LEAD ACID BATTERY

DS SERIES - GENERAL PURPOSE

DS 12-12 (12V-12AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	12.0AH	
Dimensions	Length	151±2mm (5.95 inches)
	Width	98±1mm (3.86 inches)
	Container Height	95±1mm (3.74 inches)
	Total Height (with Terminal)	101±2mm (3.98 inches)
Approx Weight	Approx 3.5 kg	Terminal: Stainless
Battery Life	10 Years	
Container Material	ABS	
Rated Capacity	13.0 AH/0.65A	(20hr ,1.80V/cell,25°C/77°F)
	12.0 AH/1.20A	(10hr,1.80V/cell,25°C/77°F)
	11.9 AH/2.38A	(5hr,1.75V/cell,25°C/77°F)
	10.7 AH/3.57A	(3hr,1.75V/cell,25°C/77°F)
	8.79 AH/8.79A	(1hr,1.60V/cell,25°C/77°F)
Max. Discharge Current	210A (5s)	
Depth of Discharge	30% DOD min. 600	
Internal Resistance	Approx 14mΩ	
Operating Temp.Range	Discharge : -15～50°C (5～122°F)	
	Charge : -5～50°C (23～122°F)	
	Storage : -20～50°C (-4～122°F)	
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Cycle Use	Initial Charging Current less than 4.2A.Voltage 14.4V~15.0V at 25°C(77°F)Temp. Coefficient -30mV/°C	
Standby Use	No limit on Initial Charging Current Voltage 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	DS 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.	

TSE | UL | ISO 14001 | ISO 9001 | CE | MSDS | IEC | ISO 45001

Constant Current Discharge (Amperes) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	26.7	20.5	17.0	14.7	11.3	8.35	7.04	4.16	3.26	2.65	2.16	1.87	1.51	1.26	0.693
1.80V/cell	35.8	26.2	20.5	17.3	13.4	9.71	7.89	4.54	3.51	2.83	2.32	2.01	1.60	1.30	0.700
1.75V/cell	40.3	28.7	22.4	18.6	13.9	10.1	8.25	4.71	3.57	2.89	2.38	2.07	1.63	1.34	0.707
1.70V/cell	44.4	31.3	23.9	19.6	14.5	10.5	8.51	4.83	3.67	2.97	2.44	2.11	1.65	1.36	0.720
1.65V/cell	49.0	33.8	25.4	20.8	15.3	10.7	8.71	4.90	3.83	3.07	2.51	2.15	1.68	1.39	0.729
1.60V/cell	54.0	36.7	27.2	22.2	16.1	11.2	8.79	5.11	3.94	3.17	2.59	2.20	1.70	1.41	0.734

Constant Power Discharge (Watts/cell) at 25 °C (77°F)

F.V/Time	5min	10min	15min	20min	30min	45min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	48.7	37.8	31.6	27.6	21.6	16.1	13.6	8.09	6.35	5.18	4.24	3.69	2.98	2.50	1.37
1.80V/cell	64.7	47.8	37.7	32.2	25.1	18.5	15.1	8.77	6.79	5.50	4.52	3.94	3.16	2.57	1.38
1.75V/cell	71.4	51.6	40.7	34.3	25.9	19.0	15.8	9.06	6.89	5.60	4.63	4.03	3.20	2.64	1.40
1.70V/cell	76.5	55.0	42.8	35.8	26.8	19.7	16.2	9.26	7.07	5.74	4.74	4.11	3.24	2.69	1.42
1.65V/cell	83.1	58.8	45.2	37.7	28.0	20.0	16.5	9.34	7.34	5.92	4.85	4.19	3.29	2.74	1.44
1.60V/cell	89.6	62.4	47.5	39.7	29.4	20.8	16.5	9.70	7.53	6.08	4.99	4.26	3.31	2.77	1.45

Specifications subject to change without notice.

LEAD ACID BATTERY

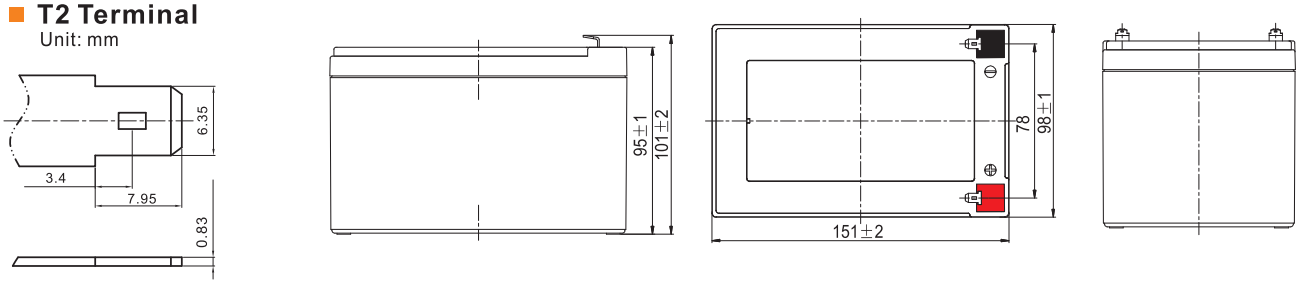
DS SERIES - GENERAL PURPOSE

DS 12-12 (12V-12AH)

