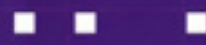


BATTERY  
**CS3**



**XHRL** series  
Extreme High Rate  
Long life

**ENERGY OF INFINITY** ▼

Confidence & Creativity  
Service & Sincerity  
Belief & Bravery

# XHRL

# XHRL series

XHRL-series batteries are specially designed for high-rate discharge applications. With new VRLA technology, the XHRL series features 20% greater power density in the standard footprint..

The XHRL service life is up to 10 years in standby use, or more than 260 cycles at 100% discharge.

As with all CSB batteries, all XHRL series batteries are rechargeable, highly efficient, maintenance free, leakproof, useable in any orientation and ISO/UL recognized



## Feature and Benefits

- Extreme energy density, small footprint, increased power (15% to 20% above standard high-rate batteries).
- Innovative plate structure greatly increases energy/density ratios.
- New paste formula increases active surface area.
- Proprietary electrolyte additives.
- Thermally bonded casing.
- TIG terminal welds.
- Flame-arresting vents.
- Highly durable safety valve.
- Increased current delivery for high-rate discharge.
- Up to 50% greater resistance to grid growth under optimal temperature.
- Reduced internal resistance for superior performance.
- Uniform plate formation for consistent capacity.
- No-spill design.
- Useable in any orientation.
- Maintenance free.
- Low self-discharge.

## Long service life

- Up to 10 years of expected life under normal float charge at 25 °C (77 °F).
- Extended shelf life (up to 14 months at 20 °C).

## Reliability

- CSB-manufactured batteries are 100% 2-cycle tested by the CCDS system.
- CSB-manufactured batteries are UL-recognized components under UL 924 and UL 1989. CSB file number MH14533.
- ISO9001 and ISO14001 certified.

## Applications

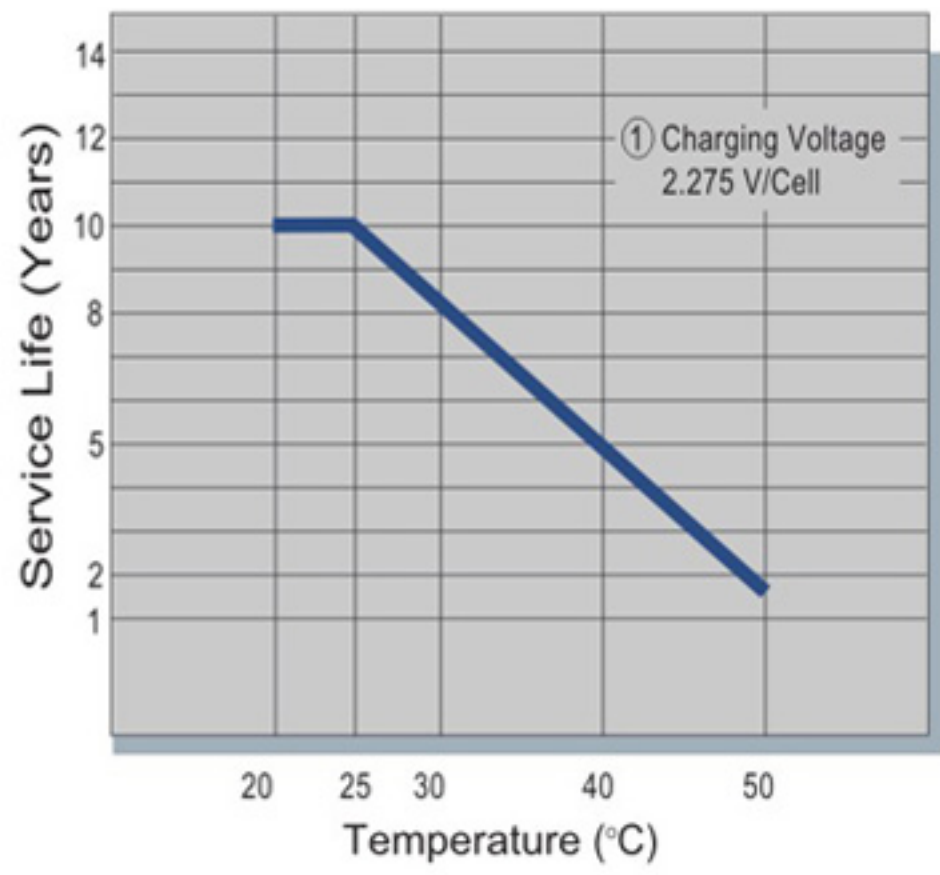
### Standby use

- UPS power supply.
- Workstation UPS.
- Emergency lighting equipment.
- Precision instrumentation.
- Fire alarm and security systems.
- Communications and electrical equipment.
- Office computers, microcomputers and OA equipment.
- Robots, control equipment and other FA equipment.
- Emergency power supply in power plants and substations.

