

**MODEL:** SPG078-35 | **DESCRIPTION:** THERMOELECTRIC GENERATOR**FEATURES**

- TEG module
- 7.8 W output
- up to 300°C continuous maximum hot side temp
- silicone sealed
- graphite pad option available

**SPECIFICATIONS**

| parameter                   | conditions/description                                            | min | typ   | max  | units             |
|-----------------------------|-------------------------------------------------------------------|-----|-------|------|-------------------|
| open circuit voltage        | at Th = 300°C, Tc = 30°C                                          |     | 8.30  |      | V                 |
| matched load resistance     | at Th = 300°C, Tc = 30°C                                          |     | 2.20  |      | Ω                 |
| matched load output voltage | at Th = 300°C, Tc = 30°C                                          |     | 4.20  |      | V                 |
| matched load output current | at Th = 300°C, Tc = 30°C                                          |     | 1.86  |      | A                 |
| matched load output power   | at Th = 300°C, Tc = 30°C                                          |     | 7.80  |      | W                 |
| heat flow across module     |                                                                   |     | 132   |      | W                 |
| heat flow density           |                                                                   |     | 10.8  |      | W/cm <sup>2</sup> |
| ac resistance               | at 27 °C, 1000 Hz                                                 | 1.1 |       | 1.5  | Ω                 |
| solder melting temperature  | cold side: SnAgSn solder<br>hot side: no solder, aluminum bonding | 217 |       |      | °C                |
| hot side plate              |                                                                   | -60 |       | 300  | °C                |
| cold side plate             |                                                                   | -60 |       | 30   | °C                |
| assembly compression        |                                                                   |     |       | 1.36 | MPa               |
| mounting torque per screw   | screw diameter / # of screws: 4 mm / 2                            |     | 0.098 |      | kg-m              |
| RoHS                        | yes                                                               |     |       |      |                   |

**GRAPHITE THERMAL INTERFACE MATERIAL**

| parameter            | conditions/description              | min   | typ    | max   | units                |
|----------------------|-------------------------------------|-------|--------|-------|----------------------|
| thermal impedance    | at 200 kPa                          |       | 0.59   |       | K-cm <sup>2</sup> /W |
|                      | at 700 kPa                          |       | 0.30   |       | K-cm <sup>2</sup> /W |
| thermal conductivity | at 700 kPa (through-plane/in-plane) |       | 10/150 |       | W/m-K                |
| thickness            |                                     | 0.114 | 0.127  | 0.140 | mm                   |
| flammability rating  | UL94V-0                             |       |        |       |                      |

Note: 1. Remove paper over adhesive before installing.

