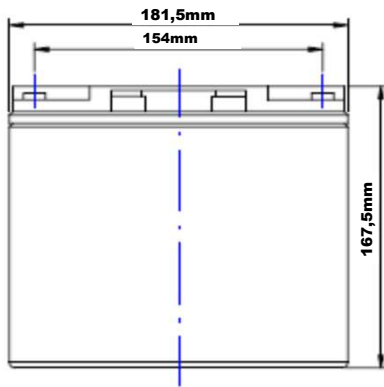
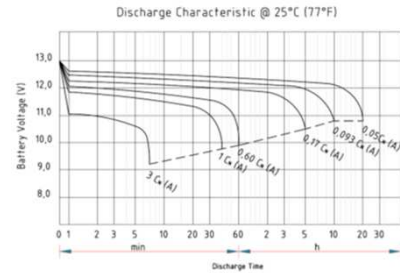
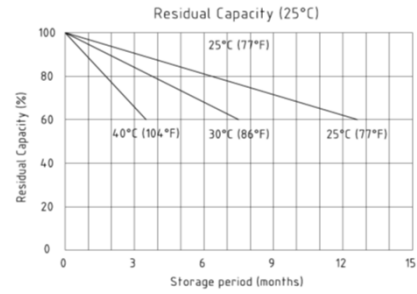
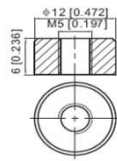


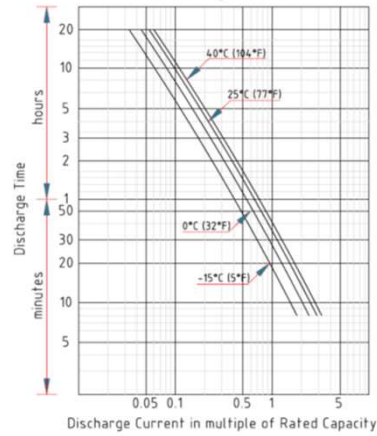
GENERAL PURPOSE BATTERIES



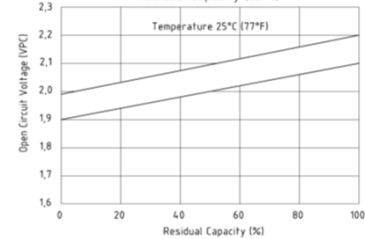
T12 Terminal
Unit: mm [inches]



Duration of Discharge vs. Discharge Current



Relationship for Open Circuit Voltage & Residual Capacity (25°C)



Specification

Nominal Voltage	12 V
Nominal Capacity (20 Hr)	18 Ah
Dimension	Length 181,5±1 mm (7,14 inches)
	Width 77±1 mm (3,03 inches)
	Container Height 167,5±1 mm (6,59 inches)
	Total Height (with terminal) 167,5±1 mm (6,59 inches)
Approx Weight	Approx 5,32 kg (11,73 lbs)
Terminal	T12
Container Material	ABS
Rated Capacity	18 Ah / 0,9A (20 hr, 1,80 V/cell, 25°C/77°F)
	16,7 Ah / 1,67A (10 hr, 1,80 V/cell, 25°C/77°F)
	15,2 Ah / 3,04A (5 hr, 1,75 V/cell, 25°C/77°F)
	13,65 Ah / 4,55A (3 hr, 1,75 V/cell, 25°C/77°F)
	11,7 Ah / 11,7A (1 hr, 1,60 V/cell, 25°C/77°F)
Max Discharge Current	270,0 A (5 s)
Internal Resistance	Approx 16,0 mΩ
Operating Temperat. Range	Discharge : -15÷50°C (5÷122°F)
	Charge : 0÷40°C (32÷104°F)
	Storage : -15÷40°C (5÷104°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)
Cycle Use	Initial Charging Current less than 3,6 A Voltage 14,4÷15,0V at 25°C (77°F) Temperature Coefficient -30mV/°C
Standby Use	No limit on Initial Charging Current Voltage 13,5÷13,8 V at 25°C (77°F) Temperature Coefficient -20mV/°C
Capacity affected by Temperature	40°C (104°F) 103%
	25°C (77°F) 100%
	0°C (32°F) 86%
Self Discharge	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.

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

F.V / Time	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1,85V / cell	26,0	22,7	19,9	15,6	11,6	9,36	5,56	4,17	3,39	2,87	2,49	1,98	1,63	0,89
1,80V / cell	30,8	26,5	22,7	17,2	12,7	10,10	5,97	4,39	3,54	2,98	2,57	2,03	1,67	0,90
1,75V / cell	33,8	28,4	24,1	18,1	13,3	10,60	6,18	4,55	3,64	3,04	2,62	2,07	1,70	0,91
1,70V / cell	36,8	30,3	25,4	18,9	13,8	10,90	6,34	4,67	3,73	3,11	2,68	2,10	1,72	0,92
1,67V / cell	38,0	31,3	26,0	19,4	14,1	11,10	6,43	4,71	3,76	3,14	2,70	2,11	1,73	0,93
1,65V / cell	39,2	32,2	26,6	19,8	14,3	11,30	6,51	4,75	3,79	3,17	2,72	2,12	1,74	0,93
1,60V / cell	41,7	34,1	28,0	20,5	14,9	11,70	6,68	4,86	3,87	3,22	2,76	2,15	1,76	0,94

