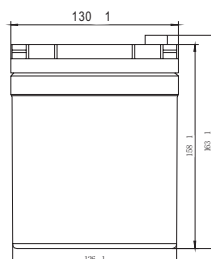
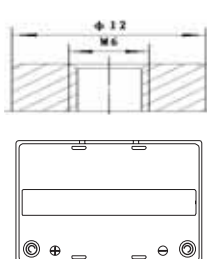
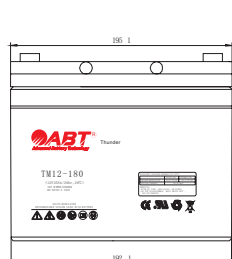
	SI Units	English Units
Length	195 mm	7.68 inch
Width	130 mm	5.12 inch
Height	158 mm	6.22 inch
Total Height	163mm	6.42 inch
Approx. Weight	11.00kg	24.26lbs

Type of material for box and lids :
ABS Standard (FV0 Optional)

Product Characteristics

- Positive and negative grids in lead-calcium tin alloy
- Superior energy density
- More than 40% power output than ABT standard SGP series
- Operates at a low internal pressure
- Usable in any orientation
- A recognized component of UL
- Range of 6V and 12V monobloc from 160W to 1000W per cell for 10' @ 1.60Vpc
- 6 months shelf life at 20°C
- 10 years design life

Dimensions / Terminal



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Nominal Capacity 68°F(20°C)	10 min wattage@1.6V 180W per Cell
	1 hour rate (24.5A, 1. 60V per cell)24.5 Ah
	10 hour rate (3.26A, 1. 75V per cell) 32. 6Ah
	20 hour rate (1.75A, 1. 75V per cell) 35Ah
Internal Resistance	Fully Charged battery 68°F(20°C)8 mOhms
Mass Energy(Wh/kgs)	38. 18
Volumic energy(Wh/dm ³)	105.13
Self-Discharge	3% of capacity declined per month at 20°C(average)
Operating Temperature Range	Discharge -20~60°C
	Charge -10~60°C
	Storage -20~60°C
Max. Discharge Current	500A(5s)
Short circuit current	1400A
Charge Methods:	Constant Voltage Charge 68°F(20°C)
	Cycle use 14.4-15. 0V/ unit
	Temperature compensation -30mV/°C/ unit
	Standby use 13.5-13.8V/ unit
	Temperature compensation -20mV/°C/ unit
	Maximum charging current 10. 5A of rated capacity
Terminal Type	Inserted Thread and bolt Max φ 12
Torque strength in Nm	8~10
Handle Type	Plastic
Flame arrestor	Yes