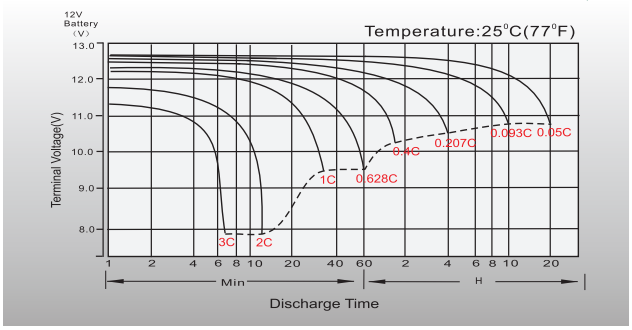
Dimensions

T2 Terminal

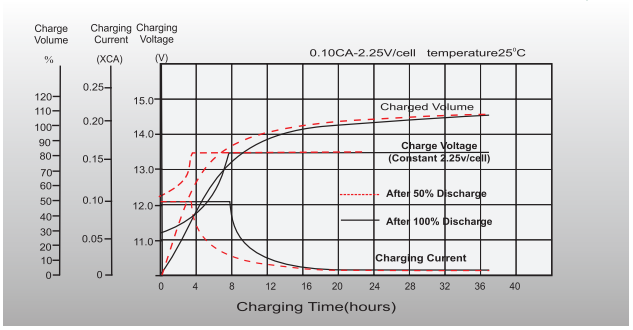
Unit: mm



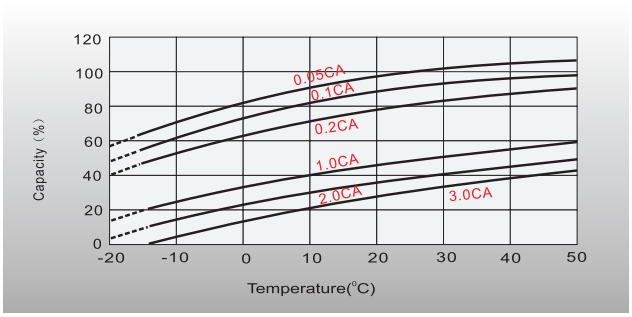
Discharge Characteristics



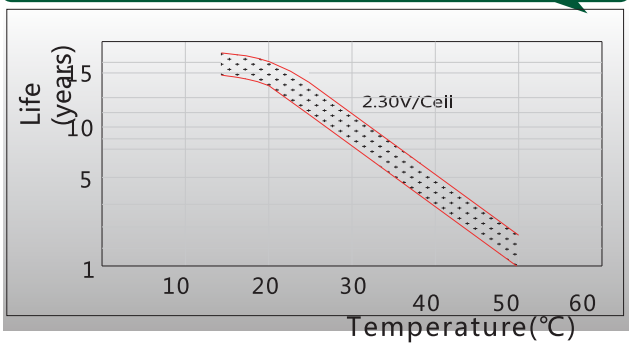
Float Charging Characteristics



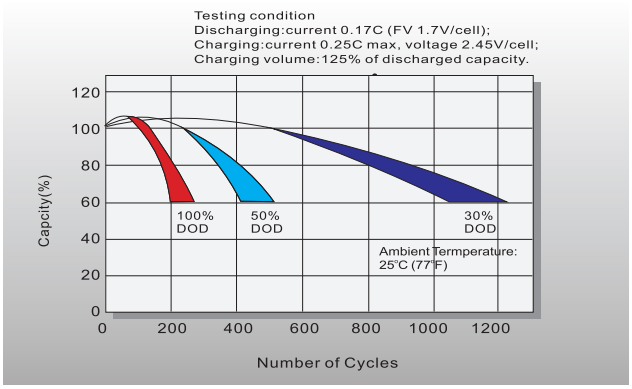
Temperature Effects in Relation to Battery Capacity



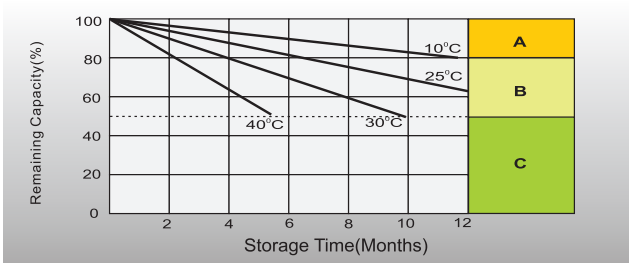
Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics



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 limted current 0.25CA and constant volatge 2.25V/cell.
2.Charged for above 20hours at limted current 0.25CA and constant volatge 2.45V/cell.
3.Charged for 8~10hours at limted current 0.05CA .

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