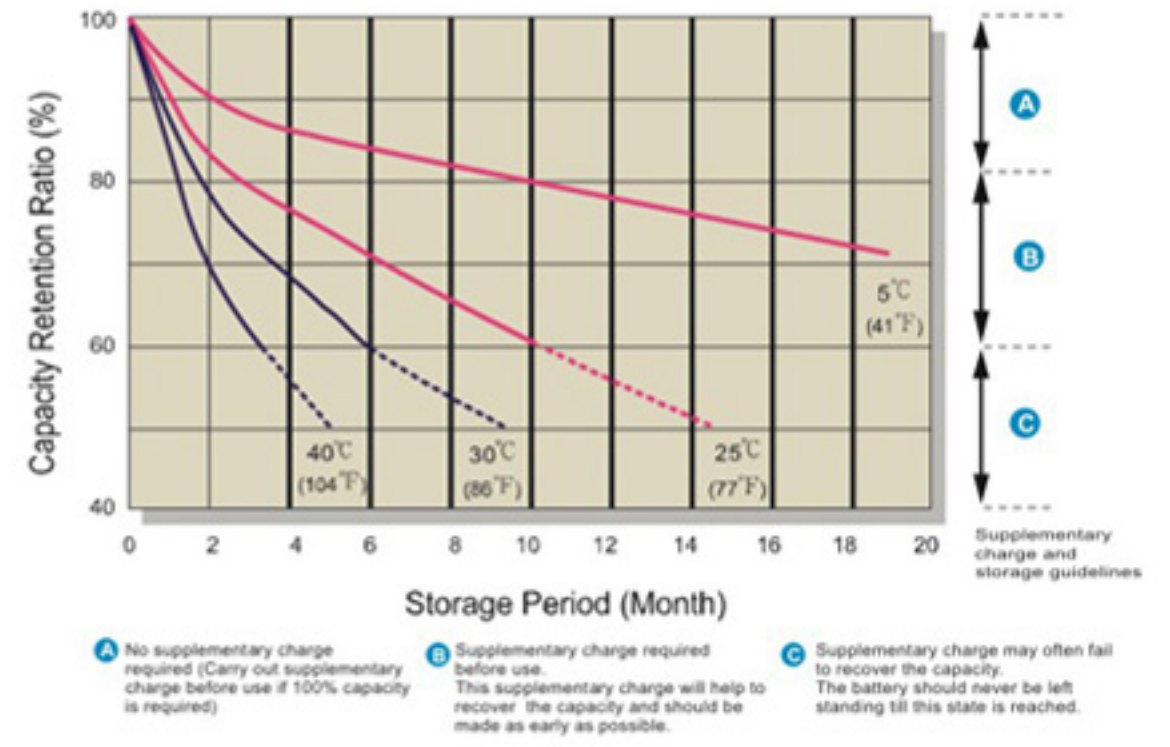
### Cycle use

- Portable measuring equipment.
- Cameras and photographic equipment.
- Various toys and hobby equipment.

