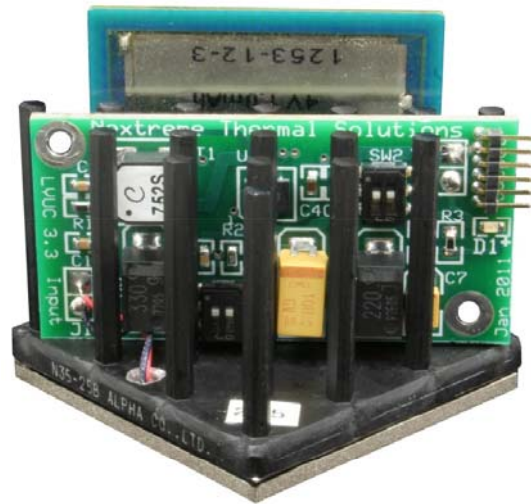


Thermobility Wireless Power Generator (WPG-1S) with Onboard Energy Storage Data Sheet

Description:

The Thermobility Wireless Power Generator WPG-1S is a self-contained energy harvesting system that pairs Nextreme's WPG-1 for thermal energy harvesting with Infinite Power Solutions' INFINERGY® D-MPM101-10B power storage module for energy storage. The unit is capable of harvesting up to 1 mW of steady-state output power while simultaneously storing power for on-demand use, thereby eliminating power source fluctuations caused by variable heat sources. Electrical output of the WPG-1S is a regulated 3.3VdC with a peak transient power of up to 50 mW. The capacity of the unit is a minimum of 1mWh.



WPG-1S Data Sheet
Wireless Power Generator

Features

- Regulated 3.3 V output
- Output power of up to 50 mW
- Small footprint (35 mm x 39 mm)
- Rechargeable energy source
- Eco-friendly

Electrical Characteristics

- Output Voltage:
- Output Power:
- Storage Capacity:
- Peak Current:
- Cycle life