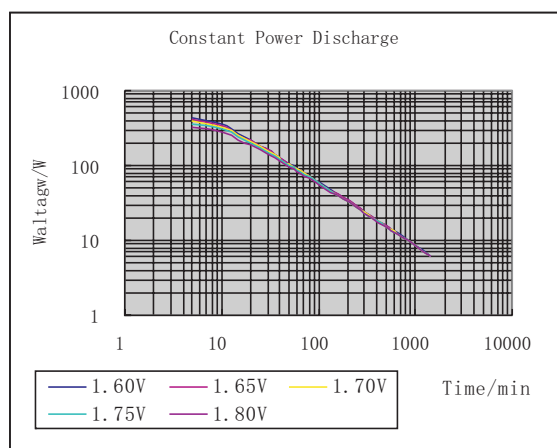
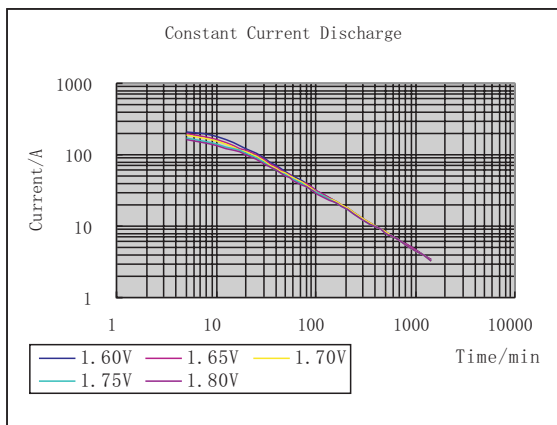
Constant Current Discharge Data (Amperes at 20°C)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	129.5	87.5	68.5	56.3	48.1	41.7	36.7	32.9	29.8	26.8	24.5	18.20	14.05	11.19	9.34	7.80	6.46	5.50	4.84	4.30	3.83	3.40	2.99	1.61
1.65V	114.3	81.6	64.6	53.9	46.1	40.0	35.3	31.8	28.9	26.1	23.9	17.58	13.55	10.88	9.06	7.56	6.30	5.37	4.72	4.22	3.77	3.36	2.95	1.59
1.70V	103.5	76.6	61.3	50.9	44.0	38.3	34.1	30.7	28.0	25.3	23.3	17.00	13.10	10.60	8.84	7.33	6.13	5.23	4.61	4.12	3.70	3.31	2.91	1.57
1.75V	93.1	72.2	58.0	49.0	42.0	36.6	32.8	29.6	26.9	24.5	22.7	16.41	12.64	10.29	8.57	7.09	5.93	5.07	4.49	4.04	3.62	3.26	2.88	1.54
1.80V	84.0	67.2	55.3	46.7	39.9	35.0	31.3	28.3	25.8	23.8	22.0	15.86	12.28	10.03	8.29	6.85	5.72	4.93	4.37	3.92	3.55	3.21	2.83	1.53

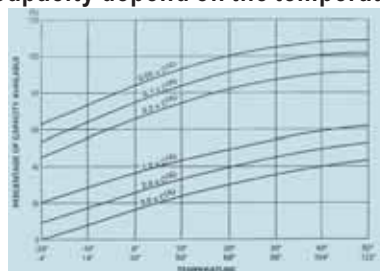
Constant Power Discharge Data (Watts per cell at 20°C)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	225.0	180.0	140.9	111.3	93.1	79.7	70.9	64.2	58.4	51.5	40.9	33.51	27.16	22.25	18.41	14.89	12.31	10.52	9.23	8.20	7.40	6.73	5.75	3.16
1.65V	215.0	173.3	136.0	107.2	90.7	78.3	69.6	62.9	57.3	50.5	40.1	32.90	26.73	21.96	18.20	14.73	12.21	10.42	9.16	8.15	7.35	6.69	5.70	3.12
1.70V	204.4	166.0	130.1	103.1	88.3	76.6	68.3	61.8	56.3	49.7	39.2	32.24	26.19	21.65	18.00	14.58	12.09	10.34	9.09	8.07	7.30	6.65	5.66	3.11
1.75V	194.0	158.0	123.0	99.3	86.0	74.7	66.7	60.5	55.1	48.5	38.2	31.58	25.63	21.34	17.78	14.43	11.98	10.26	9.01	8.01	7.25	6.61	5.63	3.08
1.80V	184.0	148.9	116.3	95.9	83.7	72.9	65.1	59.0	53.8	47.4	37.3	30.89	25.11	21.05	17.57	14.26	11.85	10.17	8.92	7.96	7.19	6.57	5.59	3.07

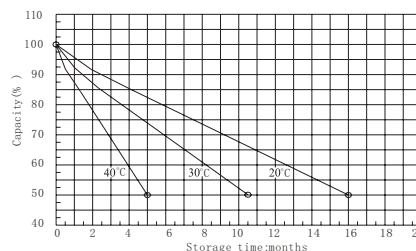
Performance drawing



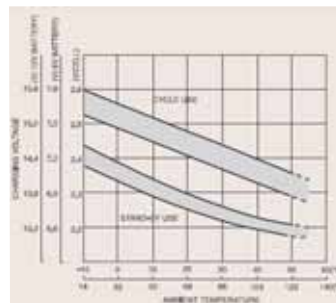
Capacity depend on the temperature



Capacity Retention Characteristic



Charge voltage depend on the temperature



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ABT VRLA Battery: Available Power Range From 7Ah to 3000Ah

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