

**MODEL:** CP038-4047-A | **DESCRIPTION:** PELTIER MODULE**FEATURES**

- arcTEC™ structure
- wide  $\Delta T$  max
- precise temperature control
- low profile
- solid state construction
- silicone sealed option available

**SPECIFICATIONS**

| parameter                        | conditions/description                  | min | typ  | max   | units    |
|----------------------------------|-----------------------------------------|-----|------|-------|----------|
| input voltage <sup>1</sup>       | Th = 27°C                               |     |      | 16.8  | V        |
|                                  | Th = 50°C                               |     |      | 18.08 | V        |
| input current <sup>2</sup>       |                                         |     |      | 3.8   | A        |
| internal resistance <sup>3</sup> | Th = 27°C                               |     | 3.35 |       | $\Omega$ |
|                                  | Th = 50°C                               |     | 3.65 |       | $\Omega$ |
| Qmax <sup>4</sup>                | Th = 27°C                               |     |      | 39.4  | W        |
|                                  | Th = 50°C                               |     |      | 46.2  | W        |
| $\Delta T$ max <sup>5</sup>      | Th = 27°C                               |     |      | 74    | °C       |
|                                  | Th = 50°C                               |     |      | 83    | °C       |
| solder melting temperature       | connection between thermoelectric pairs | 240 |      |       | °C       |
| hot side plate                   |                                         |     |      | 195   | °C       |
| cold side plate                  |                                         | -60 |      |       | °C       |
| assembly compression             |                                         |     |      | 0.34  | MPa      |
| RoHS                             | yes                                     |     |      |       |          |

Notes: 1. Maximum voltage at  $\Delta T$  max and  $T_h=27^\circ\text{C}$   
2. Maximum current to achieve  $\Delta T$  max  
3. Measured by AC 4-terminal method at 25°C  
4. Maximum heat absorbed at cold side occurs at  $I_{\text{max}}$ ,  $V_{\text{max}}$ , and  $\Delta T=0^\circ\text{C}$   
5. Maximum temperature difference occurs at  $I_{\text{max}}$ ,  $V_{\text{max}}$ , and  $Q=0$  W ( $\Delta T$  max measured in a vacuum at 1.3 Pa)  
6. Tolerance for all thermal and electrical parameters is  $\pm 10\%$ .

