UltraTech®
POWER PRODUCTS
by ADI

UltraTech VRLA Batteries

Valve Regulated Lead Acid

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Valve Regulated Lead Acid Battery (VRLA) Maintenance-Free Rechargeable Sealed Lead Acid Battery, Absorbent Glass Mat (AGM) technology.

Features & Benefits

- Maintenance-free, no water adding required
- Sealed Valve-Regulated
- Spill proof / leak proof
- Deep discharge protection
- Plate grids from lead-calcium alloy, free of antimony
- No corrosion
- Installs vertically or horizontally
- Low gassing (unless overcharged)
- Good cycling and stationary performance
- Good high rate discharges
- Long shelf life
- Rugged and vibration-resistant

Applications

- General Purpose
- Alarm, CCTV & Security System
- Emergency Lighting
- Uninterruptable Power Supply (UPS)
- Electric Power Systems (EPS)
- Communication Power Supply
- Electronic Apparatus & Equipment
- DC Power Supply
- Auto Control System

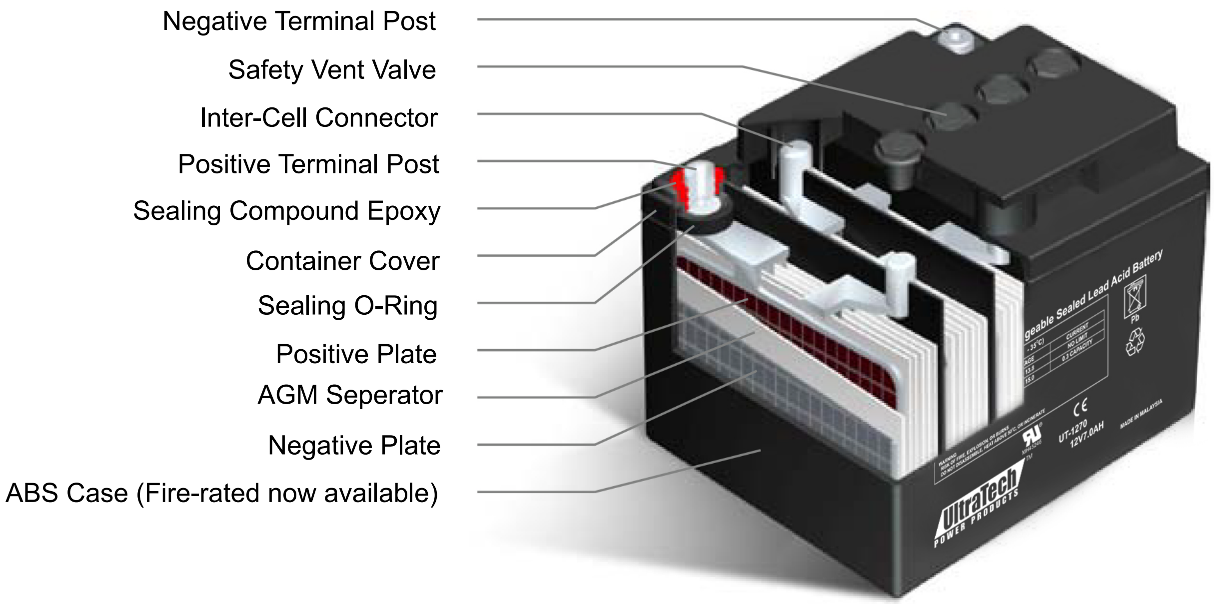
ISO 9001 Quality Management

MH45246

Specifications

Operating Temperature	Discharge: -15 ~ 50°C (5~120°F) Charge: -0~ 40°C (5~104°F) Storage: -15 ~ 40°C (5~104°F)
Nominal Operating Temp	25 ± 3°C (77 ± 5°F)
Cycle Use	14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C
Standby Use	13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C
Capacity affected by Temperature	40°C (104°F) 103% 25°C (77°F) 100% 0°C (32°F) 86%
Self Discharge	UltraTech series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.
CAUTION	Do Not Short Circuit Do Not charge in a sealed container Do Not Disassemble Do Not Heat above 50°C or Incinerate
WARNING	Risk of fire, explosion or burns. Not recommended for inverted use. Follow product charging instructions.

