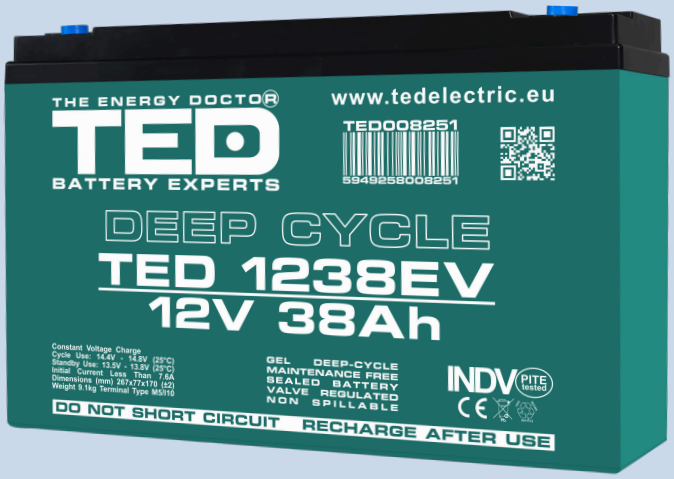
THE ENERGY DOCTOR®
TED
BATTERY EXPERTS

TECHNICAL DATA SHEET

TED1238EV 12V 38Ah



- Long cycle life: approx. 400–600 cycles 100% DOD. Flame retardant (UL94) HBO.
- Higher energy capacity: +10% compared to standard (patent negative pasting formula).
- Better durability: less then 50% grid corrosion resistance (rare-earth patent alloy).
- Extended performance: 0% acid stratification (nano silica GEL technology).

PHYSICAL SPECIFICATIONS

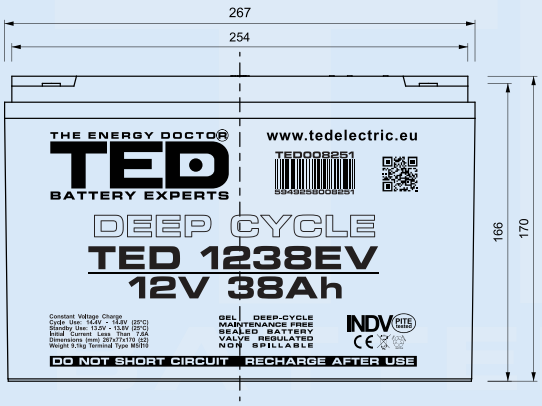
Model	Dimensions (mm)			Weight (kg)	Terminal	Design Life
	Length	Width	Height			
TED008251	267	77	170	9.1 kg	M5/I10	20°C (68°F): 5-7 Years

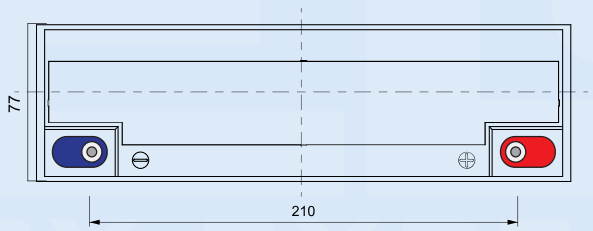
PRODUCT SPECIFICATIONS

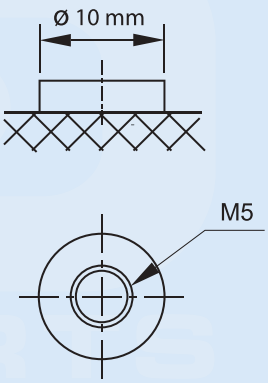
Nominal Voltage	Rated Capacity25°C/77°C	Operating Temp.Range	Capacity Effected Temp	Capacity vs Storge Time (25°C/77°F)
12V	38Ah 20hr Rate (1.80V/cell)	Discharge: -15°C ~ 50°C	40°C (104°F): 106%	3 months: 90%
	35Ah 10hr Rate (1.75V/cell)	Charge: 0°C ~ 40°C	25°C (77°F): 100%	6 months: 80%
	33Ah 5hr Rate (1.75V/cell)	Storage: -15°C ~ 40°c	0°C (32°F): 85%	9 months: 60%
	32Ah 3hr Rate (1.75V/cell)	Optimum: 25°C ± 2°C	-15°C (5°F): 72%	12 months: 45%

Charging Current	Limited Voltage	Floating Voltage
Limited Current: ≤ 7.6A (0.2C2A)	14.6 ~ 14.8V 25°C (77°F)	13.6 ~ 13.8V 25°C (77°F)
Container Material	**Internal Resistance**	**Maximum Discharge Current**
ABS UL94-HBO	~ 9.5mΩ	380A

