Team 5 - SuperTherm

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Product Description

- A consumer targeted, solar and battery powered, cooling and heating container.
  - Keeps food and drinks cool all day outside or overnight on battery power.
  - Runs on solar, car outlet, and battery power, no need to be close to an outlet.
Key Requirements

- **Cost**
  - Sales Price: $200, Component Cost: $100, Assembly & Test Costs: $50

- **Environment**
  - Indoor, Outdoor, Stationary, Mobile
  - Operating Temp Range: -30 to 50 deg. C
  - Operating Humidity Range: 0 to 100%

- **Power Input(s)**
  - Battery Power: 12V AGM VRLA Battery
  - Other Power Input: 12V Solar Panel - 12V Car Outlet
  - 6 Hour Run Time on Battery Power

- **Major Functions, Quantities Measured, Displayed**
  - Functions: Hot, Cold, User Adjustable, Off
  - Hot Temperature: 38 ± 2 deg. C
  - Cold Temperature: 2 ± 2 deg. C
  - User Adjustable Temperature Range: 2 ± 2 deg. C to 38 ± 2 deg. C
  - Quantities Measured: Temperature - 0 to 40 deg. C at ±.75 deg. C
  - Accuracy
Block Diagram