

**SERIES:** CP30 | **DESCRIPTION:** 3.0 A PELTIER MODULE

**FEATURES**

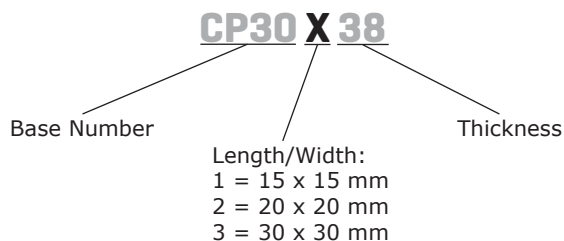
- solid state device
- small and lightweight
- precise temperature control
- quiet operation



| MODEL   | input voltage max (V) | input current max (A) | output Qmax <sup>1</sup> |                          | output ΔTmax <sup>2</sup> |                           |
|---------|-----------------------|-----------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|         |                       |                       | T <sub>h</sub> =27°C (W) | T <sub>h</sub> =50°C (W) | T <sub>h</sub> =27°C (°C) | T <sub>h</sub> =50°C (°C) |
| CP30138 | 3.8                   | 3                     | 6.5                      | 7.2                      | 66                        | 72                        |
| CP30238 | 8.6                   | 3                     | 15                       | 16.7                     | 66                        | 72                        |
| CP30338 | 15.4                  | 3                     | 27                       | 30.1                     | 66                        | 72                        |

Notes: 1. maximum cooling capacity at I<sub>max</sub>, V<sub>max</sub> and ΔT=0°C  
 2. maximum temperature difference at I<sub>max</sub>, V<sub>max</sub> and Q=0W (maximum parameters are measured in a vacuum)

