

# UPS BATTERY

SLA/VRLA/SMF Series

CSPower CS series Sealed free maintenance lead acid batteries are designed with AGM technology, high performance plates and electrolyte to gain extra power output for common power backup system applications

They are sealed and free maintenance whole life, valve regulated type standby AGM battery, also named by VRLA battery, SLA battery, and SMF battery.



## Features

- **Capacity range:** 4Ah~20Ah
- **Low self-discharge rate:** ≤3% per month
- **High oxygen recombination efficiency:** ≥98%
- **Lifetime:** 5-8 years design lifetime in standby application at 25 °C
- **Wide operation temperature range:** -15 °C ~ +45 °C
- **Deep cycle performance:** up to 1400 cycles@30% DOD
- **Non-spillable construction design**
- **High quality AGM separator: extend cycle life and prevents micro short circuit**
- **99.99% pure lead plates ensure high quality and high reliability**
- **Flame-resistance ABS material: increases the strength of battery container**
- **Voltage:** 6V,12V

## Applications



UPS/EPS power supply



Emergency lighting system



Alarm and security systems



## Specifications

CSPower MODEL	Voltage	Capacity (Ah)	Battery Dimension (mm)				Weight (kg) (±3%)	Terminal	Bolt
	(V)		L	W	H	TH			
Small Capacity SERIES									
CS6-4.0	6	4	70	47	101	107	0.7	F1/F2/CUT	/
CS6-4.5	6	4.5	70	47	101	107	0.75	F1/F2/CUT	/
CS6-5	6	5	70	47	101	107	0.8	F1/F2	/
CS6-7.0	6	7	151	34	95	101	1.15	F1/F2	/
CS6-10	6	10	151	50	94	100	1.6	F1/F2	/
CS6-12	6	12	151	50	94	100	1.75	F1/F2	/
CS12-4	12	4	90	70	101	107	1.35	F1/F2	/
CS12-4.5	12	4.5	90	70	101	107	1.48	F1/F2	/
CS12-5	12	5	90	70	101	107	1.58	F1/F2	/
CS12-6.5	12	6.5	151	65	94	100	1.9	F1/F2	/
CS12-7.0	12	7	151	65	94	100	2.05	F1/F2	/
CS12-7.2	12	7.2	151	65	94	100	2.15	F1/F2	/
CS12-7.5	12	7.5	151	65	94	100	2.2	F1/F2	/
CS12-9	12	9	151	65	94	100	2.4	F1/F2	/
CS12-10	12	10	152	99	96	102	3.2	F1/F2	/
CS12-12	12	12	152	99	96	102	3.5	F1/F2	/
CS12-15	12	15	152	99	96	102	3.8	F1/F2	/
CS12-17/18	12	17/18	181	77	167	167	5.2	T1	M5×16
CS12-20	12	20	181	77	167	167	6	T2	M6×16

# UPS BATTERY

## VRLA AGM Series

CSPOWER CS series AGM ups batteries are designed to have a large amount of stored current discharged between charging sessions, with very heavy non-porous battery plates to withstand repeated major discharging and charging cycle. The CSPOWER VRLA AGM UPS battery uses a different chemistry for the plates active paste material, and a slightly stronger electrolyte than normal battery electrolyte, thus the CS range features higher cyclic life with 10 years of float life when compared to the standard Duration range.



## Features

- **Capacity range:** 24Ah~250A
- **Low self-discharge rate:** ≤3% per month
- **High oxygen recombination efficiency:** ≥98%
- **Lifetime:** 10 years design lifetime in standby application at 25 °C
- **Wide operation temperature range:** -15 °C ~ +45 °C
- **Deep cycle performance:** up to 1700 cycles@30% DOD
- **High charging receptivity**
- **Excellent deep discharge recovery capability**
- **Thick flat plate with high Tin low Calcium alloy**
- **30% more cyclic life through innovation at the PAM additives**

