

# CZS50-12

12V 50AH

Tubular Flooded OPzS



## CZS50-12



## Physical Specification

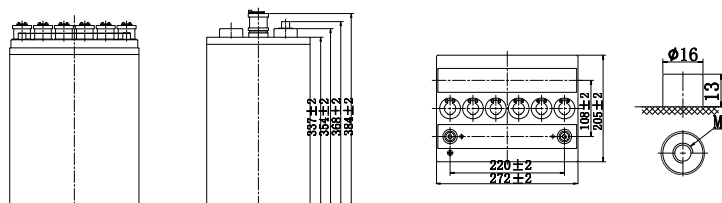
Part Number:	<b>CZS50-12</b>
Length:	<b>272 ± 2 mm ( 10.7 inches)</b>
Width:	<b>205 ± 2 mm ( 8.07 inches)</b>
Container Height:	<b>337 ± 2 mm ( 13.27inches)</b>
Total Height (With Terminal):	<b>384 ± 2 mm ( 15.12inches)</b>
Approx Weight (Without Electrolyte):	<b>28.2kg (61.7lbs)</b>
Approx Weight (With Electrolyte):	<b>39.0 kg (86.0lbs)</b>

## Specifications

<b>Voltage</b>	Rated Voltage: 12V	
	Floating Voltage: 2.23V~2.25V	Boost Charge Voltage: 2.30V~2.40V
<b>Terminal Type</b>	M8	
<b>Electrolyte Type</b>	Flooded	
<b>Container Material</b>	Standard Option	SAN transparent container
<b>Rated Capacity</b>	(10hr,5.00A,1.80V/cell)	50.0 Ah
	(5hr,8.26A,1.75V/cell)	41.3 Ah
	(3hr,11.8A,1.75V/cell)	35.4 Ah
	(1hr,26.9A,1.60V/cell)	26.9 Ah
<b>Max.Charging Current (25°C)</b>	0.1CA	
<b>Max Discharge Current</b>	440A (5s)	
<b>Internal Resistance</b>	Approx 16.5mΩ	
<b>Discharge Characteristics</b>	Operating Temp. Range	Discharge: -15°C~55°C (5°F~131°F)
		Charge: -0°C~45°C (32°F~113°F)
		Storage: -15°C~45°C (5°F~113°F)
	Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)
	Cycle Use	Initial Charging Current less than 0.1CA.Voltage
		2.35V~2.40V at 20°C(68°F) Temp. Coefficient -3mV/°C
	Standby Use	Initial Charging Current less than 0.1CA. Voltage
2.25V~2.30V at 20°C(68°F)Temp. Coefficient -2mV/°C		
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
<b>Design Floating Life at 25°C</b>	20 Years	
<b>Self Discharge</b>	Canbat Tubular Flooded OPzS Batteries may be stored for 6 months at 25°C (77°F) and then a refresh charge is required. For higher temperatures the time interval will be shorter. Self-discharge ≤ 3% per month.	

## Dimensions

### M8 Terminal



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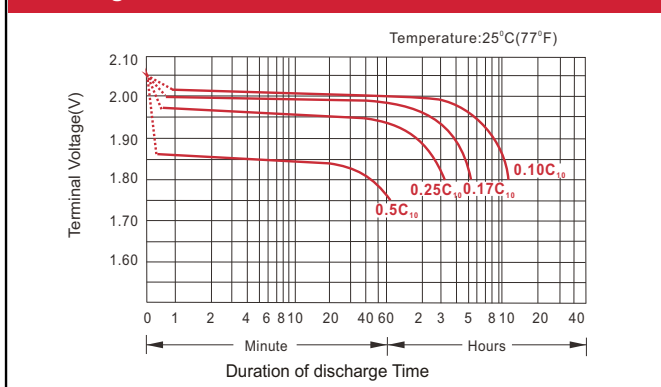
## Constant Current Discharge (Amperes) at 20 °C (68 °F)

F.V/Time	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	36.8	29.3	20.5	13.3	10.4	8.63	7.46	5.47	4.66	2.50
1.80V/cell	43.4	32.6	22.2	14.4	11.1	9.19	7.94	5.86	5.00	2.68
1.75V/cell	49.6	35.2	23.6	15.3	11.8	9.64	8.26	6.03	5.10	2.71
1.70V/cell	54.0	37.7	24.8	15.9	12.2	10.0	8.57	6.19	5.18	2.75
1.65V/cell	57.8	39.6	26.0	16.4	12.4	10.2	8.75	6.29	5.26	2.78
1.60V/cell	61.0	41.2	26.9	16.9	12.7	10.4	8.92	6.38	5.34	2.81