**PART NUMBER KEY****SPG078 - 35 X**

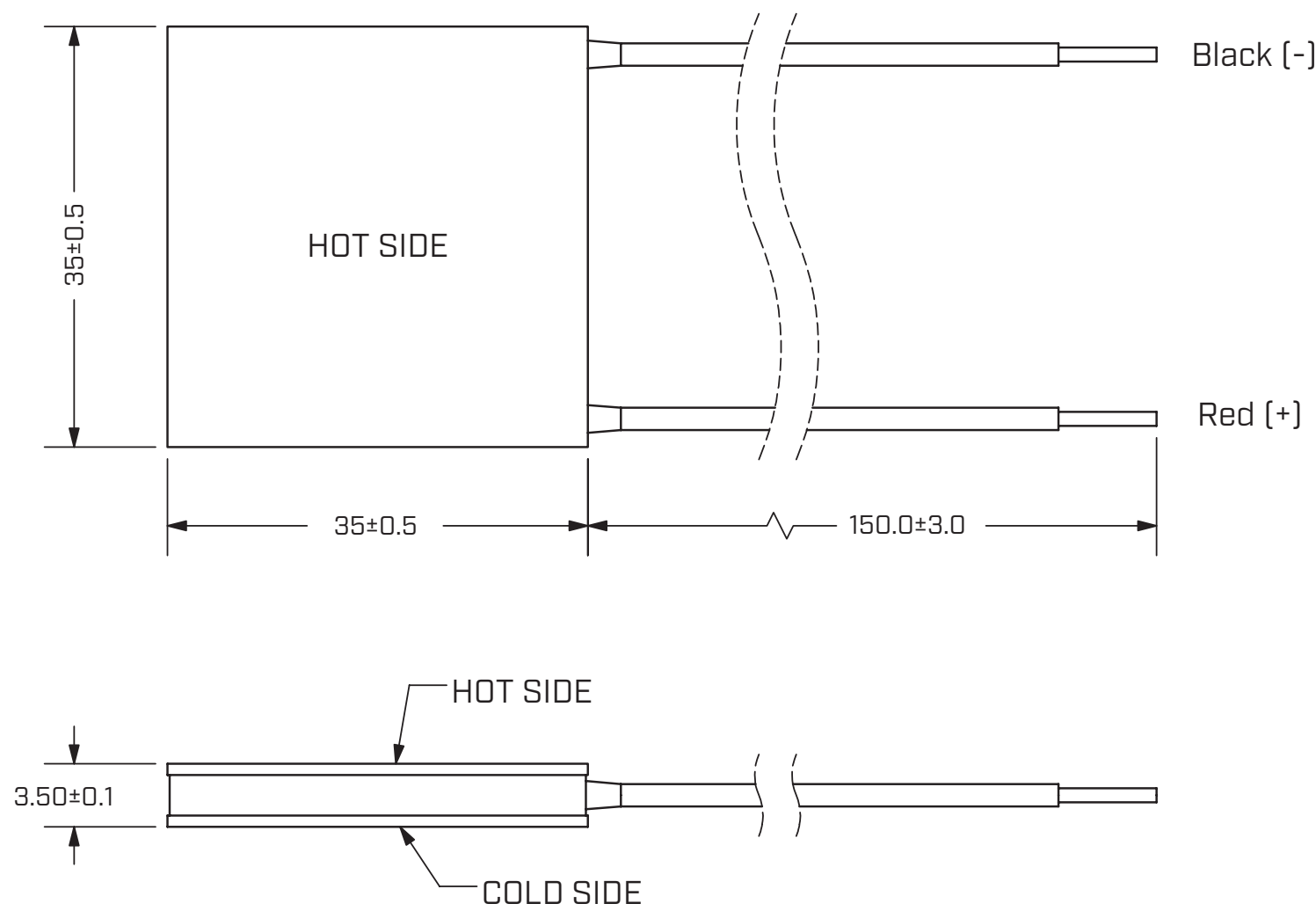
Base Number

Graphite Sheet:  
"blank" = not included  
G = included

MECHANICAL DRAWING

units: mm

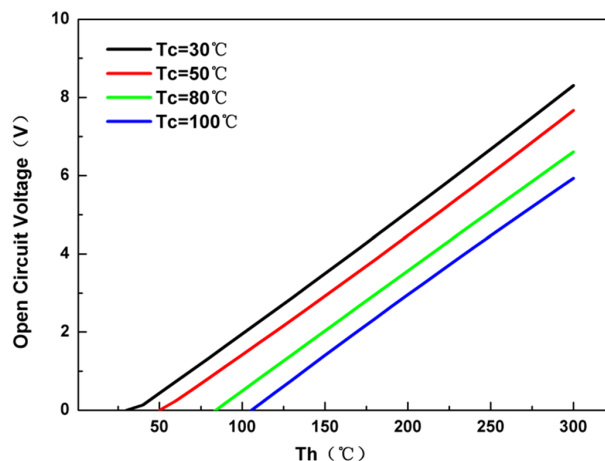
|                                      | MATERIAL                                        | PLATING |
|--------------------------------------|-------------------------------------------------|---------|
| ceramic plate                        | 96% $Al_2O_3$                                   |         |
| wire leads                           | UL1726 teflon coated 22 AWG                     |         |
| sealer                               | BG SIDUN 3.0 (between cold and hot side plates) |         |
| marking                              | P/N & "HOT SIDE" printed on hot side surface    |         |
| graphite pad <sup>2</sup> (optional) | HITHERM™ HT-1205                                |         |



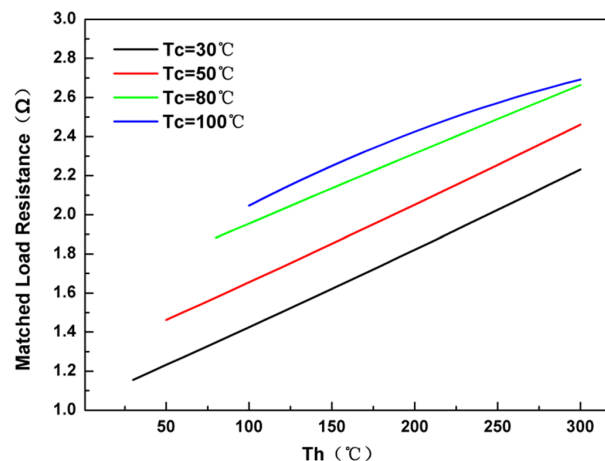
Notes: 2. Graphite pad option overall thickness is  $3.754 \pm 0.1254$  mm.

