

# The difference between 1c2c charging and discharging rate of solar container battery





## Overview

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What does a 1C charge rate mean?

If the result is 1C, the battery discharges at a rate equal to its full capacity in one hour. A 2C rate indicates the battery discharges at double its capacity per hour, meaning it would discharge fully in 30 minutes. Charging C-Rate.

What is the difference between 1C rate and 10AH battery?

For a battery with a capacity of 45Ah, a 1C rate equates to a discharge current of 45A; for a 10Ah battery, discharging at 1C rate means a discharge current of 10A. In both cases, the discharge time are the same, one hour. 1. Battery Capacity: The C-rate is closely related to battery capacity.

What is the difference between 1C rate and 2C rate?

1C rate → The battery charges/discharges in 1 hour. 2C rate → The battery charges/discharges in 0.5 hours. 0.5C rate → The battery charges/discharges in 2 hours. Example: If a battery has a capacity of 10Ah: At 1C, the current = 10A → Fully discharged in 1 hour. At 2C, the current = 20A → Fully discharged in 0.5 hours.

What happens if a battery is discharged at 2C?

Losses during rapid discharges reduce the discharge time, and these losses also affect the charging times. The same battery discharged at 0.5C should deliver 0.5A for two hours, and at 2C it will deliver 2A for 30 minutes. The C-rate is derived from Coulomb's law, which was developed by the French physicist Charles Augustin de Coulomb.



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BU-402: What Is C-rate? Charge and discharge rates of a battery are governed by C-rates. The capacity of a battery is commonly rated at 1C, meaning that a fully charged battery rated at ...

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The energy efficiency map of nominal capacity per unit electrode surface area-C-rate was constructed with a step size of 1 % SOC interval, and the results showed that the charging ...

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Charging Rate, Charging Speed, C-Rate, C-Coefficient or

The charging rate or charging speed (c-rate) is the ratio between electric current and the capacity of a battery.

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1C, meaning the battery will fully discharge in one hour. What is the difference between 1C rate and 10AH battery? Discharging at 1C rate means a discharge current of 10A. In both cases, the ...

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