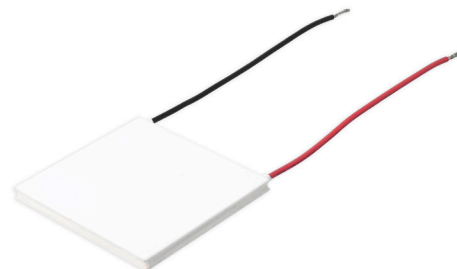


**SERIES:** CP180 | **DESCRIPTION:** PELTIER MODULE**FEATURES**

- arcTEC™ structure
- enhanced reliability for high thermal cycling
- superior thermal performance
- silicon sealed
- wide  $\Delta T$  max
- precise temperature control
- solid state construction

**MODEL**

| MODEL    | input<br>voltage <sup>1</sup><br>max<br>(Vdc) | input<br>current <sup>2</sup><br>max<br>(A) | internal<br>resistance <sup>3</sup><br>typ<br>( $\Omega \pm 10\%$ ) | output<br>Qmax <sup>4</sup> |                             | output<br>$\Delta T$ max <sup>5</sup> |                              |
|----------|---|---|---|-----------------------------|-----------------------------|---------------------------------------|------------------------------|
|          |   |   |   | T <sub>h</sub> =27°C<br>(W) | T <sub>h</sub> =50°C<br>(W) | T <sub>h</sub> =27°C<br>(°C)          | T <sub>h</sub> =50°C<br>(°C) |
| CP185039 | 15.4  | 18  | 0.66  | 157                         | 172                         | 68                                    | 75                           |

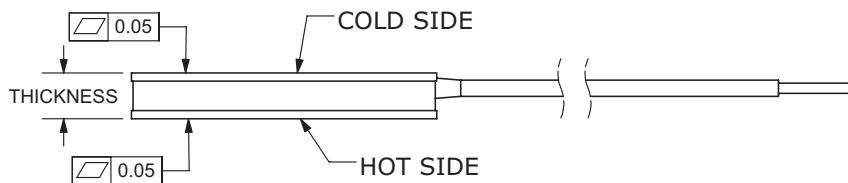
- Notes:
1. Maximum voltage at  $\Delta T$  max and T<sub>h</sub>=27°C
  2. Maximum current to achieve  $\Delta T$  max
  3. Measured by AC 4-terminal method at 25°C
  4. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and  $\Delta T=0^\circ\text{C}$
  5. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W ( $\Delta T$  max measured in a vacuum at 1.3 Pa)

## SPECIFICATIONS

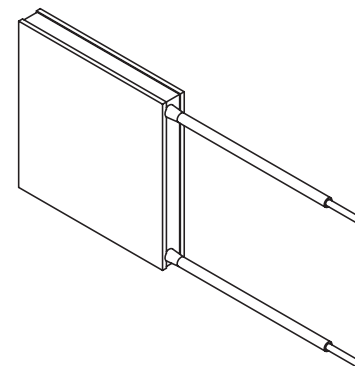
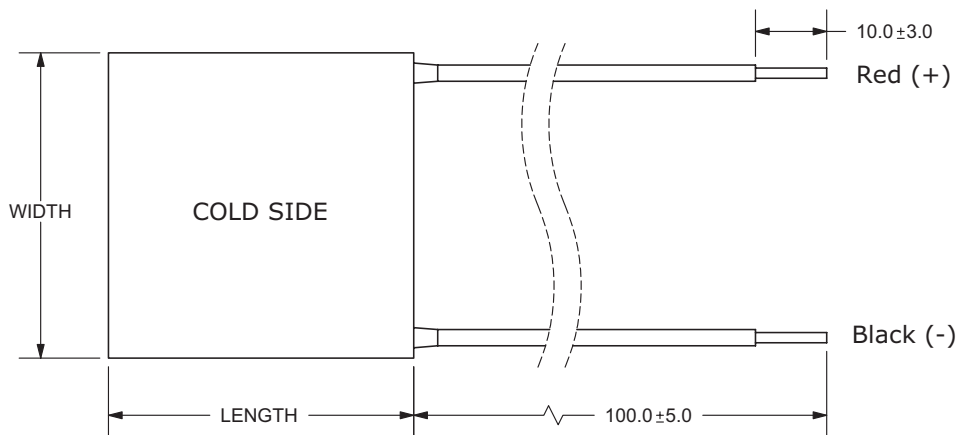
| parameter                  | conditions/description                  | min | typ | max | units |
|----------------------------|---|-----|-----|-----|-------|
| solder melting temperature | connection between thermoelectric pairs | 235 |     |     | °C    |
| assembly compression       |   |     |     | 1   | MPa   |
| RoHS                       | yes                                     |     |     |     |       |