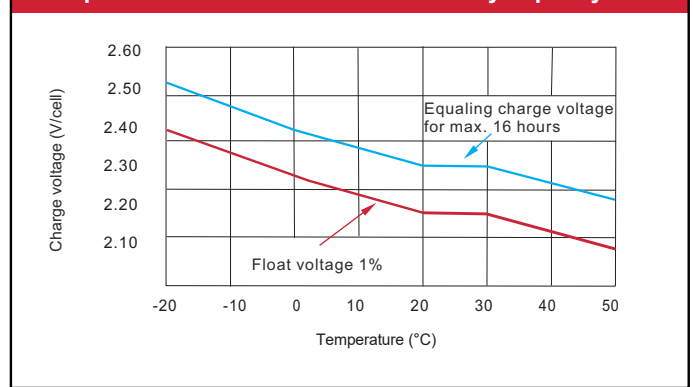
## Constant Power Discharge (Watts/cell) at 20 °C (68 °F)

F.V/Time	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
1.85V/cell	69.7	56.3	39.7	26.0	20.4	16.90	14.70	10.80	9.21	4.96
1.80V/cell	80.5	61.4	42.4	27.8	21.5	17.80	15.40	11.40	9.77	5.23
1.75V/cell	90.7	65.6	44.4	29.0	22.4	18.40	15.80	11.60	9.81	5.23
1.70V/cell	97.5	69.5	46.4	30.0	23.0	19.0	16.30	11.80	9.89	5.25
1.65V/cell	102.9	72.2	48.2	30.6	23.3	19.2	16.50	11.90	9.97	5.27
1.60V/cell	106.7	74.0	49.1	31.1	23.6	19.3	16.60	11.90	9.99	5.27

### Discharge Characteristics



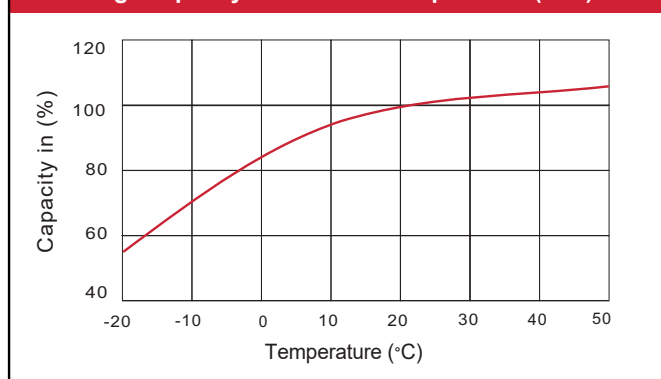
### Temperature effects in relation to battery capacity



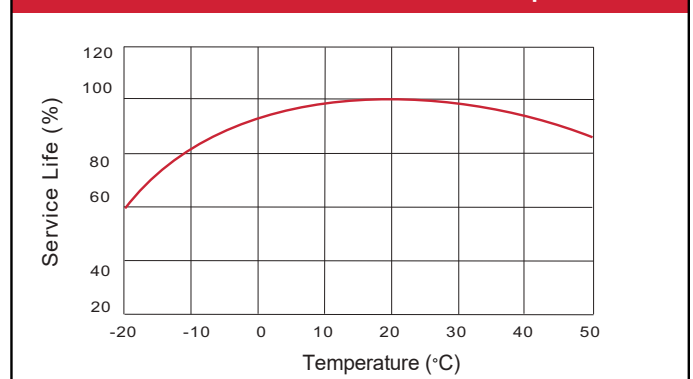
### OPzS Tubular Flooded Batteries

OPzS batteries are a type of sealed lead-acid cells, commonly referred to as SLA or VRLA. OPzS cells are designed with tubular flooded technology for cost-effective energy solutions with over 3500 cycles at a 50% DOD. Canbat developed its range of OPzS batteries with a robust construction for applications demanding regular deep discharges. The batteries are characterized by long service life, outstanding capacity performance and low maintenance requirements, with reduced topping up needs. They are excellent for installations in high temperature environments or in areas with an unstable power source. Proven high reliability energy storage for critical applications including industrial projects in telecommunications, computing, power generation and distribution, railway, airport and seaport signalling, emergency lighting, automation and measuring systems.

### Discharge capacity Vs Ambient temperature (10A)



### Relation between service life & ambient temperature



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