

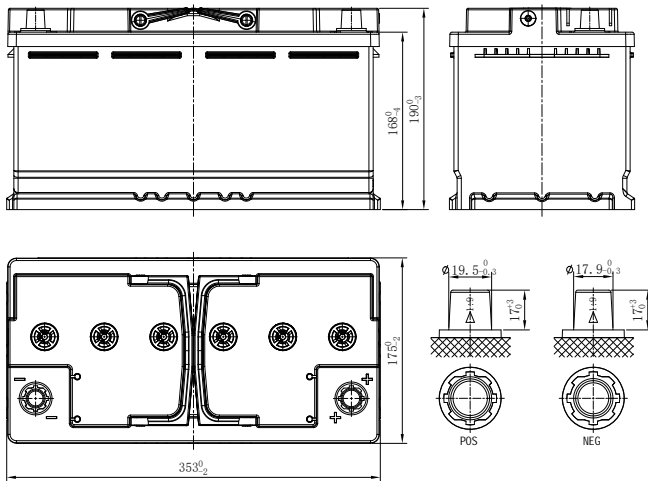
TC SERIES

TC12-90 (12V90Ah)



CHARACTERISTICS

Item	Specifications	
Rated Voltage	12V	
Nominal Capacity (25°C)	C ₂₀ , 1.80V/cell	90Ah
Dimension	Length	353mm (13.9inches)
	Width	175mm (6.89inches)
	Container Height	168mm (6.61inches)
	Total Height	190mm (7.48inches)
Approx Weight	26.2kg (57.8lbs)	
Terminal	/	
Container Material	ABS	
Short-circuit current	1680A	
Internal Resistance (25°C)	Approx 4.8 mΩ (Fully charged)	
Operating Temp. Range	Discharge	-20~55°C (-4~131°F)
	Charge	0~40°C (32~104°F)
	Storage	-20~50°C (-4~122°F)
Nominal Operating Temp. Range	25±3°C (77±5°F)	
Max.Charging Current (25°C)	0.25C	
Charge voltage (25°C)	Standby Use	Cycle Use
	2.25-2.30V/cell	2.40-2.47V/cell
Temp. Coefficient	-3mV/cell/°C	-5mV/cell/°C
	40°C (104°F)	103%
Effect of temp. to Capacity	25°C (77°F)	100%
	0°C (32°F)	86%
	TC series batteries may be stored 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.	
Self Discharge		



DISCHARGE TABLE

Constant Current Discharge (Amperes) at 25°C (77°F)									
F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	42.0	26.1	19.7	15.8	14.0	12.1	9.70	8.23	4.43
1.80V/cell	46.2	28.7	21.1	16.9	14.4	12.8	10.1	8.40	4.50
1.75V/cell	48.7	30.2	21.8	17.7	14.9	13.2	10.2	8.65	4.56
1.67V/cell	51.2	31.9	22.3	18.2	15.4	13.4	10.4	8.78	4.65
1.60V/cell	52.5	32.4	22.7	18.5	15.5	13.7	10.6	8.86	4.73

Constant Power Discharge (Watts/cell) at 25°C (77°F)									
F.V/Time	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.85V/cell	81.6	51.1	38.7	31.1	27.6	23.9	19.2	16.3	8.81
1.80V/cell	89.2	55.7	41.3	33.2	28.3	25.2	19.9	16.6	8.94
1.75V/cell	93.4	58.5	42.5	34.6	29.1	25.9	20.1	17.1	9.05
1.67V/cell	97.1	61.2	43.0	35.2	29.9	26.2	20.3	17.3	9.22
1.60V/cell	98.5	61.7	43.5	35.7	30.1	26.5	20.6	17.4	9.36

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APPLICATIONS

- Caravan/RV
- Marine

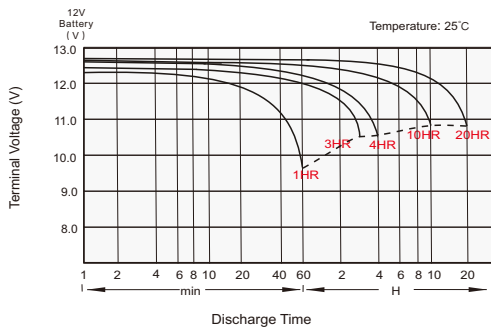
GENERAL FEATURES

- 10~12 years design life (25°C)
- Unique plate design, long cycle life ≥550 Cycles @60%DOD
- Wide operating temperature range: -20~55°C
- Low self discharge ≤3% per month
- Excellent deep discharge resilience performance to extend service life

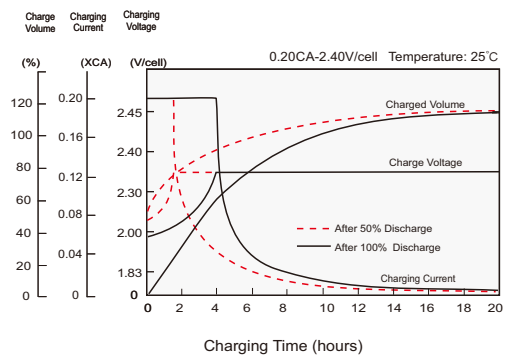
STANDARDS

- Manufactured in Leoch@IATF 16949, ISO 45001, ISO 9001 and ISO 14001 Approved production facilities

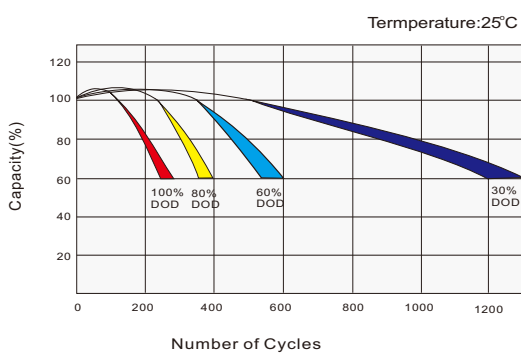
Discharge Characteristics



Charging Characteristics



Cycle Life in Relation to Depth of Discharge



Temperature Effects in Relation to Capacity