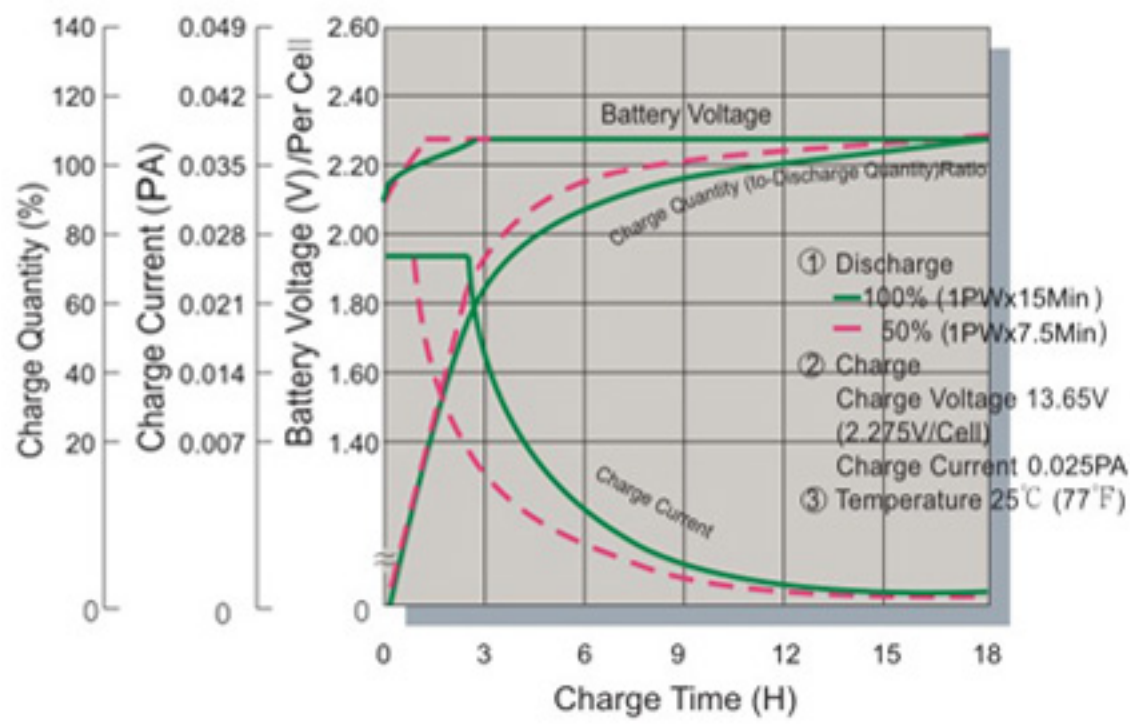
### Trickle (or Float) Service Life



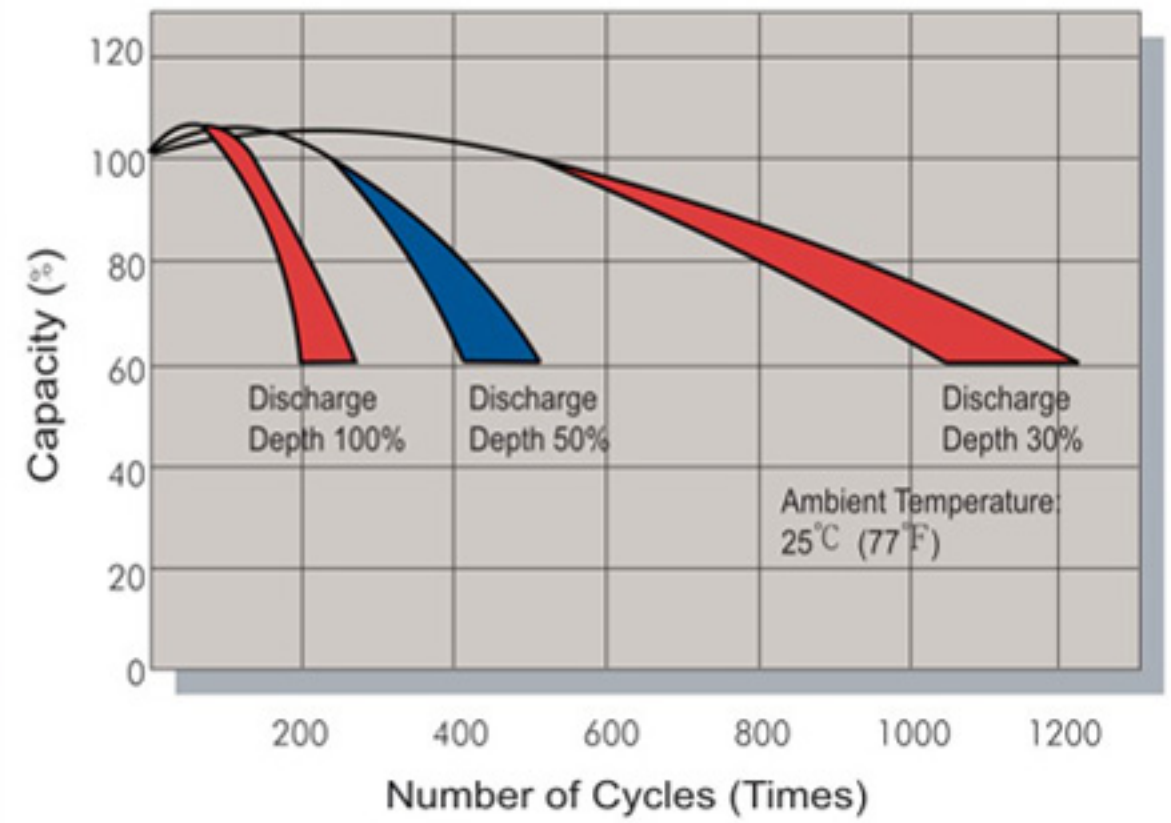
