

# Thermobility Wireless Power Generator (WPG-1) Data Sheet

## Thermobility WPG-1 Wireless Power Generator

### Description:

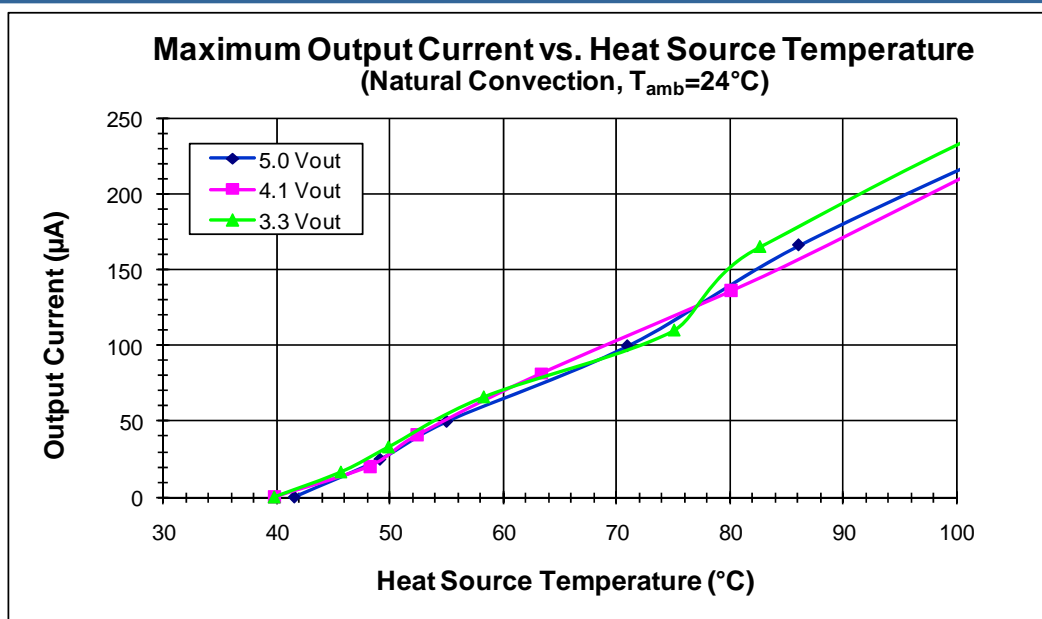
The WPG-1 is a self-contained energy harvesting system that converts heat into electrical power at a regulated output voltage of either 3.3V, 4.1V or 5.0V. The WPG-1 pairs Nextreme's proprietary HV thermoelectric technology with the Linear Technologies LTC®3108 Ultralow voltage step-up converter to provide useable electrical power at temperature differentials as low as 15-20K relative to ambient.

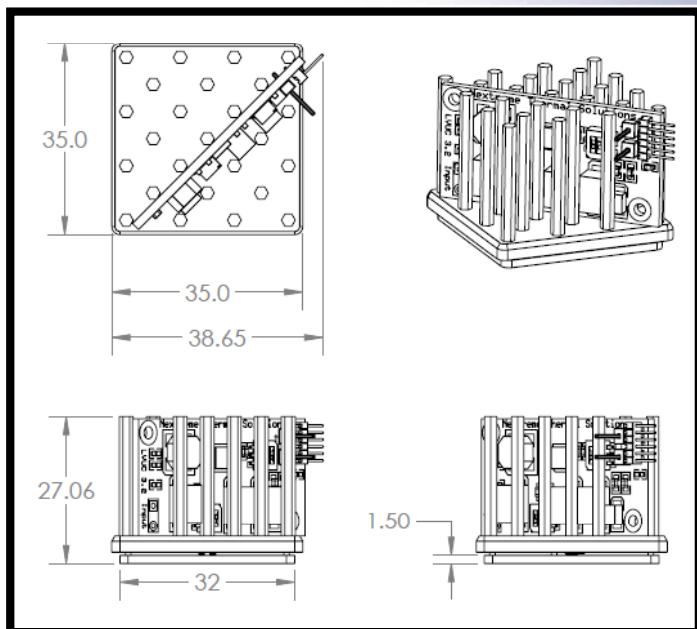
### Features:

- Regulated  $V_{out}$  of 3.3V, 4.1V or 5.0V
- $P_{out}$  up to 1mW depending on  $\Delta T$
- Compatible with thin film batteries
- Small form factor ( $\sim 2 \text{ in}^3$ )
- Ideal for wireless sensor nodes
- Wide range of load resistances ( $15\text{k}\Omega$  or higher)



Shown with available TI EZ430 SEH transmitter



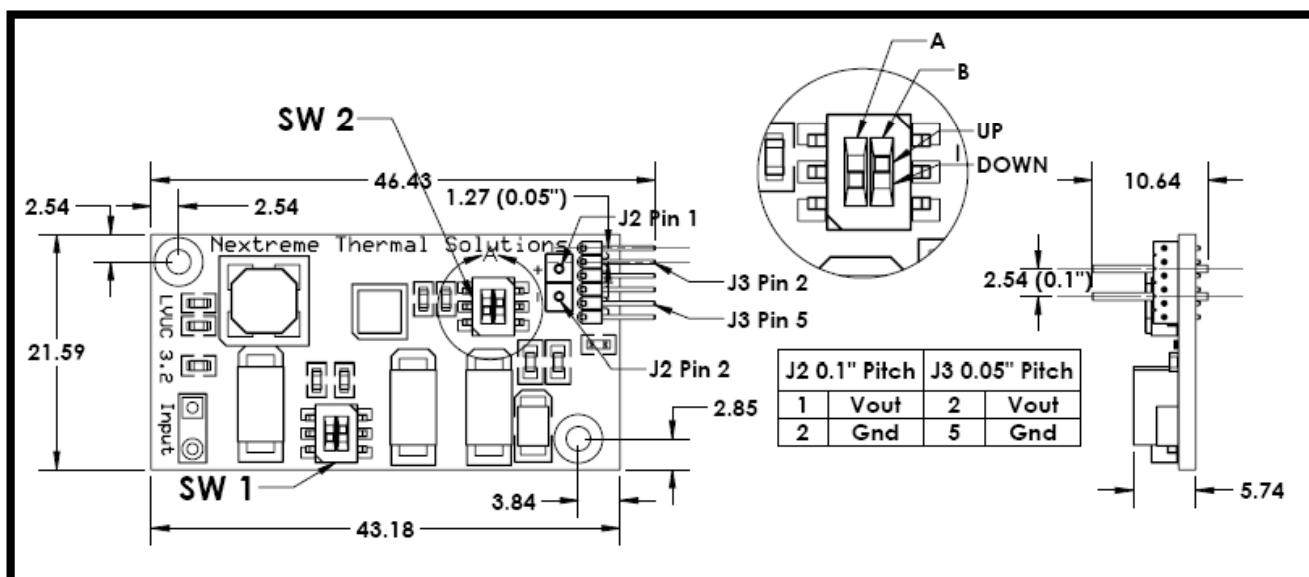


## Cautions

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

## Operating Range

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



Output Voltage Setting		
SW1	A	B
2.35†	down	down
3.3	up	down
4.1	down	up
5.0	up	up

Output Load Setting		
SW2	A	B
LED Low	down	down
LED High	down	up
2 or 6 Pin Connector*	up	NA

† No test data provided for this setting.

\* 2 Pin and 6 Pin are connected in parallel.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Nextreme:](#)

[WPG-1](#)