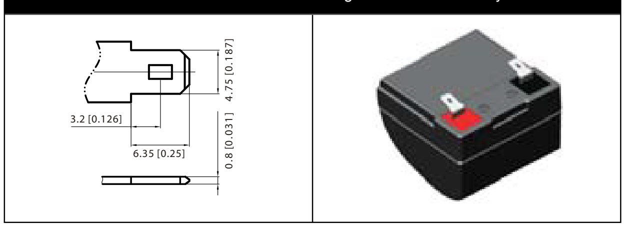
VRLA Battery Construction



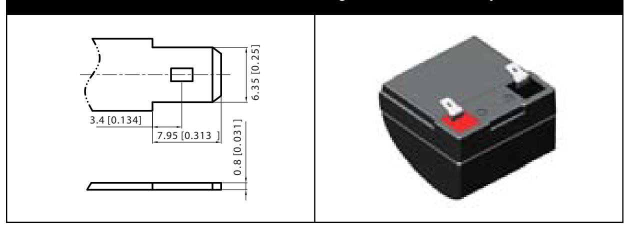
Technical Features

- UltraTech Sealed Construction uses special compound epoxy, pressure-controlled vent valves and sealed technique to ensure no electrolyte leakage.
- Using oxygen recombination technology: maintenance-free PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- ABS material: increases the strength of the battery container.
- High purity raw material to ensures a low self discharge rate
- Silver-coated copper terminals, brass insert terminals and lead terminals improve the electric conductivity

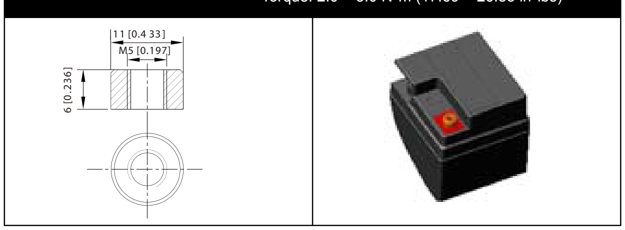
F1=T1 Terminal — FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity



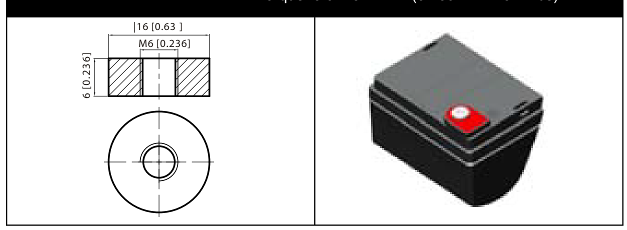
F2=T2 Terminal — FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity



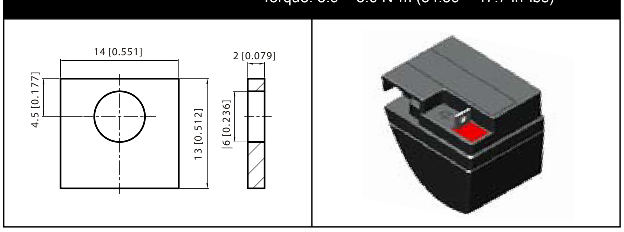
M5=T12 Terminal — Brass Threaded Insert 5mm STUD
Torque: 2.0 ~ 3.0 N*m (17.69 ~ 26.53 in*lbs)



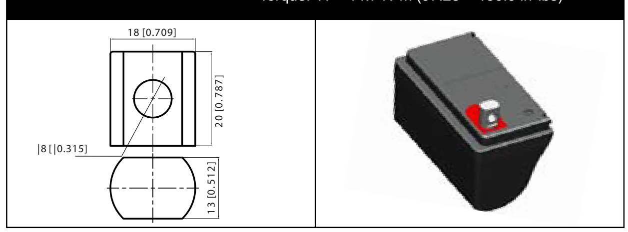
M6=T6 Terminal — Brass Coated with Tin; Threaded Insert 6mm STUD
Torque: 3.9 ~ 5.4 N*m (34.39 ~ 47.75 in*lbs)



NB=T3 Terminal — Brass Coated with Tin
Torque: 3.9 ~ 3.0 N*m (34.39 ~ 47.7 in*lbs)



U=T14 Terminal — Lead
Torque: 11 ~ 14.7 N*m (97.28 ~ 130.0 in*lbs)