• **Voltage:** 6V,12V



## Applications



UPS/EPG power supply



Emergency lighting system



Alarm and security systems



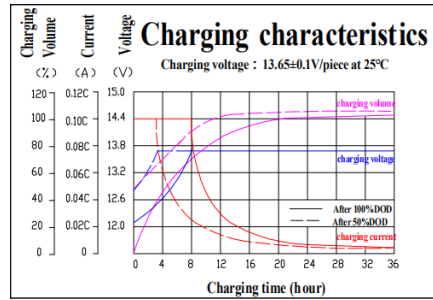
## Specifications

CSPOWER MODEL	Voltage	Capacity	Battery Dimension (mm)				Weight (kg)	Terminal	Bolt
	(V)	(Ah)	L	W	H	TH	(±3%)		
CS12-24	12	24	166	126	174	174	7.7	T2	M6×16
CS12-26	12	26	166	175	126	126	8.3	T2	M6×16
CS12-35	12	35	196	130	155	167	10	T2	M6×16
CS12-40	12	40	198	166	172	172	12.3	T2	M6×16
CS12-45	12	45	198	166	174	174	13	T2	M6×16
CS12-50	12	50	229	138	208	212	15.5	T3	M6×16
CS12-55	12	55	229	138	208	212	16.2	T3	M6×16
CS12-65	12	65	350	167	178	178	20.5	T3	M6×16
CS12-70	12	70	350	167	178	178	21.5	T3	M6×16
CS12-75	12	75	260	169	211	215	22	T3	M6×16
CS12-80	12	80	260	169	211	215	23.5	T3	M8×16
CS12-85/90	12	85/90	331	174	214	219	25	T3	M6×16
CS12-100C	12	100	307	169	211	216	27	T3	M6×16
CS12-100A	12	100	331	174	214	219	29	T4	M6×16
CS12-120B	12	120	407	173	210	233	33	T5	M8×16
CS12-120A	12	120	407	173	210	233	34	T5	M8×16
CS12-135	12	135	341	173	283	288	41	T5	M8×16
CS12-150B	12	150	484	171	241	241	41	T4	M8×16
CS12-150A	12	150	484	171	241	241	43.5	T4	M8×16
CS12-160	12	160	532	206	216	222	48.5	T4	M8×16
CS12-180	12	180	532	206	216	222	53	T4	M8×16
CS12-200B	12	200	522	240	219	225	56	T5	M8×16
CS12-200A	12	200	522	240	219	225	58.2	T5	M8×16
CS12-230	12	230	522	240	219	225	61	T5	M8×16
CS12-250	12	250	520	268	220	225	70	T5	M8×16
CS6-180	6	180	260	180	247	251	27.5	T5	M8×16
CS6-180A	6	180	306	168	220	226	27	T5	M8×16
CS6-200	6	200	260	180	247	251	29.5	T5	M8×16
CS6-200A	6	200	323	178	224	229	29.5	T5	M8×16

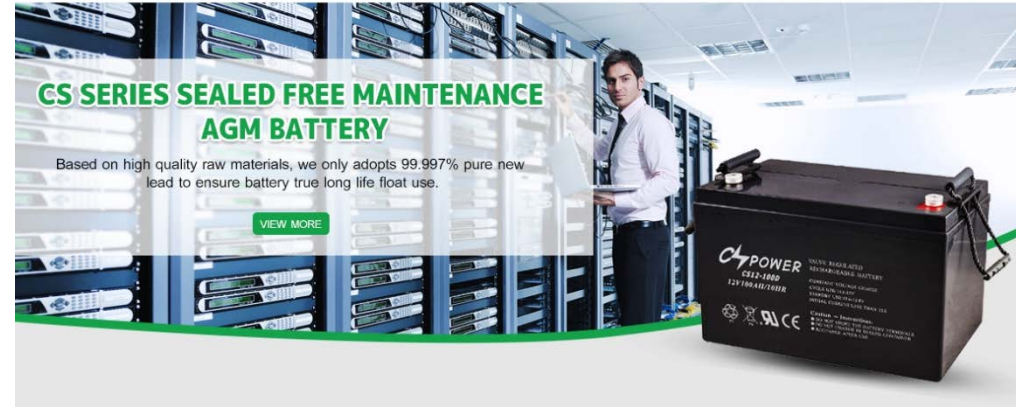
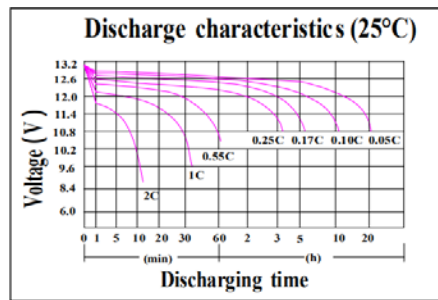
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## CHARACTERISTICS

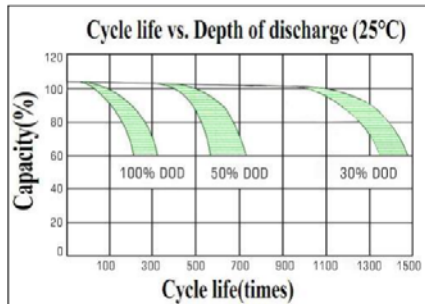
### ◆ Charging Characteristics



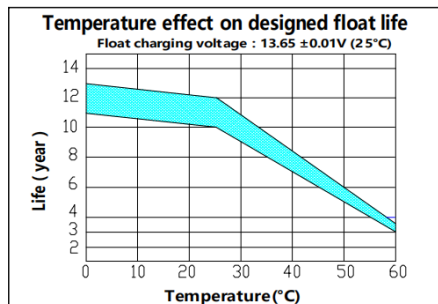
### ◆ Discharging Characteristics(25°C)



### ◆ Cycle Life VS. Depth of Discharge(25°C)



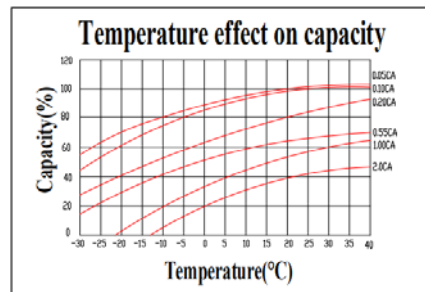
### ◆ Temperature Effect on designed service Life



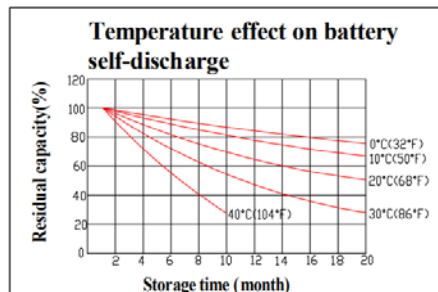
## Battery Construction



### ◆ Temperature Effect on Capacity



### ◆ Temperature Effect on battery self-discharge



Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	Fire resistance ABS (UL94-V0)	Flame Si-Rubber and aging resistance	Small capacity: F1/F2 Female Copper Insert M5/M6/M8	Advanced AGM separator for high pressure cell design	Dilute high purity sulfuric acid	Two layers epoxy resin seal