### Capacity Retention Characteristic



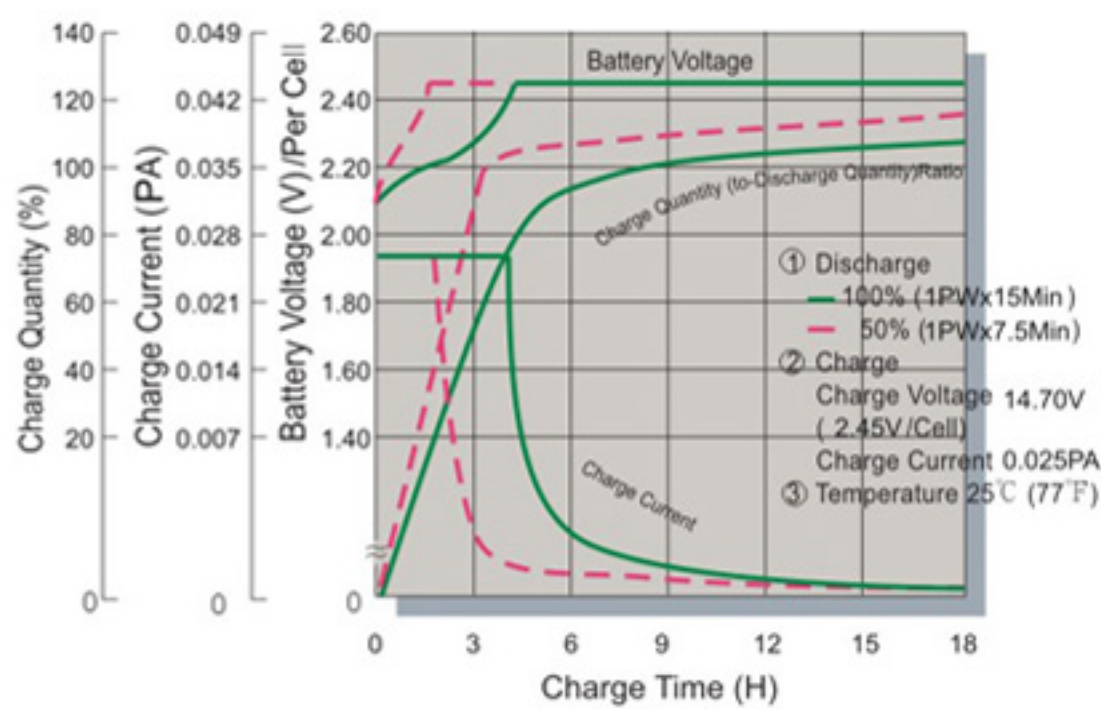
### Battery Voltage and Charge Time for Standby Use



