

TM12-310W

12V 65Ah(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

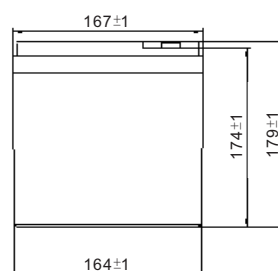
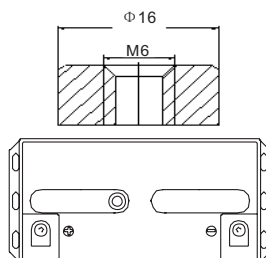
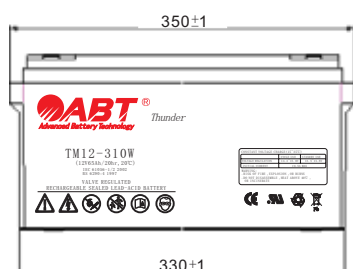
	SI Units	English Units
Length	350mm	13.78inch
Width	167mm	6.57inch
Height	179mm	7.05inch
Total Height	179mm	7.05inch
Approx. Weight	24.06kg	53.05lbs

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@1.60V 310W per cell 1 hour rate (43.6A, 1.60V per cell)43.6Ah 10 hour rate (6.05A, 1.75V per cell) 60.5Ah 20 hour rate (3.25A, 1.75V per cell) 65Ah
Internal Resistance	Fully Charged battery 68°F(20°C) 4.7mOhms
Mass Energy(Wh/kgs)	32.42
Volumic energy(Wh/dm ³)	74.55
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	780A(5s)
Short circuit current	2550A
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 19. 5A of rated capacity
Terminal Type	Inserted Thread and bolt M6X φ 16
Torque strength in Nm	8~10
Handle Type	Rope
Flame-arrestor	Yes

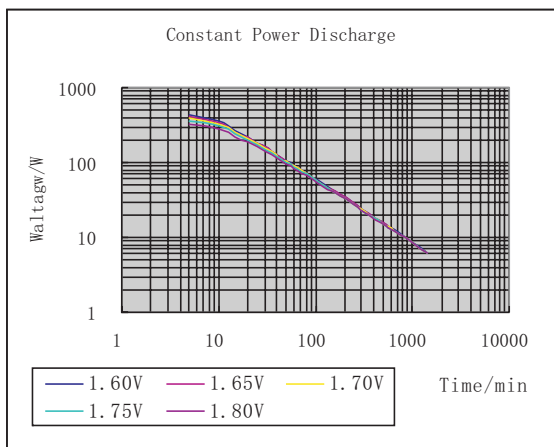
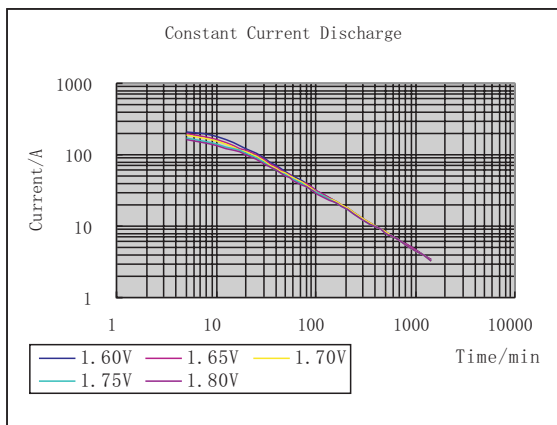
Constant Current Discharge Data (Amperes at 20°C)

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	221.0	161.5	127.2	104.9	89.4	78.3	69.1	62.2	56.2	49.9	43.6	31.22	24.73	20.37	17.20	13.87	11.59	9.81	8.41	7.45	6.70	6.17	5.25	2.87
1.65V	207.2	154.1	122.3	101.0	86.6	75.7	66.9	60.1	54.6	48.5	42.5	30.47	24.18	20.01	16.81	13.55	11.33	9.59	8.31	7.37	6.65	6.13	5.20	2.83
1.70V	195.0	146.7	117.3	96.9	83.6	72.9	64.6	58.2	52.8	47.2	41.3	29.58	23.63	19.63	16.50	13.23	11.05	9.41	8.21	7.28	6.59	6.10	5.16	2.80
1.75V	184.5	138.4	112.2	93.3	80.4	69.8	62.4	55.9	50.7	45.9	40.0	28.44	23.10	19.22	16.11	12.92	10.77	9.22	8.12	7.19	6.52	6.05	5.11	2.75
1.80V	172.8	130.6	106.8	89.4	77.0	67.6	60.5	54.0	49.1	44.6	38.9	27.54	22.65	18.78	15.81	12.64	10.53	9.07	8.03	7.12	6.45	6.00	5.08	2.72

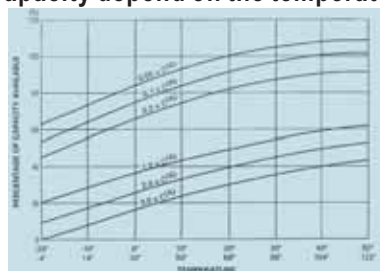
Constant Power Discharge Data (Watts per cell at 20°C)

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	393.5	310.0	249.5	194.7	163.2	141.5	126.3	114.8	103.0	93.0	82.1	59.90	45.76	38.02	32.65	26.12	21.31	18.35	16.04	14.30	12.95	11.75	10.03	5.56
1.65V	372.2	298.7	237.4	188.3	159.2	138.3	123.8	112.5	101.2	91.2	80.7	58.55	45.17	37.59	32.22	25.76	21.10	18.17	15.91	14.17	12.84	11.66	9.97	5.52
1.70V	354.4	286.6	225.6	181.8	154.7	134.7	121.7	110.2	99.4	89.7	78.8	57.19	44.61	37.18	31.85	25.45	20.94	18.01	15.76	14.06	12.75	11.57	9.90	5.47
1.75V	335.0	272.3	214.7	174.4	149.3	130.8	118.7	107.8	97.0	87.5	77.4	55.69	43.88	36.69	31.43	25.11	20.76	17.82	15.64	13.97	12.64	11.49	9.84	5.41
1.80V	318.0	259.2	205.1	168.2	145.6	127.5	116.1	105.1	95.1	85.6	75.9	54.20	43.24	36.19	31.02	24.71	20.59	17.65	15.50	13.84	12.52	11.42	9.78	5.38

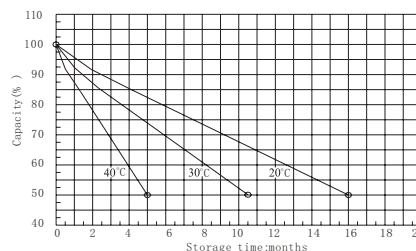
Performance drawing



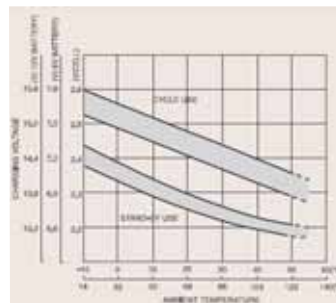
Capacity depend on the temperature



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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 (Edition: May. 2011)