

DS SERIES - GENERAL PURPOSE

DS 12-70 (12V-70AH)

Specification

Nominal Voltage	12V	
Nominal Capacity(10HR)	70 .0AH	
Dimensions	Length	348±3mm (13.7 inches)
	Width	167±2mm (6.57 inches)
	Container Height	178±2mm (7.01 inches)
	Total Height (with Terminal)	178±2mm (7.01 inches)
Approx Weight	Approx 20 kg(+/- /5))	Terminal: Stainless
Battery Life	10 Years	
Container Material	ABS	
Rated Capacity	72.2AH/3.51A	(20hr , 1.80V/cell,25°C/77°F)
	70AH/7 A	(10hr, 1.80V/cell,25°C/77°F)
	60.3 AH/12.1A	(5hr, 1.75V/cell,25°C/77°F)
	54.6 AH/18.2A	(3hr, 1.75V/cell,25°C/77°F)
	42.7 AH/42.7A	(1hr, 1.60V/cell,25°C/77°F)
Max. Discharge Current	840A (5s)	
Internal Resistance	Approx 6.6mΩ	
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 21.0A.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	119.8	94.2	80.1	67.0	53.2	40.3	33.0	21.0	16.6	13.6	10.9	9.53	7.74	6.61	3.61
1.80V/cell	160.8	120.4	96.8	79.2	62.8	46.9	37.0	22.9	17.9	14.5	11.7	10.2	8.20	7.00	3.64
1.75V/cell	181.3	132.2	105.7	85.2	65.2	48.6	38.7	23.8	18.2	14.8	12.0	10.5	8.34	7.07	3.68
1.70V/cell	199.7	144.1	112.9	89.5	67.9	50.6	39.9	24.7	18.7	15.2	12.4	10.7	8.46	7.14	3.75
1.65V/cell	220.2	155.6	120.0	95.1	71.6	51.8	41.2	25.4	19.5	15.7	12.7	11.0	8.60	7.29	3.79
1.60V/cell	242.8	168.9	128.3	101.3	75.6	54.0	42.7	26.3	20.1	16.2	13.1	11.2	8.68	7.36	3.82

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	219.1	174.0	149.5	126.3	101.5	77.5	63.6	40.8	32.4	26.5	21.4	18.7	15.3	13.0	7.14
1.80V/cell	290.9	219.7	178.2	147.1	117.9	89.4	70.9	44.2	34.7	28.2	22.9	20.0	16.1	13.8	7.20
1.75V/cell	321.0	237.5	192.2	156.7	121.4	91.9	73.9	45.7	35.2	28.7	23.5	20.5	16.4	13.9	7.26
1.70V/cell	343.7	253.0	202.4	163.5	125.7	95.2	75.9	47.4	36.1	29.4	24.0	20.9	16.6	14.1	7.39
1.65V/cell	373.6	270.6	213.5	172.4	131.5	96.7	77.9	48.5	37.4	30.3	24.6	21.3	16.8	14.3	7.48
1.60V/cell	402.6	287.1	224.6	181.6	137.8	100.2	80.3	49.9	38.4	31.2	25.3	21.7	17.0	14.5	7.51

Specifications subject to change without notice

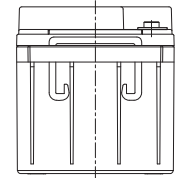
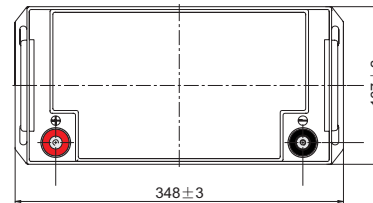
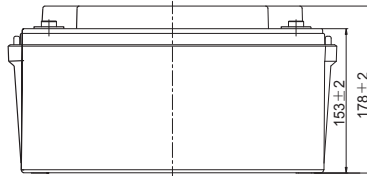
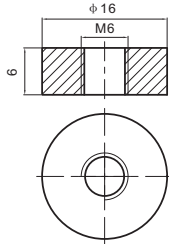
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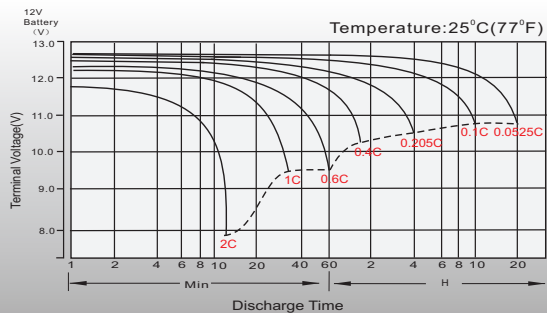
Dimensions