**PART NUMBER KEY****CP038 - 4047 - A X**

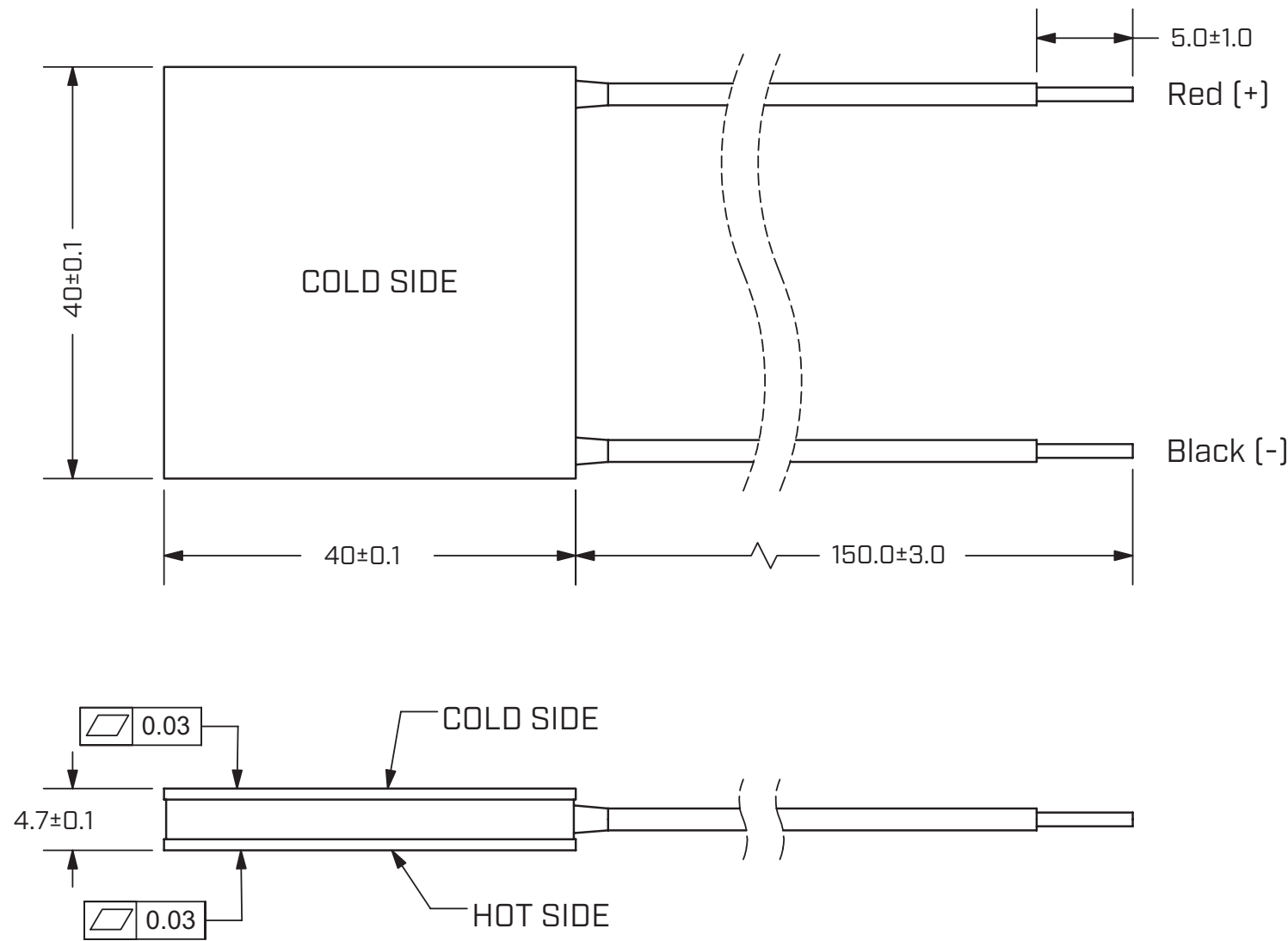
Base Number

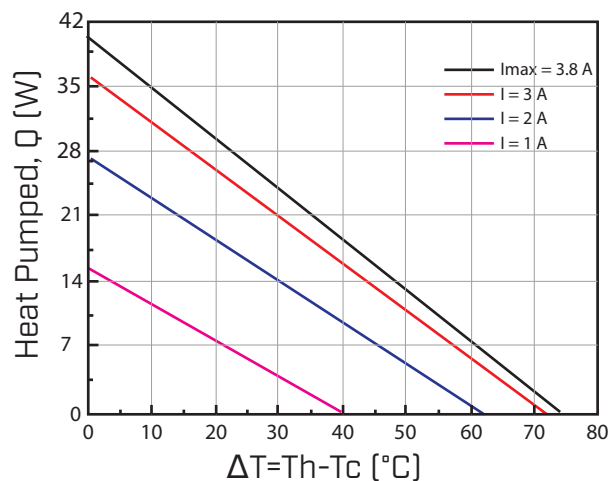
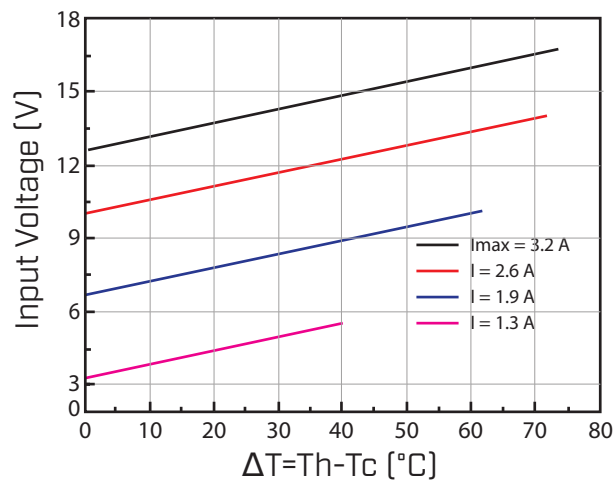
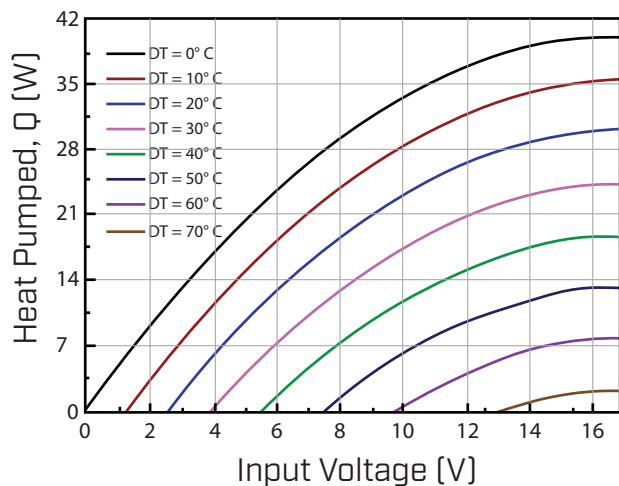
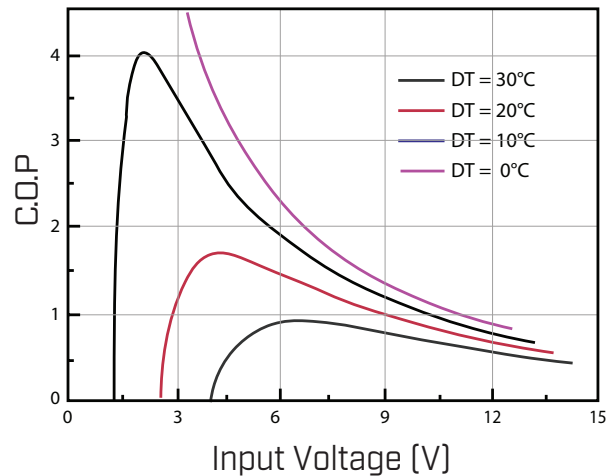
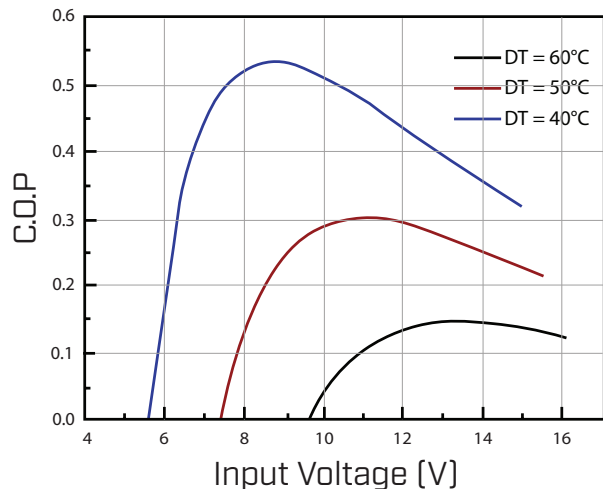
Silicone Sealed:  
"blank" = not included  
S = with silicone sealant