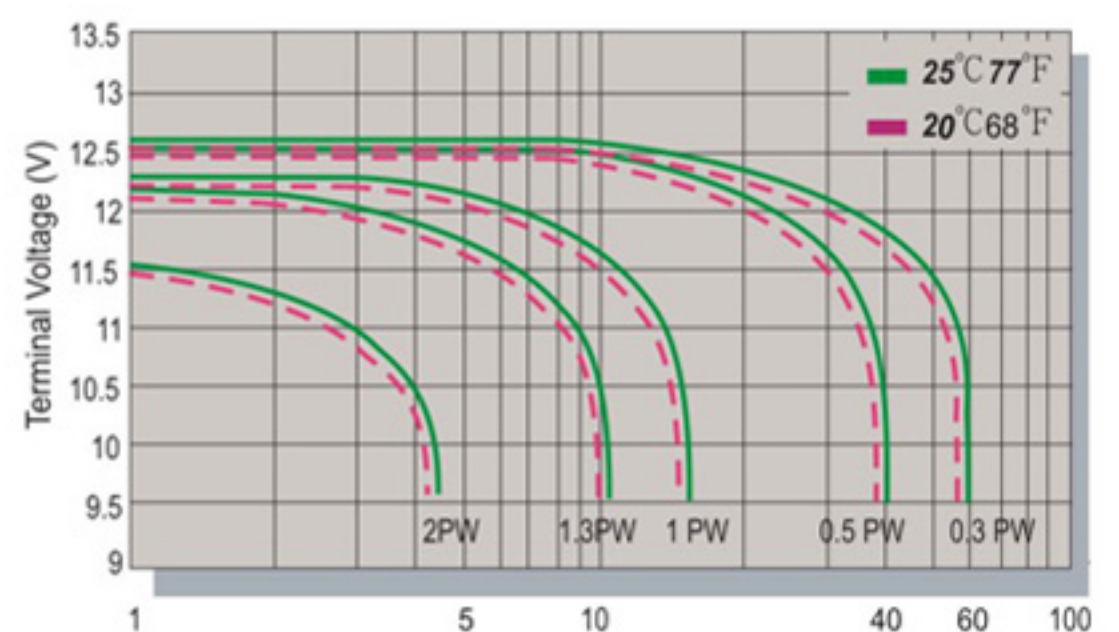
### Cycle Service Life



### Battery Voltage and Charge Time for Cycle Use



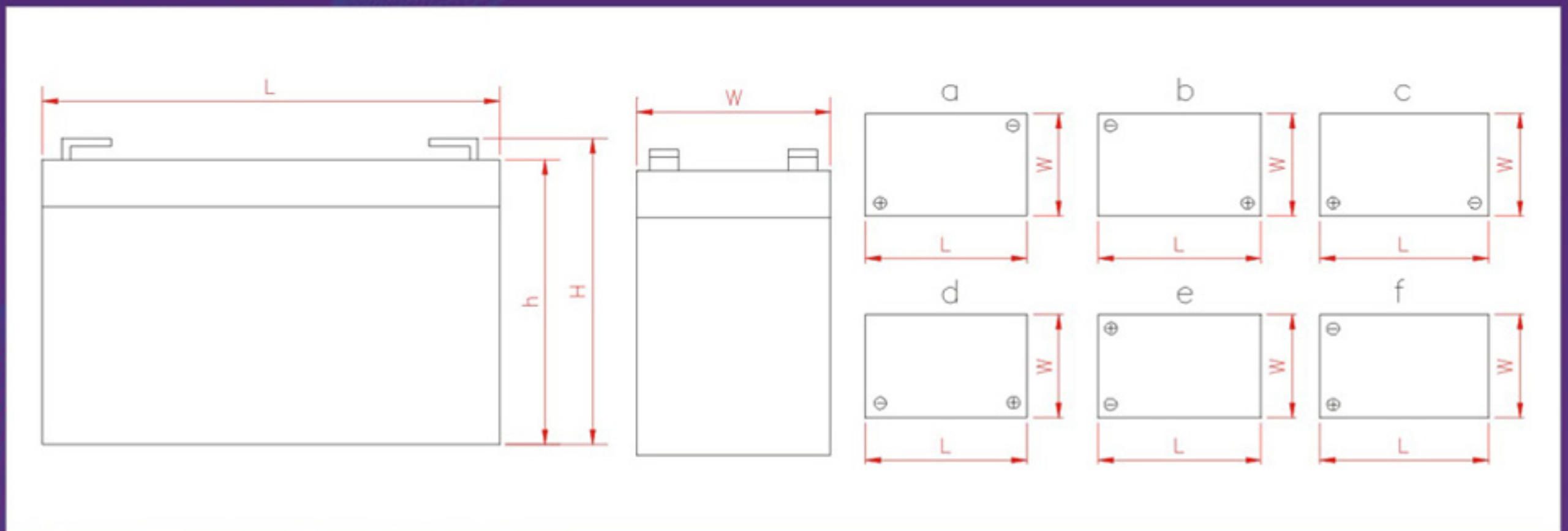
### Terminal Voltage (V) and Discharge Time