T6 Terminal

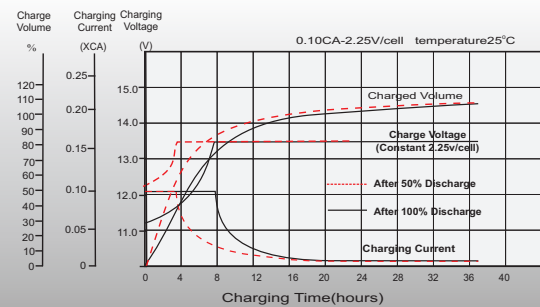
Unit: mm



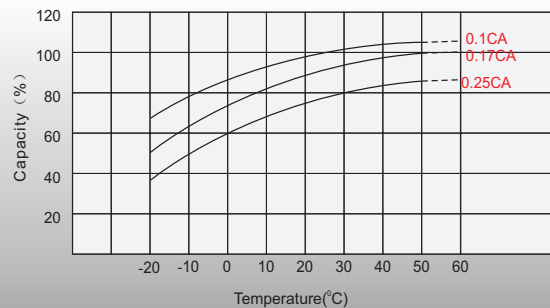
Discharge Characteristics



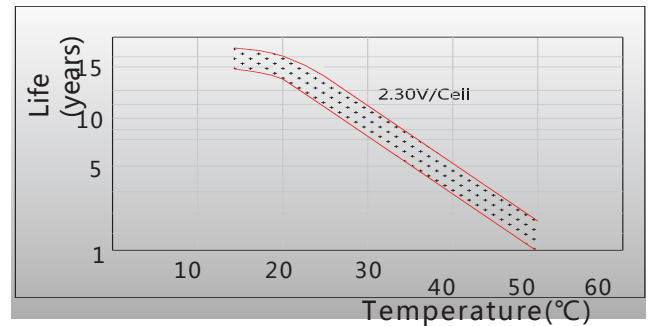
Float Charging Characteristics



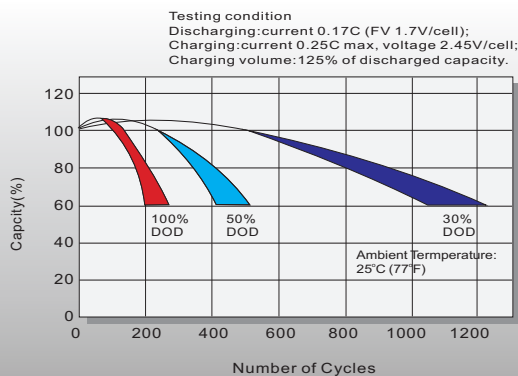
Temperature Effects in Relation to Battery Capacity



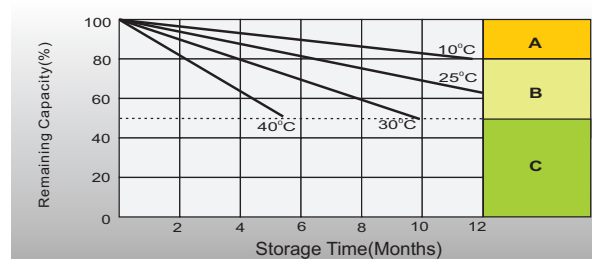
Effect of Temperature on Long Term Float Life



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 limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8-10 hours 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.