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

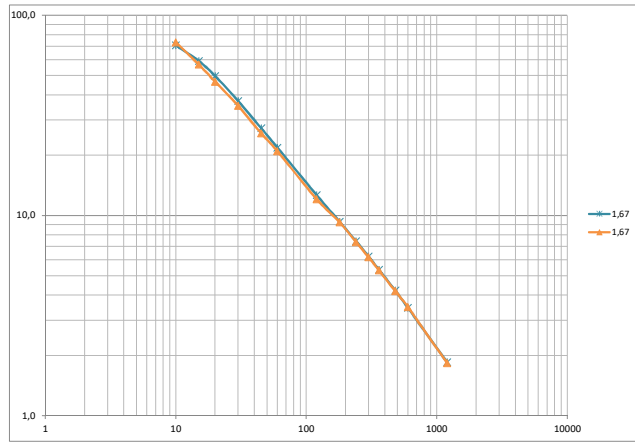
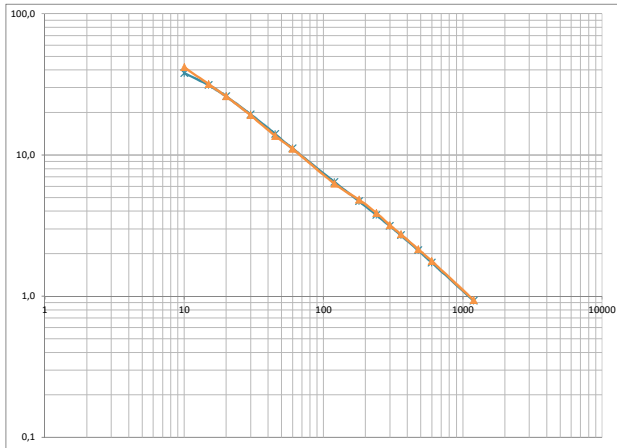
F.V / Time	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	6 h	8 h	10 h	20 h
1,85V / cell	53,63	46,87	41,16	32,24	24,02	19,29	11,40	8,48	6,87	5,82	5,04	4,00	3,31	1,81
1,80V / cell	64,15	55,33	47,38	35,85	26,41	21,06	12,22	8,96	7,20	6,04	5,20	4,12	3,39	1,82
1,75V / cell	71,25	60,00	50,81	38,03	27,87	22,22	12,72	9,31	7,40	6,17	5,30	4,18	3,43	1,83
1,70V / cell	78,65	64,60	54,15	40,15	29,13	23,06	13,11	9,57	7,59	6,32	5,35	4,19	3,47	1,84
1,67V / cell	81,91	67,13	54,83	41,22	29,82	23,56	13,30	9,70	7,70	6,40	5,40	4,20	3,50	1,85
1,65V / cell	85,59	69,32	57,25	42,25	30,36	23,98	13,50	9,77	7,73	6,44	5,49	4,28	3,51	1,86
1,60V / cell	90,32	73,61	60,44	43,91	31,56	24,82	13,86	9,98	7,89	6,53	5,57	4,33	3,54	1,87

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

	10	15	20	30	45	60	120	180	240	300	360	480	600	1200
1,67	38,0	31,3	26,0	19,4	14,1	11,10	6,43	4,71	3,76	3,14	2,70	2,11	1,73	0,93
1,67	41,9	31,7	26,0	19,1	13,7	11,05	6,26	4,82	3,89	3,18	2,74	2,15	1,77	0,94

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

	10	15	20	30	45	60	120	180	240	300	360	480	600	1200
1,67	70,9	59,1	49,8	37,4	27,4	21,9	12,7	9,32	7,46	6,25	5,38	4,22	3,47	1,85
1,67	73,4	56,8	46,6	35,3	25,8	21,0	12,1	9,3	7,4	6,2	5,3	4,2	3,5	1,8



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

		5	10	15	20	30	45	60	120	180	240	300	360	480	600	1200
1,85	81	65,00	49,80	43,80	38,70	30,50	22,90	18,50	11,10	8,33	6,79	5,77	5,01	3,99	3,31	1,81
1,8	98	78,70	58,50	50,90	43,90	33,50	24,90	20,00	11,80	8,74	7,08	5,97	5,16	4,10	3,38	1,82
1,75	110	88,40	63,70	54,30	46,40	35,10	26,00	20,90	12,20	9,02	7,24	6,07	5,25	4,15	3,41	1,83
1,7	121	97,20	68,90	57,50	48,70	36,80	26,90	21,50	12,50	9,24	7,40	6,20	5,34	4,20	3,45	1,84
1,65	130	104,70	72,80	60,70	50,80	38,10	27,80	22,20	12,80	9,39	7,51	6,30	5,41	4,24	3,48	1,86
1,6	137	110,40	77,00	63,90	53,20	39,40	28,80	22,90	13,10	9,57	7,65	6,38	5,47	4,28	3,51	1,87