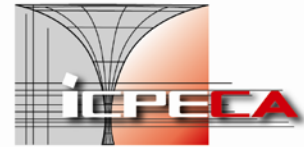




Nr. Registrul Comerțului
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Capital Social: 381.108 Lei
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CARBON-based PLANAR HEATER designed for THERMAL MANAGEMENT of the SPACE VEHICLES

Description

Planar heater based on carbon fiber heating element and KAPTON polyamide insulation system, designed for maximum safety operation & thermal transfer.



Carbon-based planar heater

Characteristics:

- active surface: 5x5" (125x125mm);
- rated electric power: 80W;
- nominal voltage: 28V (DC);
- operating temperature: -80 up to 110°C, vacuum;
- estimated endurance: over 100 000 hours at LEO irradiation level.

Advantages

The present planar heater relies on metallic heating elements, which consist of a single metallic wire; when this wire fails, the heater is out of function. The new design consists of large number of carbon fibers or carbon fabric, which can be assimilated with a large number of elementary heaters, arranged in parallel configuration. If one of these elementary heaters fail, the others remain operational, so as the entire heater stays functional. The heater can operate even if half of the total number of elementary heaters fail, thus maintaining the heating power by increasing the voltage supply.

Applications

- thermal management of space vehicles.