**PART NUMBER KEY**

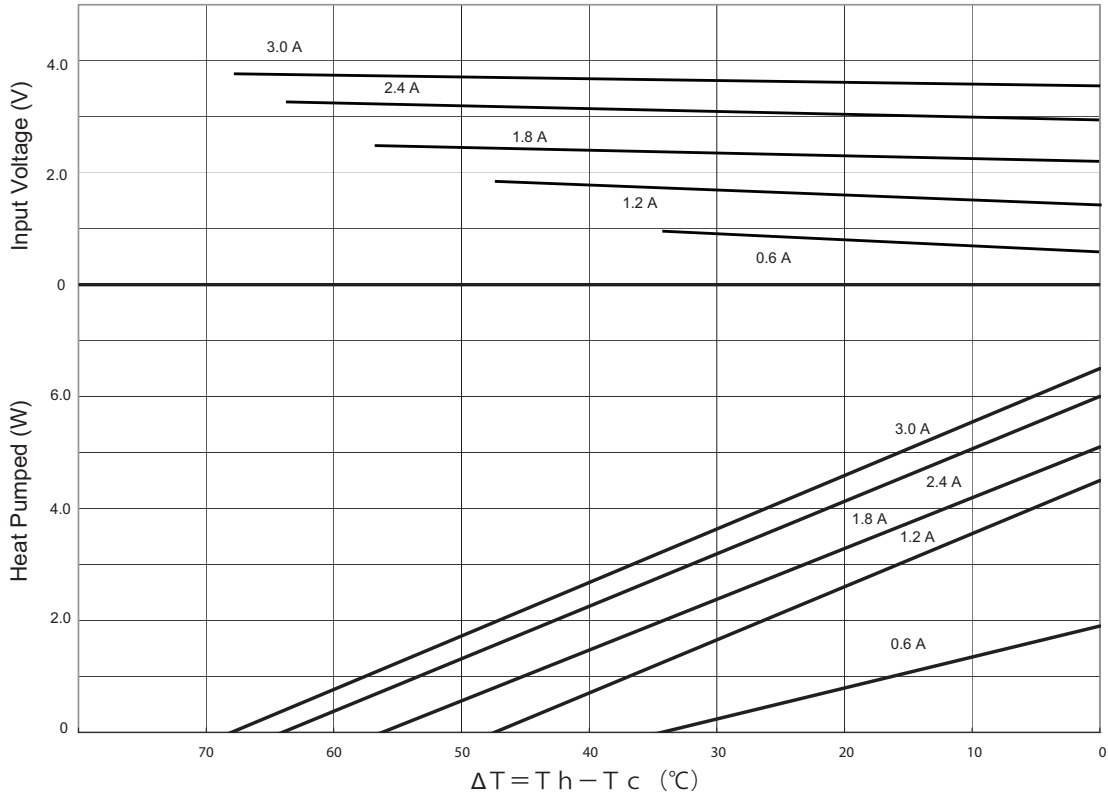


**GENERAL**

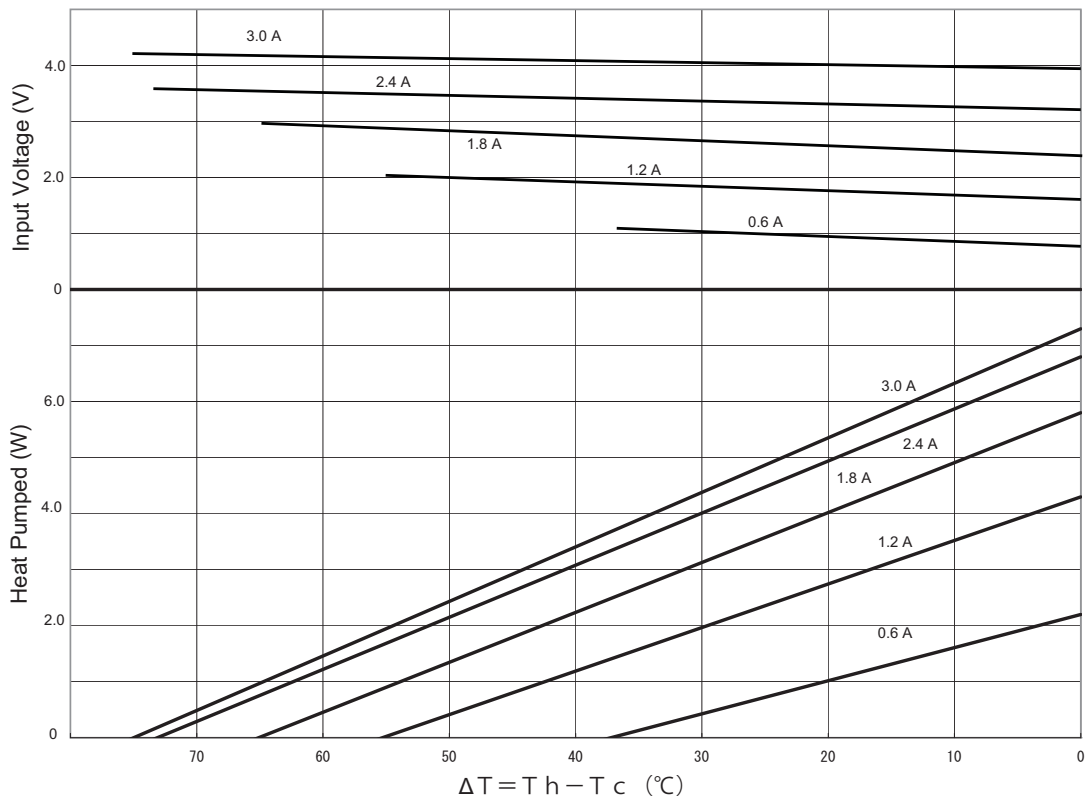
| parameter                        | conditions/description                  | min  | typ | max     | units               |
|----------------------------------|---|------|-----|---------|---------------------|
| internal resistance <sup>3</sup> | CP30138                                 | 0.9  | 1.0 | 1.1     | Ω                   |
|                                  | CP30238                                 | 2.07 | 2.3 | 2.53    | Ω                   |
|                                  | CP30338                                 | 3.6  | 4.0 | 4.4     | Ω                   |
| solder melting temperature       | connection between thermoelectric pairs |      |     | 138     | °C                  |
| assembly compression             |   |      |     | 98.07   | N/cm <sup>2</sup>   |
|                                  |   |      |     | 10      | kgf/cm <sup>2</sup> |
| hot side plate                   |   |      |     | 80      | °C                  |
| MTBF                             |   |      |     | 200,000 | hours               |