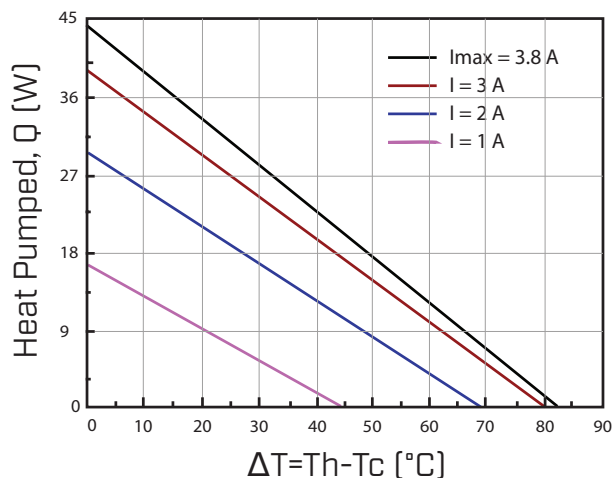
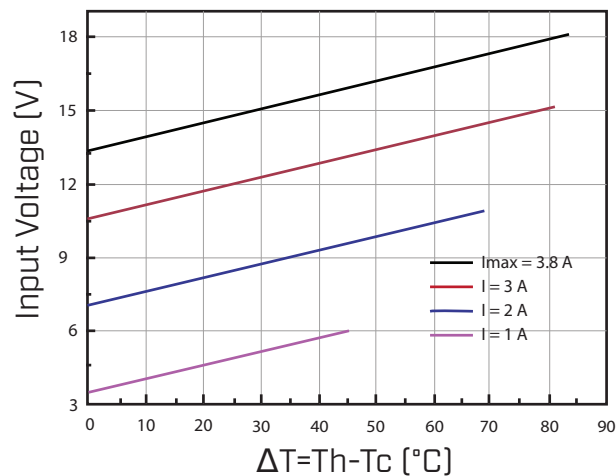
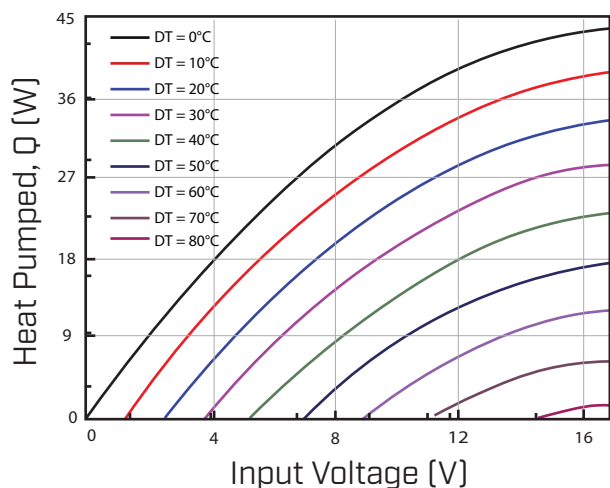
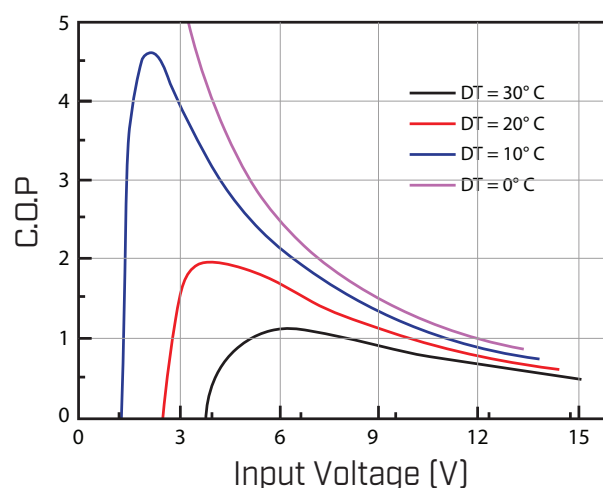
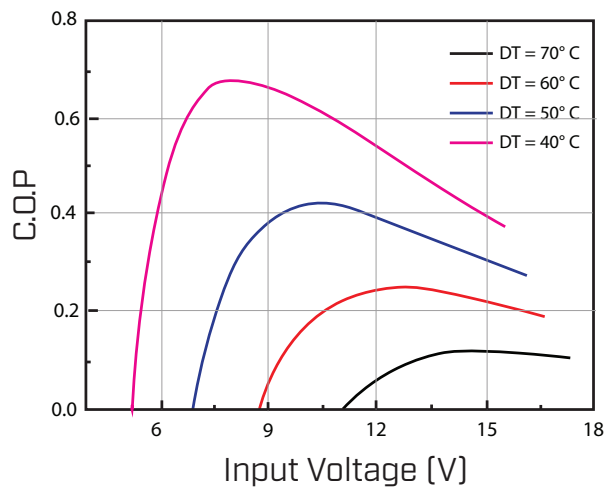
MECHANICAL DRAWING