General Characteristics

UT Part#	Terminal		Voltage	Capacity (Ah)	Length		Width		Height		Total Height		Weight		Case Quantity	Gross Case Weight
				20Hr	mm	in	mm	in	mm	in	mm	in	lbs	kg		(kg)
UT-1213 (VdS)	T1	F1	12	1.3	97	3.8	43	1.7	52	2.0	58	2.3	1.26	0.57	20	11.4
UT-1220 (VdS)	T1	F1	12	2	178	7.0	35	1.4	60	2.4	66	2.6	2.14	0.97	20	19.2
UT-1221 (VdS)	T1	F1	12	2.1	178	7.0	35	1.4	60	2.4	66	2.6	2.14	0.97	20	19.4
UT-1232	T1	F1	12	3.2	134	5.3	67	2.6	59.5	2.3	65.5	2.6	2.62	1.19	10	11.9
UT-1240	T1	F1	12	4.5	90	3.5	70	2.8	101	4	107	4.2	3.20	1.45	10	14.5
UT-1270	T1	F1	12	7	151	5.9	65	2.6	93.5	3.7	99.5	3.9	3.99	1.81	5	9.1
UT-12120	T2	F2	12	12	151	5.9	98	3.9	95	3.7	101	4.0	7.14	3.24	4	14
UT-12180	T2	F2	12	18	181.5	7.1	76.5	3.0	167.5	6.6	167.5	6.6	11.79	5.35	1	5.4
UT-121805	T12	M5	12	18	181.5	7.1	76.5	3.0	167.5	6.6	168	6.6	11.79	5.35	1	5.4
UT-12240	T3	NB	12	24	166	6.5	175	6.9	125	4.9	125	4.9	15.87	7.2	1	7.2
UT-12260NB	T3	NB	12	24	166	6.5	175	6.9	125	4.9	125	4.9	17.20	7.8	1	7.8
UT-12380	T6	M6	12	40	197	7.8	165	6.5	170	6.7	170	6.7	26.0	12.0	1	12.2
UT-12650	T6	M6	12	65	348	13.7	167	6.6	178	7.0	178	7.0	40.90	18.5	1	18.5

Fire-Rated ABS Versions (UK94V-0)

UT Part#	Terminal		Voltage	Capacity (Ah)	Length		Width		Height		Total Height		Weight		Case Quantity	Gross Case Weight
				20Hr	mm	in	mm	in	mm	in	mm	in	lbs	kg		(kg)
UT-1220-FR	T1	F1	12	2	178	7.0	35	1.4	60	2.4	66	2.6	2.14	0.97	20	19.4
UT-1232-FR	T1	F1	12	3.2	134	5.3	67	2.6	59.5	2.3	65.5	2.60	2.62	1.19	10	11.9
UT-1270-FR	T1	F1	12	7	151	5.9	65	2.6	93.5	3.7	99.5	3.9	3.99	1.81	5	9.05
UT-12120-FR	T2	F2	12	12	151	5.9	98	3.9	95	3.7	101	4.0	7.14	3.24	4	12.96
UT-121805-FR	T12	M5	12	18	181.5	7.1	76.5	3.0	167.5	6.6	167.5	6.6	11.79	5.35	1	5.35

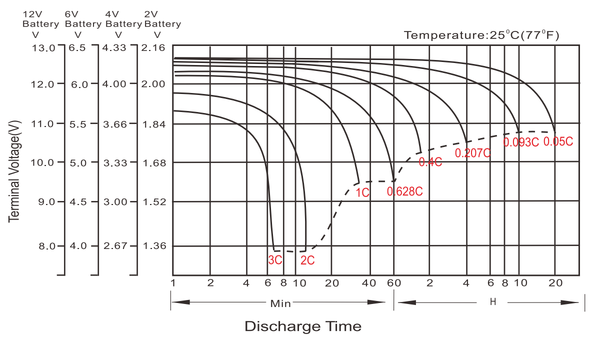
Performance Characteristics

UT Part#	Voltage	Amp Hour Rate Capacity at 25					Maximum	Internal	Case
		20Hr 1.80 VPC	10Hr 1.80 VPC	5Hr 1.75 VPC	3Hr 1.75 VPC	1Hr 1.75 VPC	Discharge(A)	Resistance	Material
UT-1213 (VdS)	12	1.3	1.1	1	0.9	0.8	18A (5s)	~90mΩ	ABS
UT-1220 (VdS)	12	2	2.1	1.9	1.7	1.4	33A (5s)	~100mΩ	ABS
UT-1221 (VdS)	12	2.1	1.97	1.81	1.61	1.25	31.5A (5s)	~75mΩ	ABS
UT-1232	12	3.2	3.31	3.01	2.62	2.03	53A (5s)	~40mΩ	ABS
UT-1240	12	4.5	3.7	3.4	3.1	2.5	60A (5s)	~40mΩ	ABS
UT-1270	12	7	6.5	6	5.4	4.4	105A (5s)	~23mΩ	ABS
UT-12120	12	12	11.2	10.2	9.2	7.5	180A (5s)	~17mΩ	ABS
UT-12180	12	18	16.7	15.3	13.8	11.3	270A (5s)	~16mΩ	ABS
UT-121805	12	18	16.7	15.3	13.8	11.3	270A (5s)	~16mΩ	ABS
UT-12240	12	24	22.3	20.4	18.4	15.1	360A (5s)	~14mΩ	ABS
UT-12260NB	12	26	24.2	22.1	19.9	16.3	390A (5s)	~14mΩ	ABS
UT-12380	12	40	38	32.7	29.7	23.2	456A (5s)	~10mΩ	ABS
UT-12650	12	65	59.8	53	47.7	35.9	650A (5s)	~7.4mΩ	ABS