Applications

- Thermoelectric energy harvesting
- Wireless sensor nodes

Thermal Requirements

- Maximum Heat Source Temperature: 100°C
- Nominal Ambient Temperature: 24°C

LDO regulated to 3.3 V

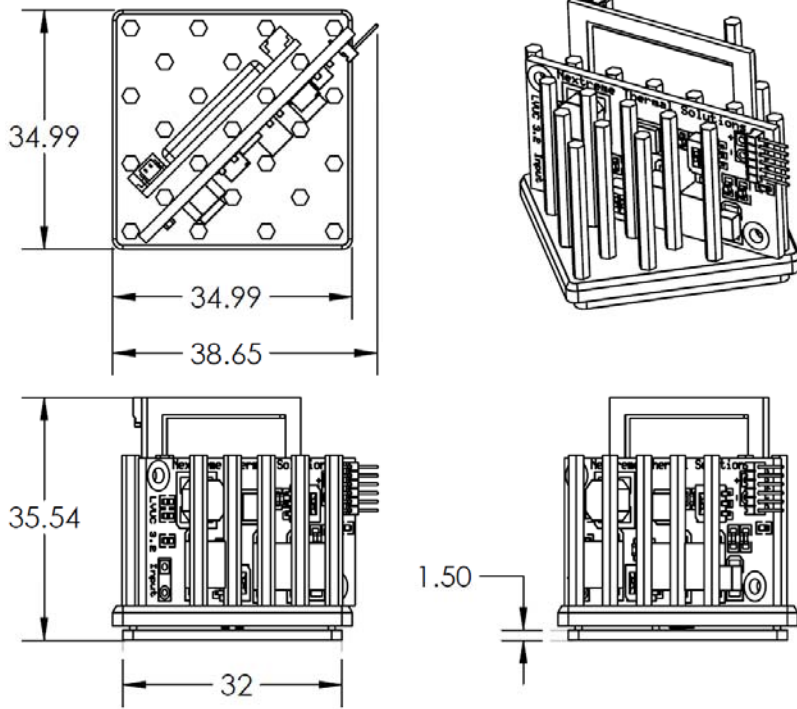
Up to 50 mW transient at 25°C

1000 μ Ah

>15 mA

>10,000 cycles

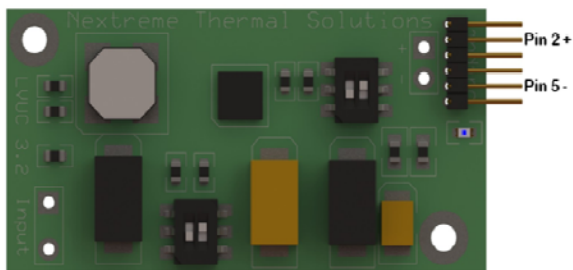
Dimensions



Operating Range

Maximum Heat Source Temperature	T_{hot}	100°C
Nominal Ambient Temperature	T_{cold}	24°C
Delta T	ΔT	15 – 76°C

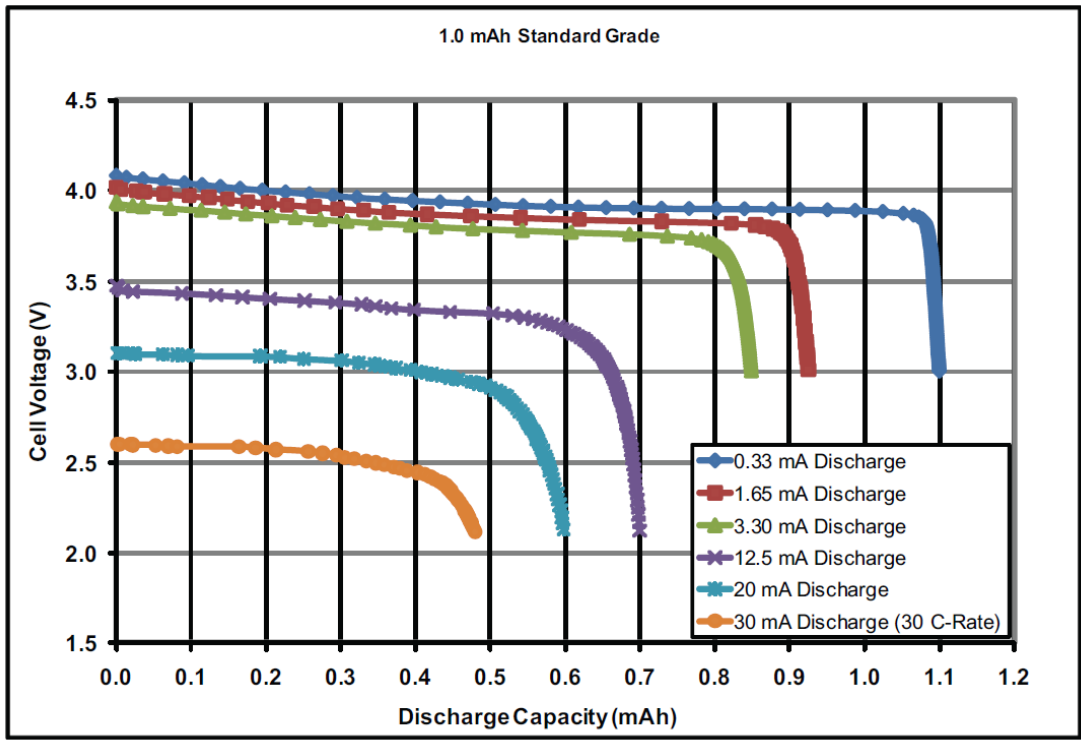
Pin-Out



Cautions

- Keep areas around the heat sink clear for optimal air flow.
- Avoid excessive shock or vibration.
- Avoid exposure to water or high moisture environments.

Cell Voltage and Discharge Characteristics (Data courtesy Infinite Power Solutions)



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The WPG-1S uses an Infinite Power Solutions D-MPM101-10B micro power module for storing energy. The discharge characteristics shown in the plot are of the MEC101 cell used in the D-MPM101 module. For details on the MEC101, please refer to the following URL: <http://www.infinitepowersolutions.com/products/thinergy>

Contact Information

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