units: mm

|                   | MATERIAL                                                | PLATING |
|-------------------|---------------------------------------------------------|---------|
| ceramic plate     | 96% $\text{AL}_2\text{O}_3$                             |         |
| wire leads        | UL1726 20 AWG                                           | tin     |
| sealer (optional) | 704 silicone sealant (between cold and hot side plates) |         |
| marking           | P/N printed on cold side surface                        |         |



**PERFORMANCE (Th=27°C)****Heat Pumped, Q Vs.  $\Delta T$** **Input Voltage, V Vs.  $\Delta T$** **Heat Pumped, Q Vs. Input Voltage, V****COP Vs. Input Voltage, V ( $\Delta T = 0 \sim 30^\circ\text{C}$ )****COP Vs. Input Voltage, V ( $\Delta T = 40 \sim 60^\circ\text{C}$ )**

**PERFORMANCE (Th=50°C)****Heat Pumped, Q Vs.  $\Delta T$** **Input Voltage, V Vs.  $\Delta T$** **Heat Pumped, Q Vs. Input Voltage, V****COP Vs. Input Voltage, V ( $\Delta T = 0 \sim 30^\circ\text{C}$ )****COP Vs. Input Voltage, V ( $\Delta T = 40 \sim 70^\circ\text{C}$ )**

REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 07/24/2026 |

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



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