



S12

12 Ah | 12 V | 20 h

Specifications

Voltage	12 V
Nominal Capacity	12 Ah @ 20 hour-rate
Number of Cells	6
Internal Resistance	Approx. 16.5 mΩ
Design Life	6 to 8 years (float charging)
Short Circuit Current	590 A
Self Discharge	Monthly rate < 3% @ 25 °C Recharge after 6 months Charge before using

Charging & Discharging

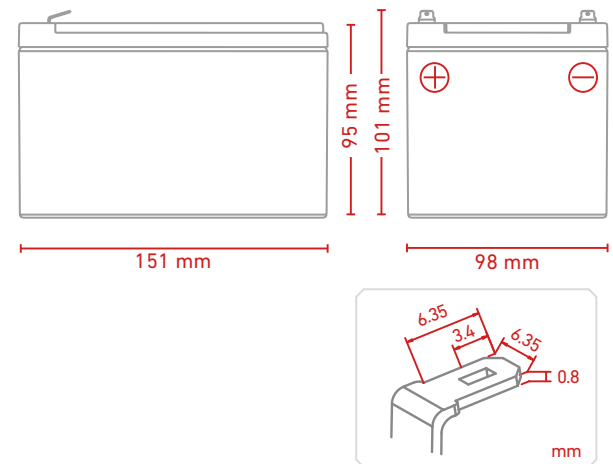
Max. Charging Current	3.6 A
Max. Discharge Current	120 A (5 sec)
Standby Use Voltage	13.7 V to 13.9 V @ 25 °C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	13.7 V to 13.9 V @ 25 °C Temperature Compensation: -4mV/°C/Cell
Reference Capacity	C3 9.29 Ah C5 10.5 Ah C10 11.2 Ah C20 12.0 Ah

Temperature Ranges

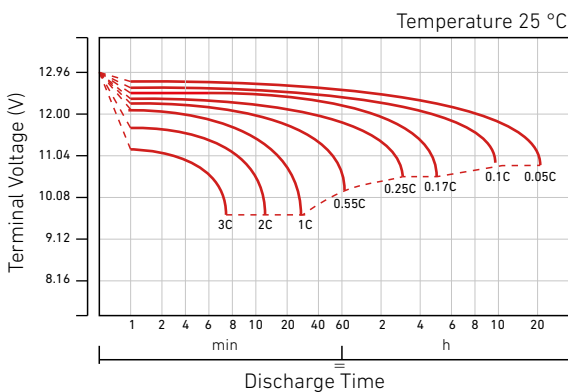
Normal Operation	25 °C ± 5 °C
Discharging	-20 °C to 60 °C
Charging	0 °C to 50 °C
Storage	-20 °C to 60 °C

Mechanical Specifications

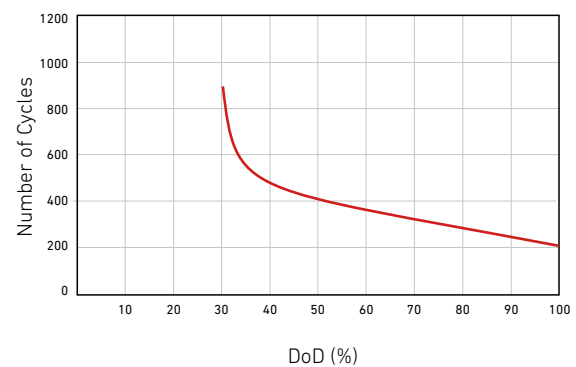
Measurements (L x W x H)	151 x 98 x 95 mm
Weight	Approx. 3.5 kg
Terminals	F2
Case material	A.B.S. UL94-HB, UL94-V0 Optional



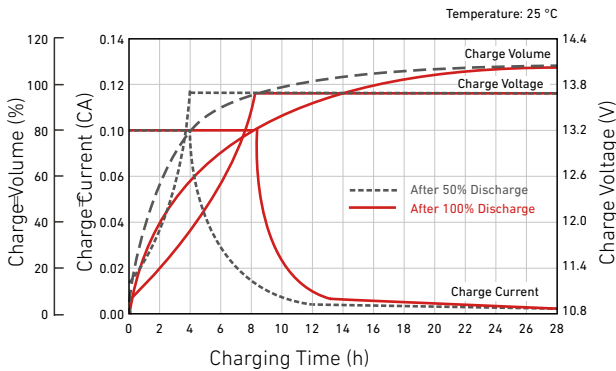
Discharge Characteristics Curve



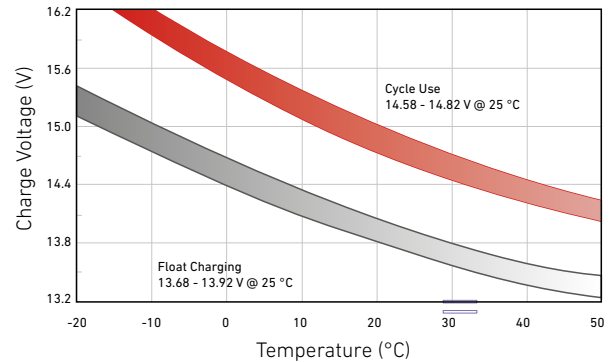
Cycle Life in Relation to Depth of Discharge