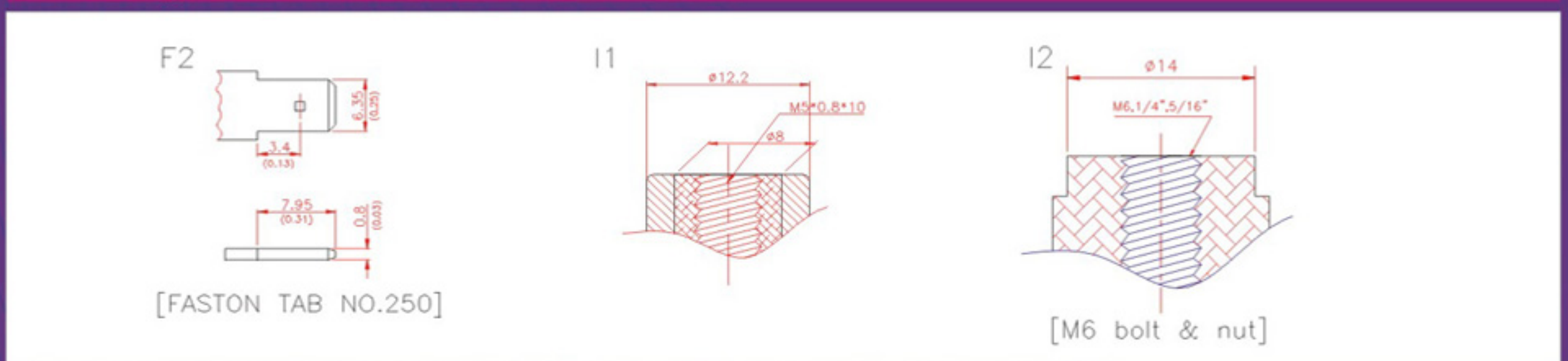
## Specifications

Type	Nominal Voltage(V)	Nominal Capacity (15min) (Wh/cell)	Weight (Approx. kg)	Energy Density (wh/L)	Specific Energy (wh/kg)	Internal Resistance Approx. (mΩ)	Max. Discharge Current 5 sec (A)	Dimensions (mm)				Terminal Position	Terminal Type	Max. Charging Current (A)	Charging(V)	
								Height Over Terminal (H)	Container Height (h)	Length (L)	Width (W)				Standby Use	Cycle Use
XHRL 12245W	12	245	17.60	57.6	10.44	5.90	300	207.3±2.5	202.3±2.5	228±2.5	138.4±1.5	c	I2	24.50	2.275V±0.025/CELL AT 25°C (77°F) Temp Coefficient -3.3mV/CELL°C	2.45V±0.05V/CELL AT 25°C (77°F) Temp Coefficient -5mV/CELL°C
XHRL 12360W	12	360	27.50	58.1	19.64	4.00	800	214.2±2.5	211.2±2.5	261±2.5	168.5±2.0	c	I2	36.00		
XHRL 12410W	12	410	31.00	55.8	19.84	4.00	800	214.2±2.5	211.3±2.5	308.7±2.5	169±2.0	c	I2	41.00		
XHRL 12460W	12	460	35.50	55.1	19.44	5.00	800	216.6±2.5	214.6±2.5	343±2.5	170±2.5	c	I2	46.00		
XHRL 12620W	12	620	45.70	58.2	20.35	4.50	800	275.9±2.5	273.9±2.5	343±2.5	170±2.5	c	I2	62.00		

## Terminal Position



## Terminal Type



## XHRL12245W

### Constant Current Discharge Characteristics Unit:Amperes(25°C, 77°F)

F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	258	205	168	122	96.0	68.2	44.4	38.2	27.2
1.67V	237	190	160	119	94.4	67.4	44.1	37.7	26.9
1.70V	223	183	155	117	92.9	66.9	43.7	37.5	26.8
1.75V	197	169	145	111	89.3	64.8	42.6	36.7	26.3
1.80V	175	151	131	104	83.5	61.6	40.8	35.3	25.5
1.85V	153	133	116	92.2	74.8	55.9	37.7	32.9	24.3