PRODUCT DIMENSIONS







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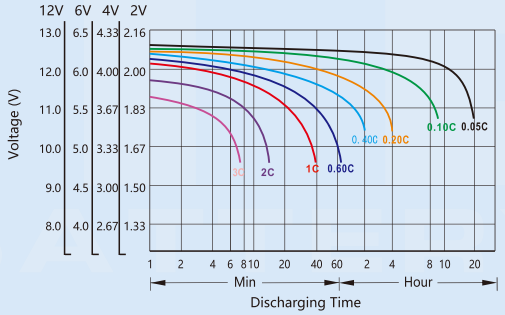
Constant Current Discharge (A) at 25°C (77°F)

F.V/Time	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/Cell	38.7	27.6	22.1	12.6	9.61	7.36	5.99	5.07	3.89	3.17	1.75
1.80V/Cell	40.1	28.4	22.8	13.1	10.0	7.58	6.22	5.26	4.01	3.26	1.90
1.75V/Cell	41.2	29.5	23.6	13.9	10.7	8.12	6.57	5.52	4.21	3.40	1.84
1.70V/Cell	42.2	30.2	24.4	14.1	10.7	8.23	6.71	5.67	4.29	3.47	1.88
1.67V/Cell	43.0	31.2	25.3	14.3	10.8	8.31	6.85	5.74	4.37	3.52	1.90
1.60V/Cell	44.2	32.1	25.8	14.7	10.9	8.56	7.00	5.90	4.48	3.63	1.91

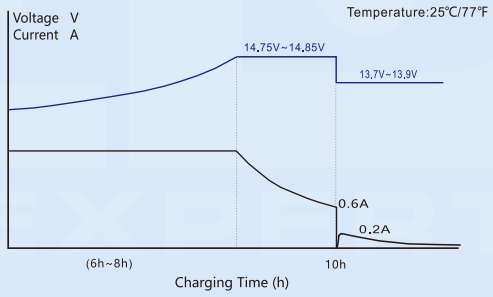
Constant Power Discharge (W/ce11) at 25°C (77°F)

F.V/Time	30 min	45 min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/Cell	75.6	54.2	43.7	25.2	19.3	14.8	12.1	10.2	7.88	6.43	3.55
1.80V/Cell	78.0	55.7	44.9	26.0	19.9	15.2	12.5	10.6	8.09	6.59	3.85
1.75V/Cell	79.8	57.6	46.4	27.5	21.2	16.2	13.2	11.1	8.46	6.85	3.72
1.70V/Cell	81.3	58.7	47.7	27.8	21.1	16.3	13.4	11.3	8.58	6.95	3.78
1.67V/Cell	82.3	60.1	49.1	27.9	21.3	16.4	13.5	11.4	8.67	7.01	3.79
1.60V/Cell	83.8	61.4	49.6	28.6	21.2	16.8	13.7	11.6	8.82	7.16	3.81

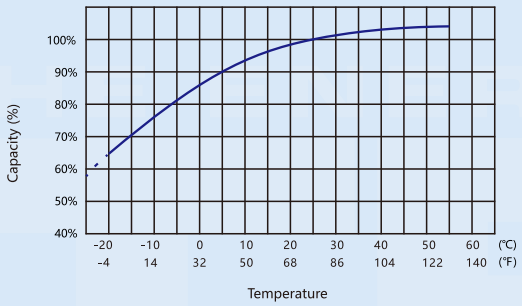
Discharging Characteristics@25°C(77°F)



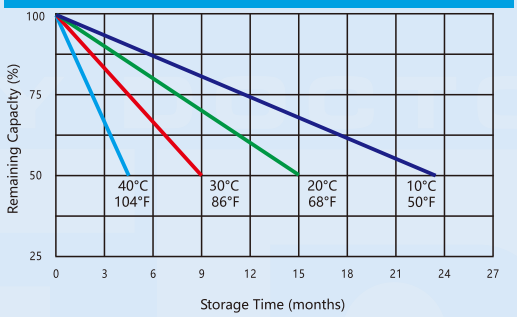
Charging Characteristics@25°C(77°F)



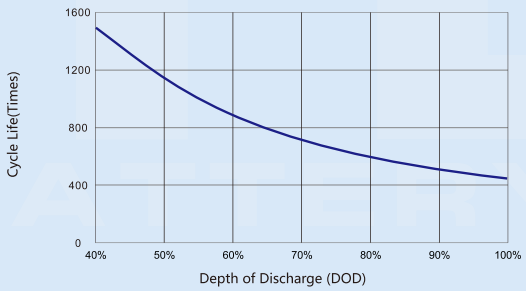
Capacity vs Temperature



Self-discharge vs Time



Cycle Life vs Depth of Discharge@25°C(77°F)



Cycle Life vs Remaining Capacity@25°C(77°F)