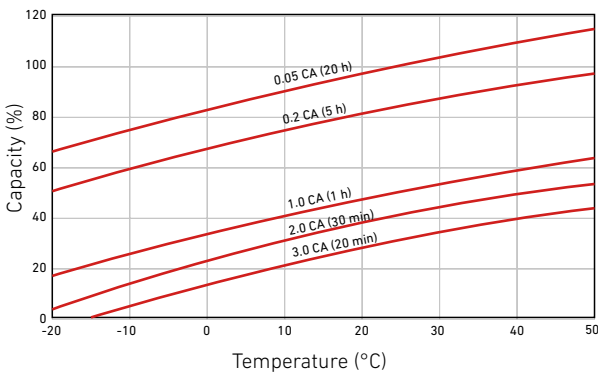
Discharge Characteristics Curve For Standby Use



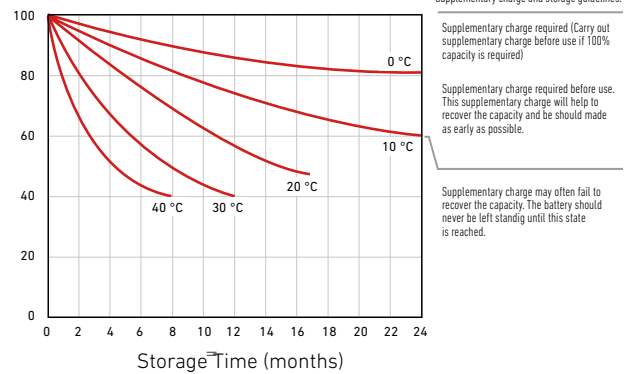
Relationship Between Charging Voltage and Temperature



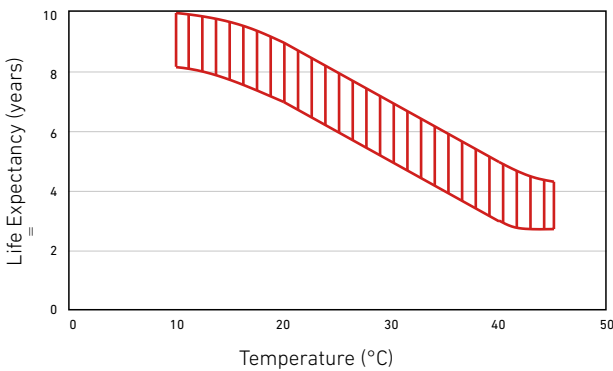
Temperature Effects on Capacity



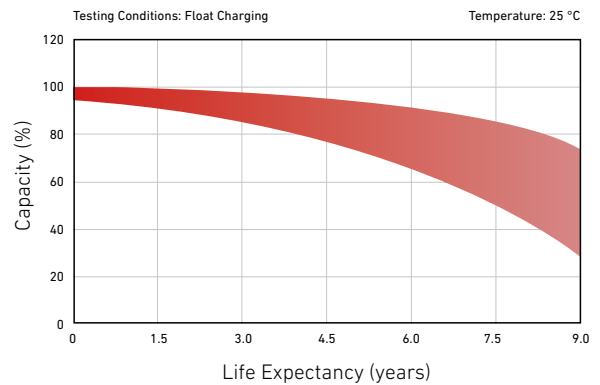
Storage Characteristics



Effect of Temperature on Long-Term Life



Life Characteristics of Standby Use



Constant Current Discharge Characteristics: A (25 °C)

F.V	Time											
	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.60 V	47,58	31,03	22,89	13,25	7,654	4,516	3,283	2,614	2,207	1,475	1,201	0,625
1.65 V	45,86	30,10	22,29	12,96	7,513	4,450	3,239	2,582	2,181	1,460	1,190	0,620
1.70 V	43,62	28,89	21,50	12,57	7,325	4,362	3,181	2,539	2,147	1,440	1,174	0,613
1.75 V	40,75	27,32	20,48	12,07	7,078	4,246	3,104	2,481	2,102	1,414	1,154	0,604
1.80 V	37,13	25,32	19,16	11,42	6,755	4,093	3,003	2,405	2,043	1,379	1,127	0,592
1.85 V	32,67	22,81	17,49	10,58	6,340	3,894	2,870	2,306	1,964	1,332	1,092	0,577

Constant Power Discharge Characteristics: WPC (25 °C)

F.V	Time											
	5 min	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.60 V	81,89	53,53	40,62	24,42	14,53	8,69	6,36	5,09	4,32	2,92	2,40	1,25
1.65 V	81,03	53,32	40,39	24,24	14,41	8,62	6,32	5,06	4,29	2,90	2,38	1,24
1.70 V	77,94	51,74	39,30	23,66	14,10	8,48	6,22	4,98	4,23	2,87	2,35	1,23
1.75 V	74,12	49,81	37,97	22,94	13,69	8,29	6,10	4,89	4,16	2,82	2,31	1,21
1.80 V	68,71	46,96	36,02	21,92	13,13	8,03	5,92	4,76	4,05	2,76	2,26	1,19
1.85 V	61,54	43,06	33,35	20,52	12,41	7,68	5,68	4,58	3,91	2,67	2,19	1,16