### Constant Power Discharge Characteristics Unit:Watts(25°C, 77°F)

F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	2,700	1,952	1,515	1,240	913	723	606	523	372
1.67V	2,532	1,877	1,470	1,212	900	714	598	522	369
1.70V	2,446	1,834	1,457	1,201	890	704	592	516	363
1.75V	2,277	1,736	1,385	1,166	864	694	584	506	359
1.80V	2,109	1,612	1,301	1,090	833	666	562	500	347
1.85V	1,907	1,457	1,189	999	763	623	528	473	326

<b>XHRL12360W</b>									
<b>Constant Current Discharge Characteristics Unit:Amperes(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	378	256	195	155	110	86.7	71.6	60.8	42.8
1.67V	348	245	188	152	109	85.7	70.4	60.3	42.4
1.70V	333	237	185	149	107	84.9	70.3	60.1	42.2
1.75V	308	225	177	143	105	83.3	68.5	58.7	41.4
1.80V	283	208	162	134	100	79.9	66.4	57.0	40.5
1.85V	245	188	147	120	92.3	73.8	61.5	51.6	32.2
<b>Constant Power Discharge Characteristics Unit:Watts(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	4,098	2,888	2,216	1,773	1,284	1,018	845	716	510
1.67V	3,834	2,771	2,161	1,744	1,269	1,008	837	711	505
1.70V	3,695	2,714	2,131	1,712	1,258	1,001	829	706	502
1.75V	3,440	2,574	2,035	1,662	1,232	983	812	694	493
1.80V	3,203	2,402	1,904	1,558	1,171	943	785	680	483
1.85V	2,842	2,191	1,728	1,418	1,093	872	737	632	457

<b>XHRL12410W</b>									
<b>Constant Current Discharge Characteristics Unit:Amperes(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	423	296	224	182	133	103	86.3	74.7	52.8
1.67V	390	281	219	178	130	102	85.5	74.1	52.4
1.70V	373	272	214	175	129	101	84.9	73.1	51.7
1.75V	348	256	203	169	124	98.6	83.0	71.8	50.7
1.80V	319	236	188	158	118	94.7	79.7	68.9	49.2
1.85V	280	211	170	142	108	87.1	74.2	64.8	45.2
<b>Constant Power Discharge Characteristics Unit:Watts(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	4,518	3,265	2,535	2,075	1,527	1,210	1,014	875	622
1.67V	4,236	3,140	2,460	2,028	1,506	1,194	1,000	873	617
1.70V	4,092	3,069	2,437	2,009	1,489	1,177	991	863	608
1.75V	3,810	2,904	2,317	1,950	1,445	1,161	977	847	600
1.80V	3,528	2,697	2,177	1,824	1,393	1,114	940	836	581
1.85V	3,191	2,437	1,990	1,671	1,276	1,042	883	791	546

<b>XHRL12460W</b>									
<b>Constant Current Discharge Characteristics Unit:Amperes(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	475	332	252	204	149	116	96.8	83.8	59.2
1.67V	437	315	245	199	146	115	95.9	83.1	58.8
1.70V	418	305	240	196	144	114	95.3	82.0	58.0
1.75V	390	287	227	190	139	111	93.1	80.6	56.9
1.80V	358	264	210	177	132	106	89.4	77.3	55.2
1.85V	314	237	191	159	121	97.7	83.3	72.7	50.7
<b>Constant Power Discharge Characteristics Unit:Watts(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	5,069	3,664	2,844	2,328	1,714	1,358	1,137	982	698
1.67V	4,753	3,523	2,760	2,276	1,690	1,339	1,122	979	692
1.70V	4,591	3,443	2,735	2,254	1,671	1,321	1,112	968	682
1.75V	4,275	3,258	2,600	2,187	1,622	1,302	1,096	950	673
1.80V	3,958	3,026	2,443	2,046	1,563	1,250	1,054	937	652
1.85V	3,580	2,735	2,233	1,875	1,432	1,169	991	887	612