## PERFORMANCE CURVES

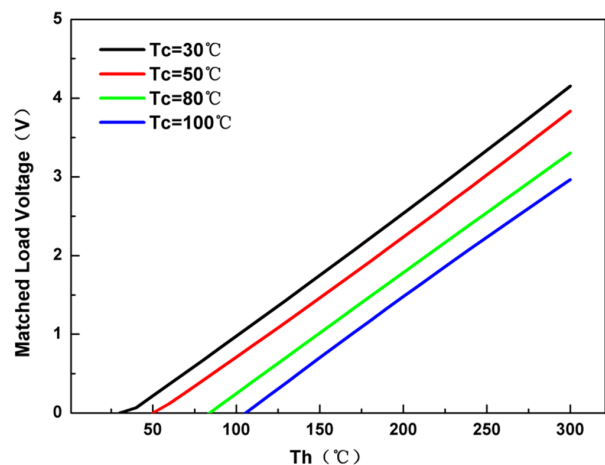
### Open Circuit Voltage Vs. Th



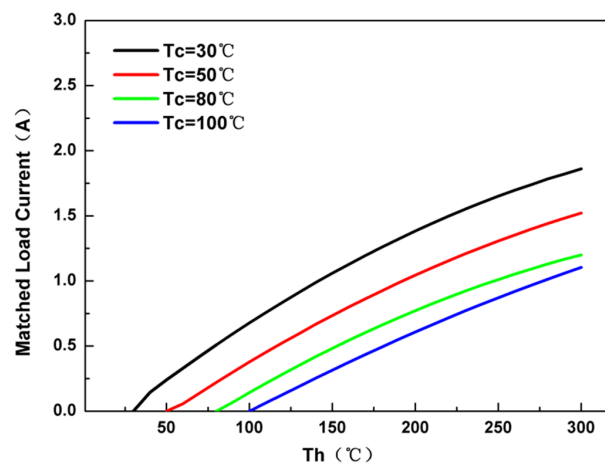
### Matched Load Resistance Vs. Th



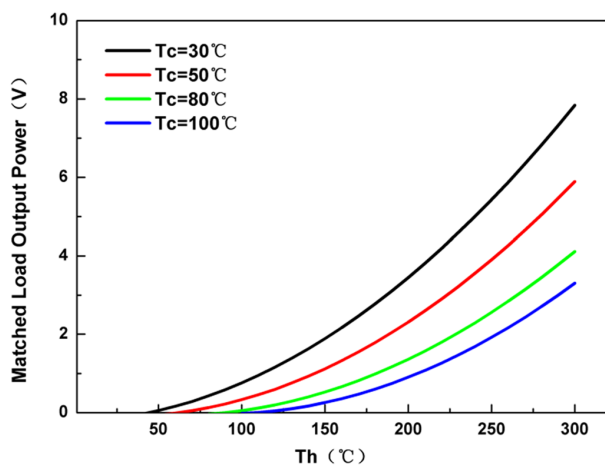
### Matched Load Voltage Vs. Th



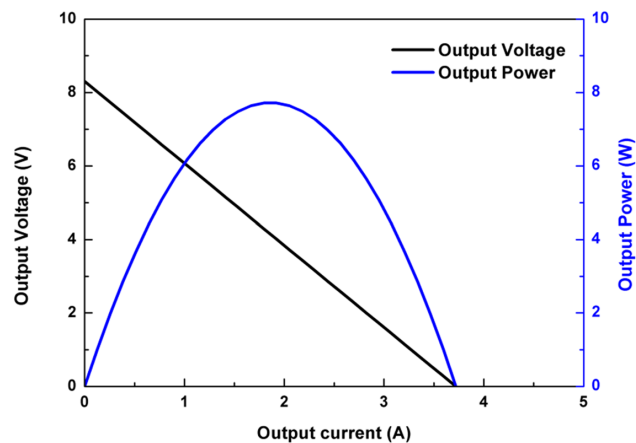
### Matched Load Current Vs. Th



### Matched Load Output Power Vs. Th



### Output Voltage/Power Vs. Output Current (Th=300°C, Tc= 30°C)



REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 05/20/2026 |

The revision history provided is for informational purposes only and is believed to be accurate.



Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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