

## EHA-PA1AN1-R03

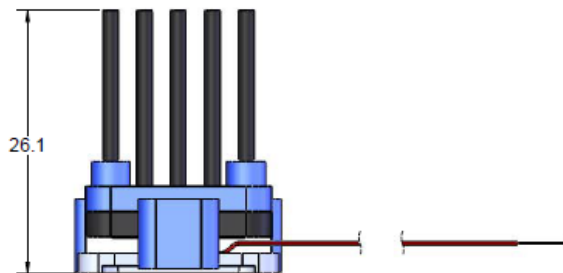
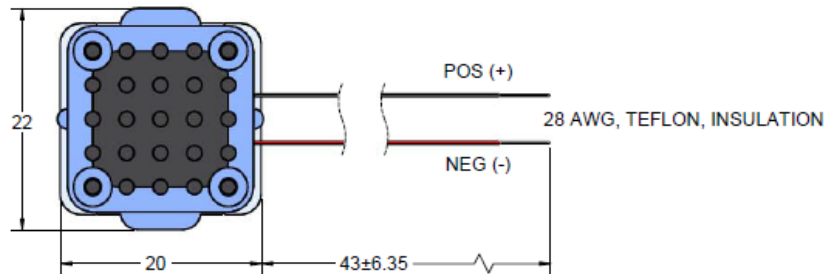
Mini-Harvester Thermal Energy Generator  
Solid to Air



### TYPICAL PERFORMANCE VALUES

AC Resistance @27°C ( $\Omega$ ):	1.1
Max Hot Side Temp (C):	85°C
Thermal $R_{Base - Amb}$ @ 0mph (C/W)	135
Thermal $R_{Base - Amb}$ @ 3mph (C/W)	57
Typical Load ( $\Omega$ )	(1.2-5)
Optimal Load ( $\Omega$ )	1.5 $\Omega$

### MECHANICAL CHARACTERISTICS

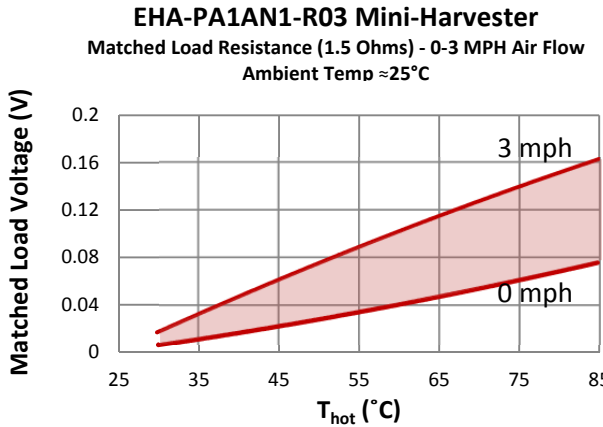
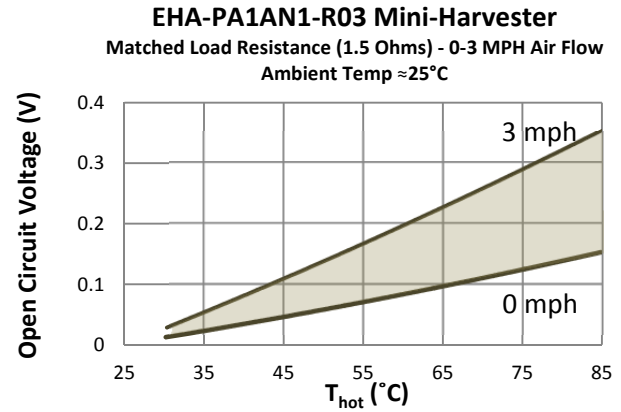
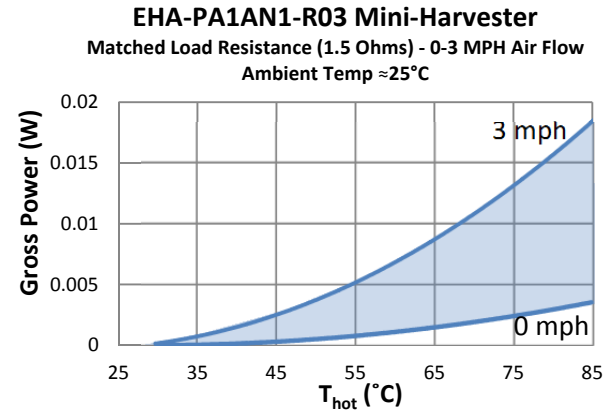


