

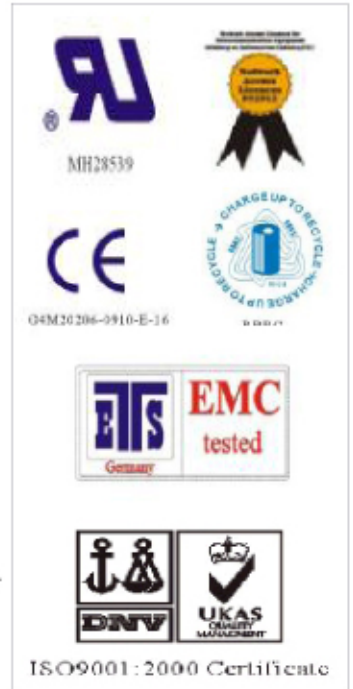


TL 12-150 (12V150Ah) TANZALITE®

TL 12-150 is a general purpose battery with 10 years design life time in float charging use. As with all TANZALITE batteries, all TL models are rechargeable, highly efficient, leak proof and maintenance free.

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	150Ah@10hr-rate to 1.75V per cell @25°C
Weight	Approx. 45 Kg
Max. Discharge Current	75 0A (5 sec)
Internal Resistance	Approx. 4 m
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Float charging Voltage	13.6 to 13.8 VDC/unit Average at 25°C
Recommended Maximum Charging Current Limit	45 A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C
Self Discharge	TANZALITE batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter.
Terminal	Faston F5/F12
Container Material	A.B.S. (UL94-HB) Flammability resistance of UL94-V1 can be available upon request.



Dimensions

Unit: mm



Constant Current Discharge Characteristics Unit: A(25°C)

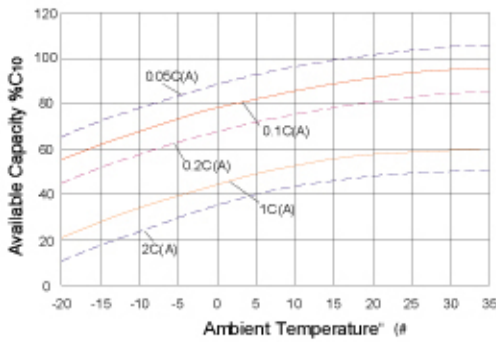
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	561	402	293	173	97.5	59.9	39.2	32.4	25.5	18.5	15.6	8.3
1.67V	546	383	287	170	97.1	59.4	39.0	32.3	25.4	18.3	15.5	8.1
1.70V	515	369	282	168	96.2	59.0	38.7	32.1	25.2	18.2	15.3	8.0
1.75V	462	341	269	164	95.3	58.5	38.6	31.8	24.9	18.0	15.2	7.8
1.80V	417	311	248	157	93.0	57.5	37.5	31.1	24.5	17.7	15.0	7.7
1.85V	363	278	222	147	88.4	54.9	35.9	29.6	23.4	17.0	14.6	7.2

Constant Power Discharge Characteristics Unit: W(25°C)

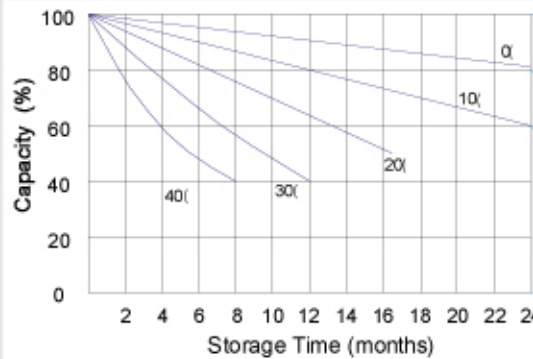
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	1006	735	542	324	185.9	114.8	75.3	62.4	49.2	35.7	29.3	15.5
1.67V	985	702	530	320	185.0	114.3	75.2	62.3	48.9	35.6	29.0	15.3
1.70V	930	679	523	317	183.6	113.3	74.7	62.0	48.8	35.3	28.8	15.2
1.75V	837	627	499	309	181.8	112.2	74.3	61.5	48.3	35.0	28.5	15.0
1.80V	753	570	458	295	177.3	110.6	72.5	59.9	47.6	34.2	28.2	14.9
1.85V	650	506	409	277	168.0	105.5	68.9	57.0	45.2	33.0	27.3	14.3

All mentioned values are average values.

