

TF series product is the general Valve Regulated Lead Acid battery with AGM technology. TF series batteries have are widely applied to energy reservation system, traction system, starting devices, emergence system and so on.

Application

- Lighting system
- Security system
- Electric toy
- Medical equipment
- Telecommunication system
- Power systems
- UPS
- Electric tools

General Features

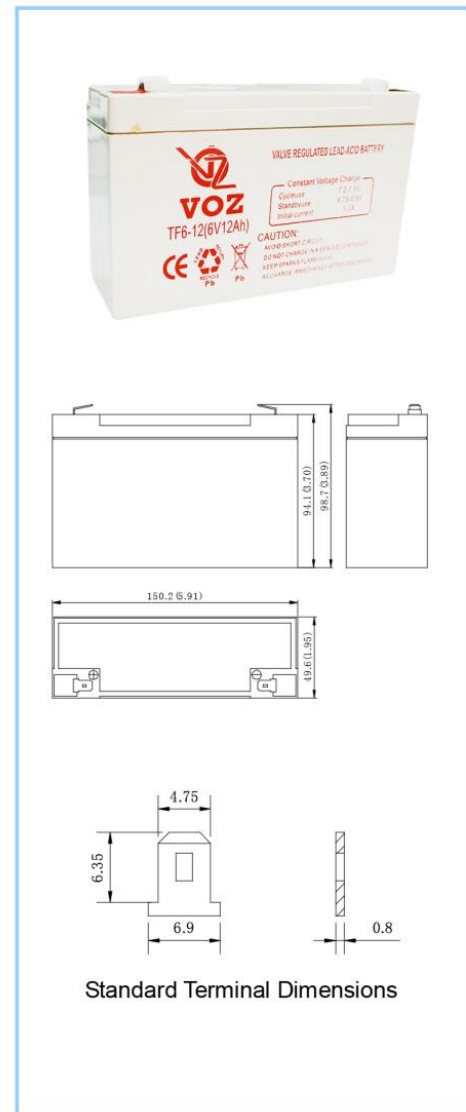
- Maintenance free
- Convenient for installation
- Safety and no leakage
- Excellent recharge and discharge performance
- Low self-discharge rate

Battery Construction

• Component	Material
• Positive plate	Lead dioxide
• Negative plate	Lead
• Container	ABS
• Cover	ABS
• Safety valve	Rubber
• Terminal	T1/T2
• Separator	AGM glass
• Electrolyte	Sulfuric acid

General Specifications

Battery Model	TF 6-12 (6V12AH/20HR)			
Designed Service Life	5 years			
Capacity (25°C)	20HR	10HR	5HR	1HR (6A)
	(0.5A)	(0.93A)	(1.704A)	
	10.00AH	9.30AH	8.50AH	6.00AH
Dimension: mm (inch)	Length	Width	Height	Total Height
	150.2 (5.91)	49.6 (1.95)	94.1 (3.70)	98.7 (3.89)
Approx. Weight	1.60 Kg (3.52lbs) ±5%			
Internal Resistance	Fully charged at 25°C: 0.010 Ohm			
Self-discharge	3% of capacity declined per month at 25°C			
Capacity Affected by Temp. (20HR)	40°C	25°C	0°C	-15°C
	105%	100%	85%	65%
Charge Voltage (25°C)	Cycle use		Stand-by use	
	7.20-7.50V(-12mV/°C), Max. Current: 3.00 A		6.75-6.90V (-9mV/°C)	



Note The above data are average values, and can be obtained with 3 charge/discharge cycles. These are not minimum values.



Constant Current Discharge Data

Constant Current Discharge Data Sheet (Amperes at 25°C)

End Voltage/cell	Minute (s)				Hour (s)				
	5	10	15	30	1	3	5	10	20
1.80	30.20	21.50	16.60	9.30	6.10	2.56	1.71	0.96	0.49
1.75	32.40	23.10	17.70	10.00	6.41	2.68	1.77	0.97	0.50
1.70	34.50	23.90	18.80	10.70	6.71	2.84	1.85	1.00	0.51
1.65	36.60	24.80	19.90	11.40	6.98	2.99	1.93	1.10	0.51
1.60	38.60	26.00	20.90	12.00	7.25	3.07	2.02	1.02	0.52

Constant Power Discharge Data

Constant Power Discharge Data Sheet (Watts at 25°C)

End Voltage/cell	Minute (s)					Hour (s)			
	5	10	15	30	45	1	2	3	5
1.80	60.80	41.00	33.20	18.80	13.80	11.40	7.00	5.31	3.48
1.75	64.60	43.70	35.30	20.0	14.90	12.30	7.29	5.54	3.61
1.70	68.40	46.20	37.30	21.50	15.90	13.20	7.58	5.76	3.68
1.65	72.2	48.7	39.40	22.70	16.90	14.00	7.91	6.00	3.89
1.60	76.00	51.30	41.50	23.90	17.80	14.80	8.24	6.26	4.10

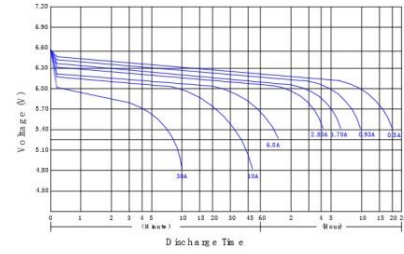
End Voltage

Discharge Rate	Discharge Current	End Voltage (V/cell)
20h	0.05C ₂₀ A (I ₂₀)	1.75
10h	0.09C ₂₀ A (I ₁₀)	1.75
3h	0.25C ₂₀ A (I ₃)	1.75
1h	0.60C ₂₀ A (I ₁)	1.60

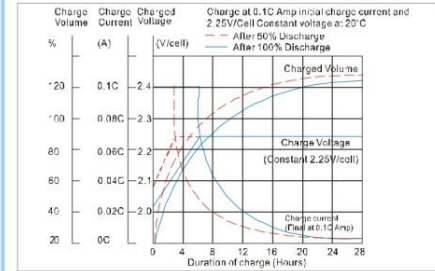
Storage Time VS Charge Time

Storage Time	Top up Charging Recommendation
Less than 6 months from production or previous top up charge	Maximum of 16 hours at a constant voltage of 2.40VPC
Less than 12 months from production or previous top up charge	Maximum of 20 hours at a constant voltage of 2.40VPC
Less than 6 months from production or previous top up charge	Maximum of 8 hours at a constant current of 0.1 C A
Less than 12 months from production or previous top up charge	Maximum of 10 hours at a constant current of 0.1 C A

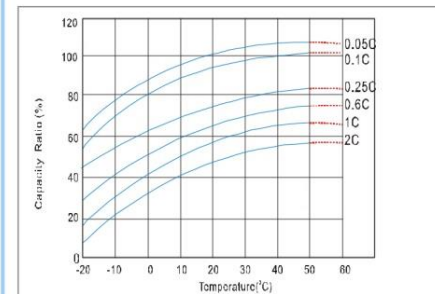
Performance Curves and Charts



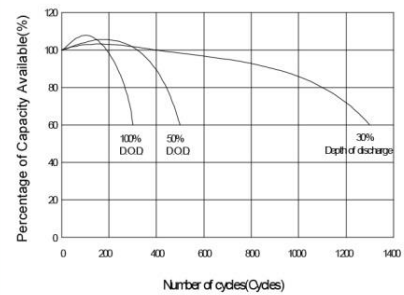
Discharge Characteristic (25°C)



Charge Characteristic (25°C)



Effect of temperature on capacity



Number of cycles Vs. Depth of Discharge



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