

Tubular Deep Cycle GEL Battery

TDC12-100

CSPower TDC series Tubular GEL battery is with 25 years floating design life, it is a Valve Regulated Tubular Gel battery that adopts immobilized GEL and Tubular Plate technology to offer high reliability and performance. The Battery is designed and manufactured according to DIN standards and with die-casting positive grid and patent formula of active material. TDC series exceeds DIN standard values with more than 25 years floating design life at 25°C and is even more suitable for cyclic use under extreme operating conditions.

12V
100Ah

GEL
Technology

Tubular
Plate



Applications

- Solar & Wind Power system
- Nuclear power station
- Telecom backup power supply
- energy saving requirements
- Emergency Power System

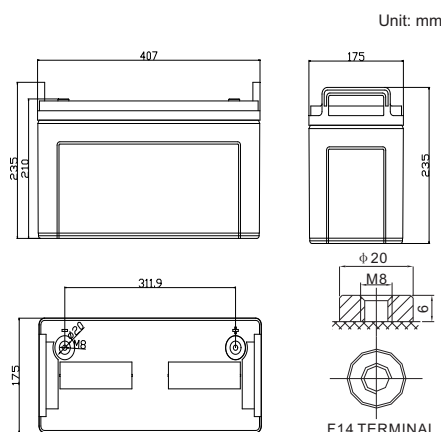
General Features

- ✓ It can discharge at -40°C~70°C, Charge at 0-50°C
- ✓ Long life expectancy of 25+ years in floating condition
- ✓ Adopts quality silicon nano gel electrolyte
- ✓ Excellent deep discharge recovery capability
- ✓ Deep cycle performance: up to 3000

Dimensions & Weight

Technical Specifications

Complied Standards



Length	407±1mm (16.0 inches)
Width	175±1mm (6.89 inches)
Height	210±1mm (8.27 inches)
Total Height	235±1mm (9.25 inches)
Torque Value	10~12 N*m

Cells Per Unit	6
Voltage Per Unit	12
Nominal Capacity	100Ah@10hr-rate to 1.80V per cell @25°C
Weight	Approx. 36.0 Kg (Tolerance ± 2%)
Internal Resistance	Approx. 8 mΩ
Terminal	F14(M8)
Max. Discharge Current	1000A (5 sec)
Design Life	25 years (floating charge)
Maximum Charging Current	20.0 A
Reference Capacity	C24 100.7AH C48 106.4AH C72 111.7AH C100 114.0AH C120 116.3AH C240 123.1AH
Float Charging Voltage	13.5 V~13.8 V @ 25°C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.2 V~14.4 V @ 25°C Temperature Compensation: -4mV/°C/Cell
Operating Temperature Range	Discharge: -40°C~60°C Charge: -20°C~50°C Storage: -40°C~60°C
Normal Operating Temperature Range	25°C ± 5°C
Self Discharge	Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25°C, and then recharging is recommended. Monthly Self-discharge ratio is less than 2% at 25°C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Battery Discharge Table

Discharge Constant Current per Cell (Amperes at 25° C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	49.20	39.00	27.51	20.86	17.10	14.78	13.30	10.38	8.900	4.673
1.87V	55.00	43.00	29.51	22.12	18.05	15.54	14.10	10.86	9.300	4.882
1.83V	63.00	48.00	32.00	23.58	19.00	16.22	14.60	11.35	9.700	5.093
1.80V	70.00	52.00	33.20	24.24	19.38	16.60	15.00	11.64	10.00	5.251
1.75V	78.00	55.71	34.71	25.22	19.70	17.00	15.30	11.83	10.20	5.356
1.70V	86.00	57.51	35.71	25.71	20.04	17.20	15.50	11.93	10.30	5.407
1.65V	88.71	61.11	36.91	26.40	20.33	17.40	15.70	12.03	10.40	5.460
1.60V	92.51	63.20	38.31	27.51	20.90	17.70	15.90	12.12	10.50	5.513