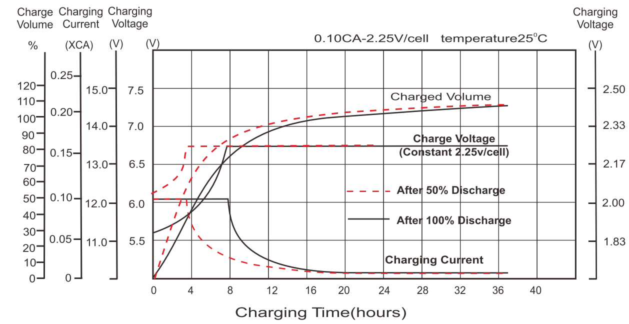
Fire-Rated ABS Versions (UK94V-0)

UT Part#	Voltage	Amp Hour Rate Capacity at 25					Maximum	Internal	Case
		20Hr 1.80 VPC	10Hr 1.80 VPC	5Hr 1.75 VPC	3Hr 1.75 VPC	1Hr 1.75 VPC	Discharge(A)	Resistance	Material
UT-1220-FR	12	2	1.95	1.78	1.58	1.22	31.5A (5s)	~75mΩ	ABS
UT-1232-FR	12	3.2	3.31	3.01	2.62	2.03	53A (5s)	~40mΩ	ABS
UT-1270-FR	12	7	6.53	5.85	5.3	4.06	105A (5s)	~27mΩ	ABS
UT-12120-FR	12	12	11.2	10.2	9	6.84	180A (5s)	~19mΩ	ABS
UT-121805-FR	12	18	17	15.5	13.8	11.2	270A (5s)	~16mΩ	ABS

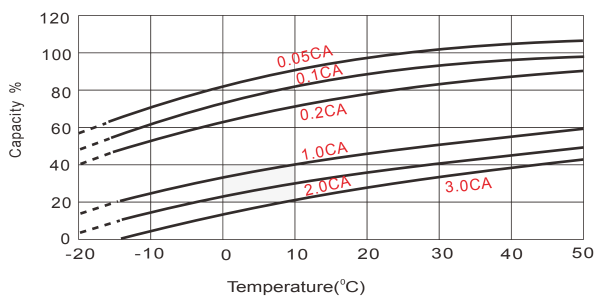
Discharge Characteristics



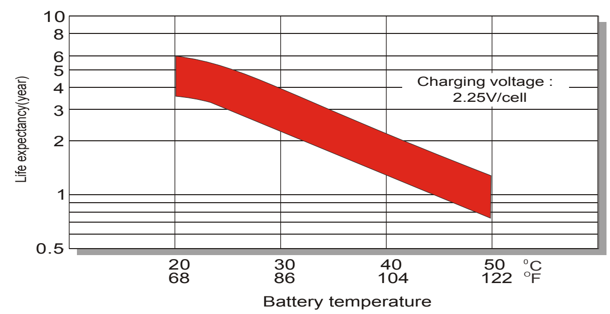
Float Charging Characteristics



Temperature Effects vs Battery Capacity

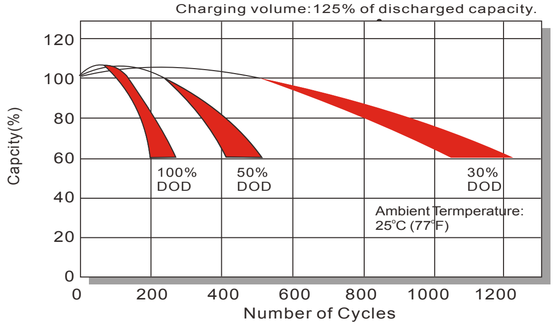


Effect of Temperature on Long-Term Float Life

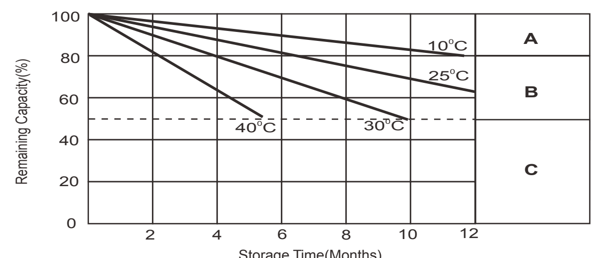


Cycle Life vs Depth of Discharge

Testing condition
Discharging:current 0.17C (FV 1.7V/cell);
Charging:current 0.25C max, voltage 2.45V/cell;
Charging volume:125% of discharged capacity.



Self Discharge Characteristices



A No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

B Supplementary charge required before use.Optional charging way as below:
1.Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2.Charged for above 20hours at limited current 0.25CA and constant voltage 2.45V/cell.
3.Charged for 8~10hours at limited current 0.05CA .

C Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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