<b>XHRL12620W</b>									
<b>Constant Current Discharge Characteristics Unit:Amperes(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	640	448	339	274	201	156	130	113	79.8
1.67V	590	424	331	269	197	155	129	112	79.2
1.70V	564	411	324	265	194	153	128	111	78.2
1.75V	525	387	306	256	187	149	125	109	76.7
1.80V	482	356	284	239	178	143	121	104	74.4
1.85V	423	319	257	214	163	132	112	98.0	68.3
<b>Constant Power Discharge Characteristics Unit:Watts(25°C, 77°F)</b>									
F.V/Time	5MIN	10MIN	15MIN	20MIN	30MIN	40MIN	50MIN	60MIN	90MIN
1.60V	6,831	4,937	3,832	3,137	2,309	1,830	1,533	1,323	941
1.67V	6,405	4,748	3,720	3,067	2,278	1,805	1,512	1,320	932
1.70V	6,187	4,640	3,685	3,037	2,252	1,780	1,498	1,305	919
1.75V	5,761	4,390	3,503	2,948	2,185	1,755	1,477	1,281	907
1.80V	5,334	4,078	3,292	2,757	2,106	1,685	1,421	1,263	878
1.85V	4,825	3,685	3,009	2,526	1,930	1,576	1,335	1,195	825

BATTERY



## SALES OFFICE

### TAIWAN OFFICE

CSB BATTERY CO., LTD.  
5F.-1, No.36, Nanjing W. Rd.,  
Datong District,  
Taipei City 10352 ,  
Taiwan (R.O.C.),  
Tel: +886-2-2555-5600  
Fax: +886-2-2555-3300  
E-mail: service@csb-battery.com.tw

### USA OFFICE

CSB BATTERY TECHNOLOGIES, INC.  
2901, White Settlement Rd.  
Ft. Worth TX 76107.  
U.S.A.  
Tel: +1-817-244-7777/1-(800)3  
CSBUSA(272872)  
Fax: +1-817-244-4445  
E-mail: csb@csb-battery.com

### EUROPE OFFICE

CSB BATTERY OF NETHERLANDS B.V  
Ridderhaven 32  
2984BT Ridderkerk  
The Netherlands  
Tel: +31 (0) 180 418 140  
Fax: +31 (0) 180 418 327  
E-mail: eurosales@csb-battery.com

### BEIJING OFFICE

CSB BATTERY TECHNOLOGIES (BEIJING) CO., LTD.  
2th Fl. 7G, Future Business Center, Chaoyang  
North Rd., Chaoyang District  
Beijing, China  
Zipcode: 100024  
Tel: +86-10-5962-1300 / 1301 / 1302 / 1303  
Fax: +86-10-5962-1304  
E-mail: chinasl@csb-battery.com

### SHANGHAI OFFICE

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.  
Sec. A, 3Fl., No.6 Building, No.350, Xiya Rd.,  
Shanghai Waigaoqiao Trade Zone.  
Shanghai, China  
Zipcode: 200131  
Tel: +86-21-5046-1622, 5046-0833  
Fax: +86-21-5064-3314  
E-mail: chinasl@csb-battery.com

### SHENZHEN OFFICE

CSB BATTERY LOGISTICS (SHANGHAI) CO., LTD.  
Room 2103-2105, Block East,  
City Professional Hub, Shennan Avenue, Futian  
Shenzhen, China  
Zipcode: 518053  
Tel : + 86-755-2694-2788/2606/2706  
Fax: + 86-755-2694-2748  
E-mail: she@csb-battery.com

## MANUFACTURING SITE

### GUANGZHOU FACTORY

CSB BATTERY GUANGZHOU CO., LTD.  
No 97, Tianyuan Road, Yonghe Area,  
Guangzhou Economic Technology Development  
Zone, P.R.C.  
Postcode: 511356  
Tel : +86-20-8297-9716  
Fax : +86-20-8297-9719

### GUAN TYAN FACTORY

CSB GUAN TYAN FACTORY (TAIWAN)  
No. 16, Gong Yeh West Rd., Ell Jenn Tsuen,  
Guan Tyan Hsiang, Tainan Hsien,  
Taiwan.  
Tel : +886-6-698-7600  
Fax : +886-6-698-5734