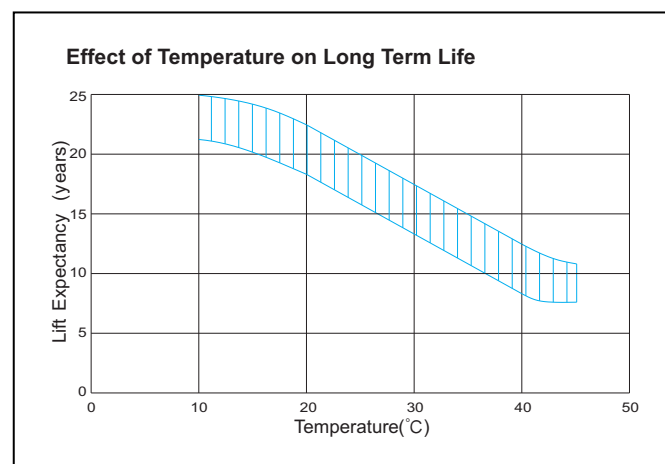
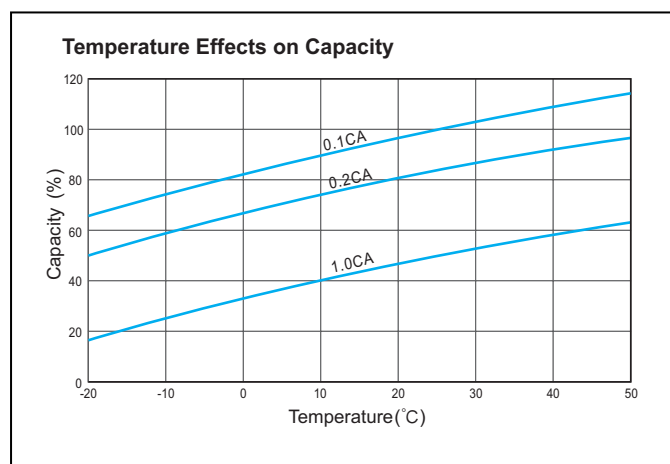
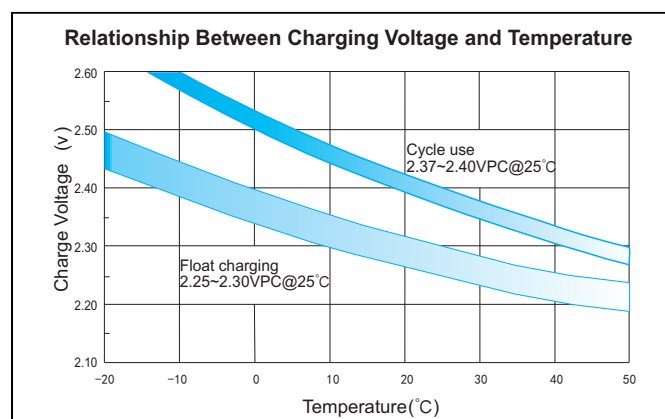
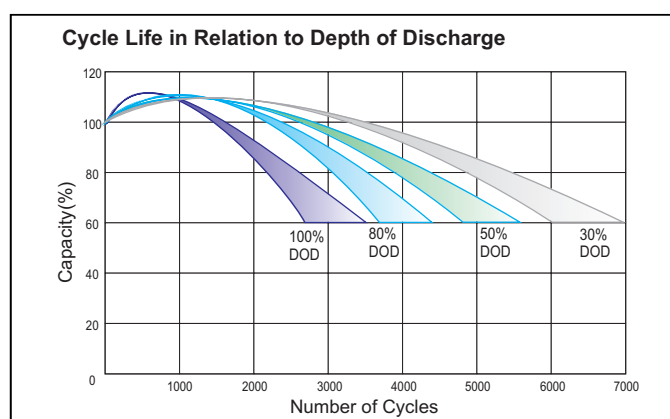
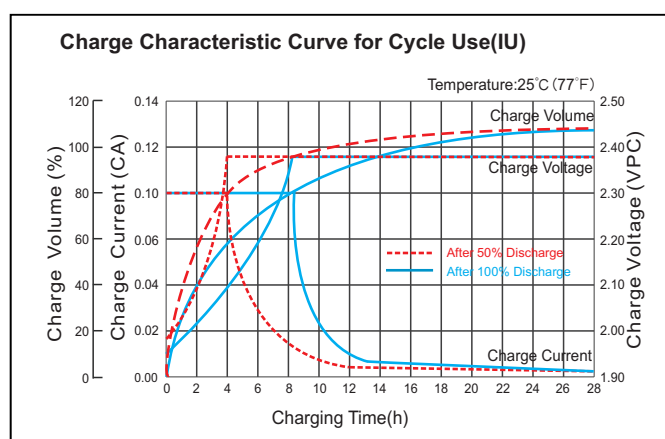
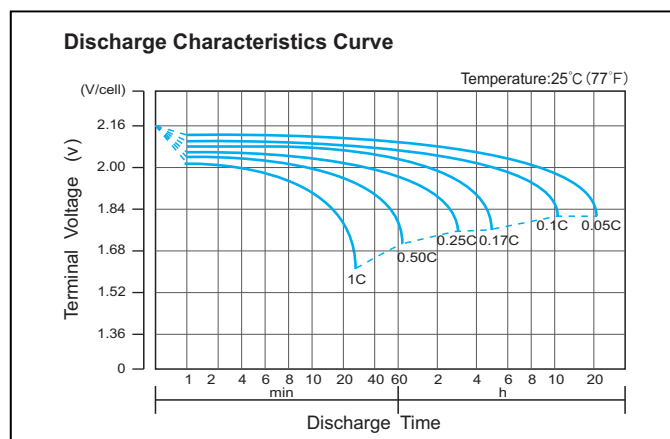
Discharge Constant Power per Cell (Watts at 25° C)

F.V/ Time	30min	1h	2h	3h	4h	5h	6h	8h	10h	20h
1.90V	94.19	74.89	53.15	40.41	33.48	29.10	26.30	20.76	18.14	9.522
1.87V	103.6	81.30	56.37	42.33	35.26	30.50	27.80	21.63	18.91	9.930
1.83V	116.1	88.63	60.00	44.52	37.00	31.70	28.70	22.41	19.59	10.29
1.80V	126.8	94.56	62.00	45.52	37.70	32.40	29.40	22.89	20.08	10.54
1.75V	137.6	98.78	64.00	46.93	38.19	33.20	29.90	23.18	20.37	10.69
1.70V	147.5	99.81	65.63	47.70	38.78	33.50	30.20	23.38	20.56	10.80
1.65V	150.0	104.2	67.44	48.78	39.30	33.80	30.50	23.57	20.66	10.85
1.60V	151.9	107.4	69.04	50.37	40.30	34.10	30.70	23.67	20.76	10.90

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TDC12-100

Performance Characteristics



Battery Discharge Capacity

Long time discharge capacity for solar/wind application						
Capacity	C24(Ah)	C48(Ah)	C72(Ah)	C100(Ah)	C120(Ah)	C240(Ah)
Model	F.V=1.85VPC					
TDC12-100	100.7	106.4	111.7	114.0	116.3	123.1

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice. Contact CSPower for the latest information.

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