### ORDERING OPTIONS

Model Number	Description
EHA-PA1AN1-R03	Mini-Harvester Energy Generator Assembly Solid to Air

### PRODUCT FEATURES

- Low cost, small package thermal energy harvester.
- Alternative for replaceable primary cell batteries.
- Compatible with vertical and horizontal surfaces.
- Compatible with commercially available power management electronics.
- Non-invasive installation.
- Anodized for corrosion protection.
- Maximum hot side temperature of 85°C.



Air Flow (MPH)	0	3	0	3
Hot Side Temperature (°C)	85	85	55	55
Cold Side Temperature (°C)	25	25	25	25
Gross Power (W)	0.003	0.018	0.0005	0.005
Open Circuit Voltage (V)	0.15	0.35	0.075	0.175
Matched Load Voltage (V)	0.08	0.16	0.038	0.1

**Power Output**

Power from the harvester is generated by converting heat energy into electrical energy. The amount of electrical power produced is a function of the temperature differential between source and ambient, as indicated by the performance curves. Voltage boost and power conditioning electronics and reference designs are commercially available from many semiconductor manufacturers. These include the Texas Instruments BQ25504, EM Microelectronic EM8900, and Linear Technologies LTC3107, LTC3108, LTC3109.

**Installation**

Recommended mounting methods: Remove insulation and any remaining debris from the surface to allow effective thermal contact. Assembly should be adhered to surface with a thermally conductive adhesive or epoxy suited for the application environment. Bond line should be minimized to reduce thermal interface resistance.

**Operation Cautions**

For maximum reliability, ambient temperatures are limited between -40°C to 60°C during continuous operation. Maximum hot side temperatures are restricted to 85°C.

**CONTACT US:**

For customer support or general questions please contact a local office below or visit our website at [www.marlow.com](http://www.marlow.com).

Marlow Industries, Inc.  
 10451 Vista Park Road  
 Dallas Texas 75238-1645  
 214-340-4900 (tel)  
 214-341-5212 (fax)  
 877-627-5691 (tech support)  
[www.marlow.com](http://www.marlow.com)

Marlow Industries Europe GmbH  
 Brunnenweg 19-21  
 64331 Weiterstadt  
 Germany  
 Tel.: +49 (0) 6150 5439 - 403  
 Fax: +49 (0) 6150 5439 - 400  
[info@marlow-europe.eu](mailto:info@marlow-europe.eu)

II-VI Japan Inc.  
 WBG Marive East 17F  
 2-6 Nakase, Mihama-ku  
 Chiba-Shi, Chiba 261-7117  
 Japan  
 81 43 297 2693 (tel)  
 81 43 297 3003 (fax)  
[center@ii-vi.co.jp](mailto:center@ii-vi.co.jp)  
[www.ii-vi.co.jp](http://www.ii-vi.co.jp)

II-VI Singapore Pte., Ltd.  
 Blk. 5012, Techplace II  
 #04-07 & 05-07/12, Ang Mo Kio Ave. 5  
 Singapore 569876  
 (65) 6481 8215 (tel)  
 (65) 6481 8702 (fax)  
[info@ii-vi.com.sg](mailto:info@ii-vi.com.sg)  
[www.ii-vi.com.sg](http://www.ii-vi.com.sg)

Marlow Industries China, II-VI  
 Technologies Beijing  
 A subsidiary of II-VI Incorporated  
 Rm 202, 1# Lize 2nd Middle Road  
 Wangjing, Chaoyang District  
 Beijing 100102 China  
 010-64398226 ext 105 (tel)  
 010-64399315 (fax)  
[info@iivibi.com](mailto:info@iivibi.com)