## MECHANICAL DRAWING

units: mm

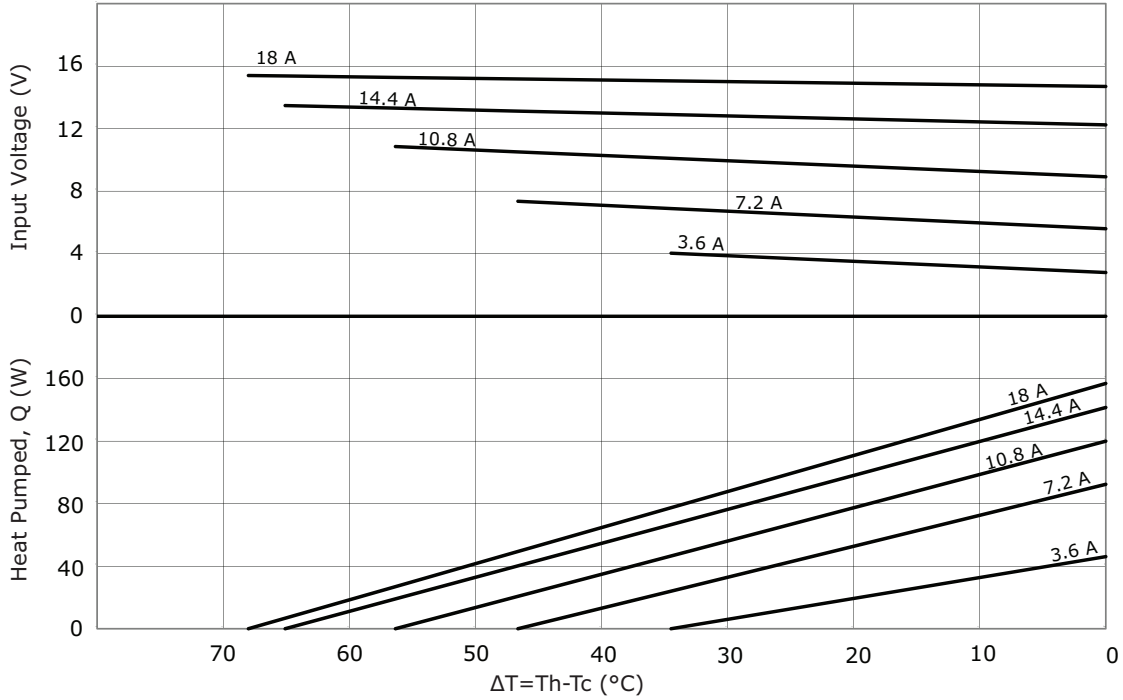


|               | MATERIAL  | PLATING |
|---------------|---|---------|
| ceramic plate | 96% $Al_2O_3$   |         |
| wire leads    | 20 AWG  | tin     |
| sealer        | silicon rubber 703 RTV (between cold and hot side plates) |         |
| joint cover   | silicon rubber 703 RTV                                    |         |
| marking       | P/N & S/N printed on cold side surface                    |         |

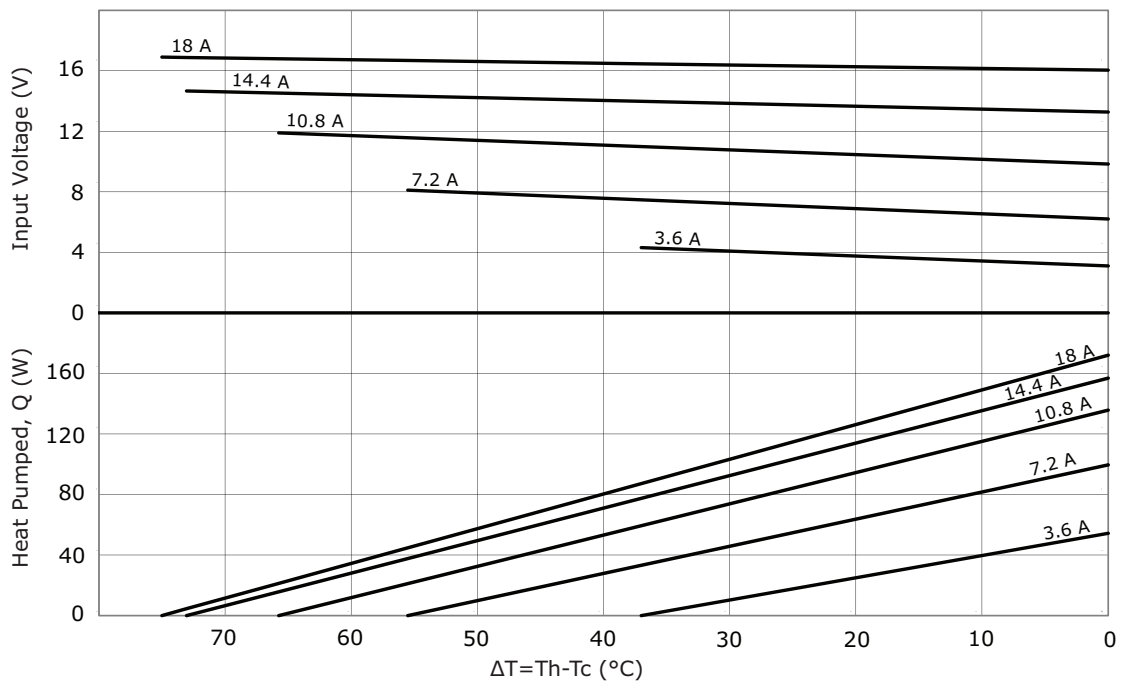


| MODEL NO. | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|-----------|-------------|------------|----------------|
| CP185039  | 50 ±0.3     | 50 ±0.3    | 3.9 ±0.025     |

### CP185039 PERFORMANCE (Th=27°C)



### CP185039 PERFORMANCE (Th=50°C)



## REVISION HISTORY

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| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 10/17/2019 |

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

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# CUI DEVICES

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

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