Temperature effects curve



Storage characteristic



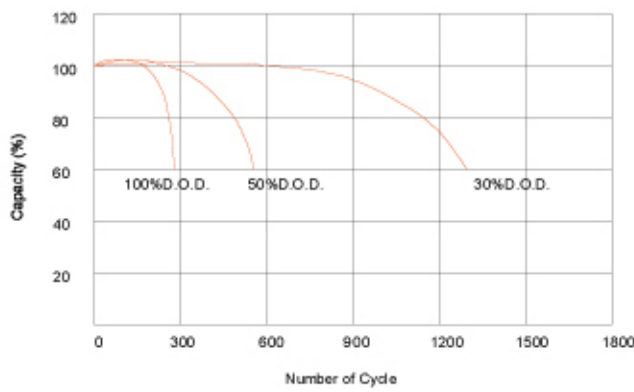
Supplementary charge required (Carry out supplementary charge before use if 100% capacity is required)

Supplementary charge required. This supplementary charge will help to recover the capacity and should be made as early as possible.

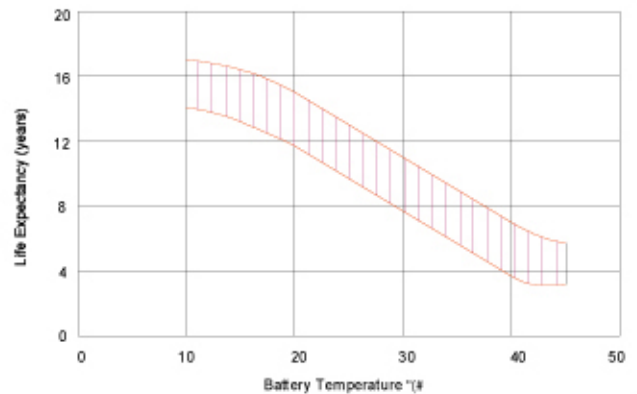
Supplementary charge may often fail to recover the capacity. The battery should never be left standing till this state is reached

Supplementary charge and storage guidelines

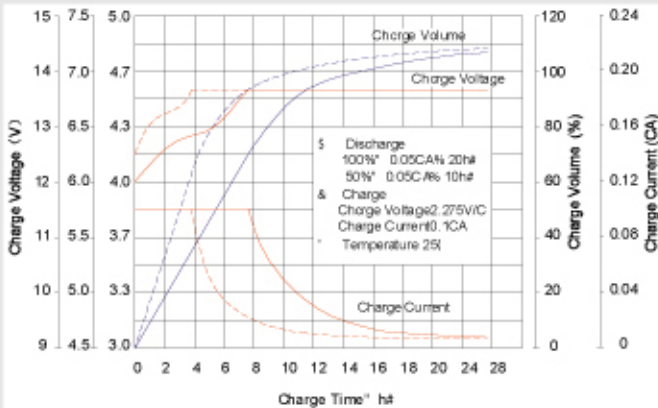
Life characteristics of cyclic use



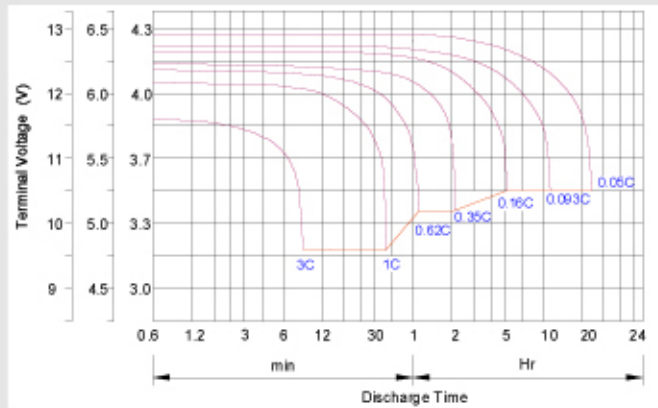
Effect of temperature on long term float life



Charge characteristic Curve for standby use



Discharge characteristic Curve



Charging Procedures(12V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	14.7	14.4~15.0	0.3C
Standby	25°C	13.7	13.6~13.8	0.3C

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

Constant Voltage	-0.2Cx2h + 14.4~15.0V,24h,Max. Current 0.3CA
Constant Current	-0.2Cx2h + 0.1CAx12h
Fast	-0.2Cx2h + 0.3CAx4h

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	" A + 0.2C	0.2C) " A#	1.0C " A + 1.0C

Charging Procedures(6V series)

Application	Charge Voltage (V)			Max. Charge Current
	Temperature	Set point	Allowable range	
Cycle Use	25°C	7.35	7.25~7.45	0.3C
Standby	25°C	6.85	6.8~6.9	0.3C