Notes: 3. measured by AC 4-terminal method at 25°C

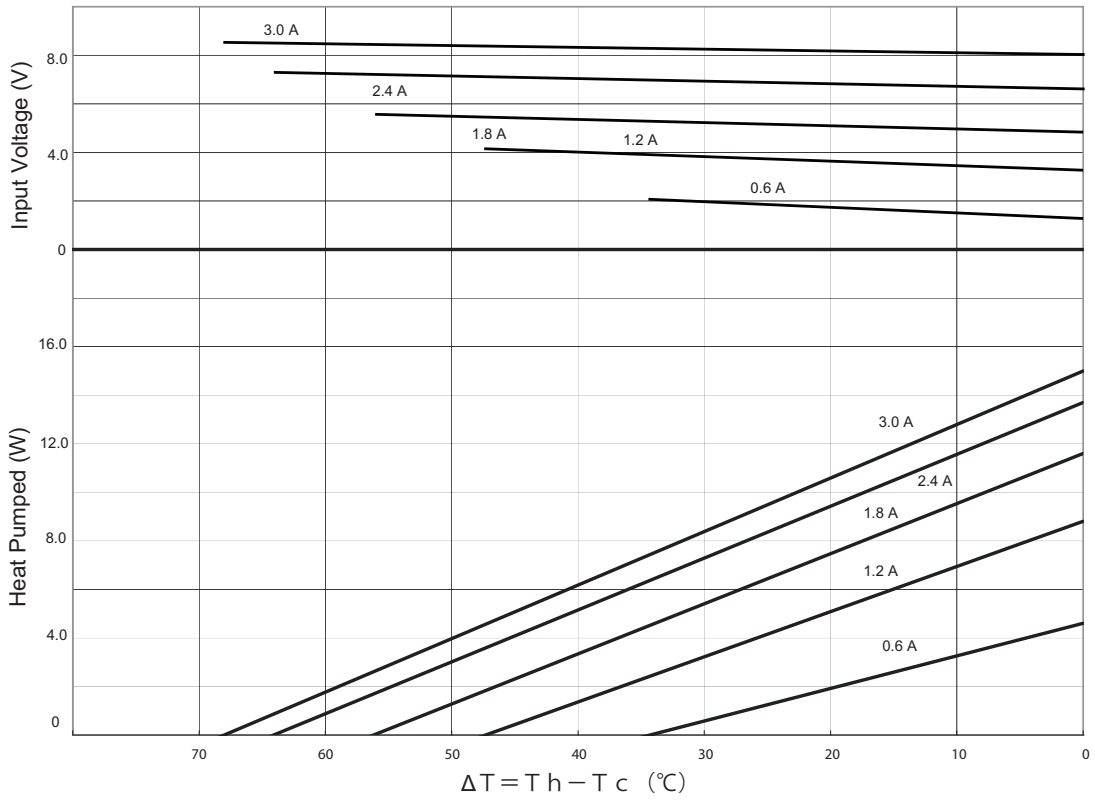
### CP30138 PERFORMANCE (Th=27°C)



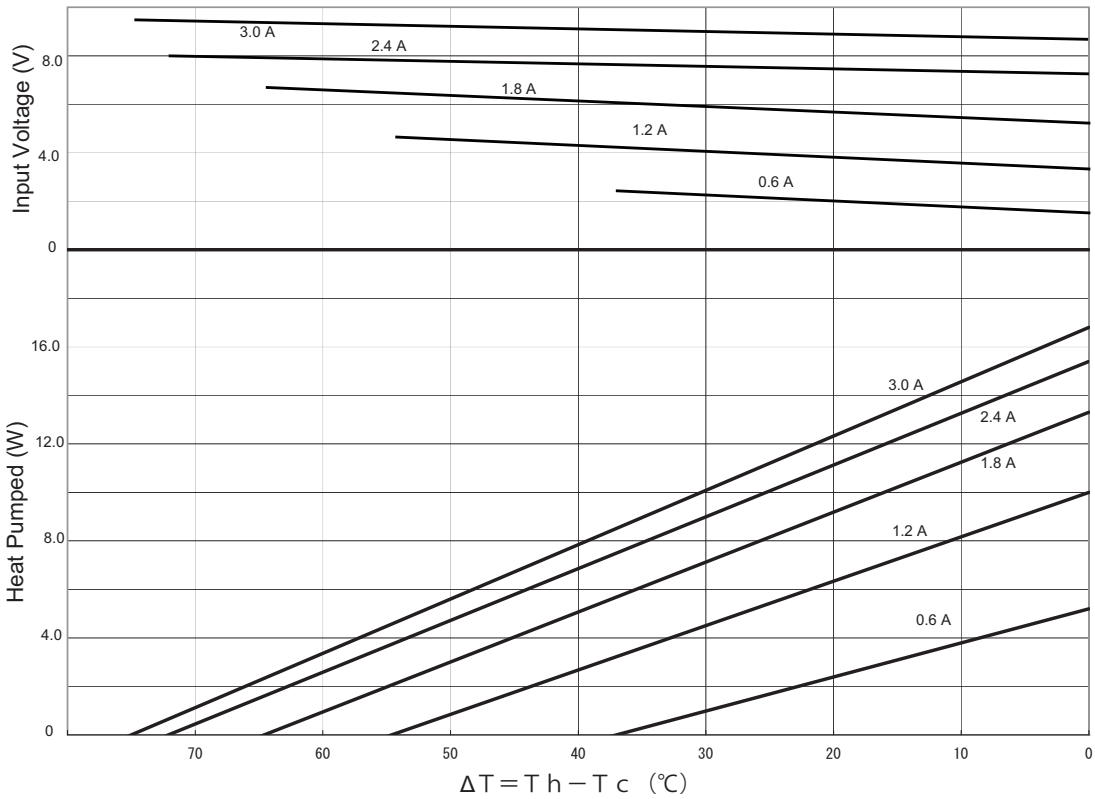
### CP30138 PERFORMANCE (Th=50°C)



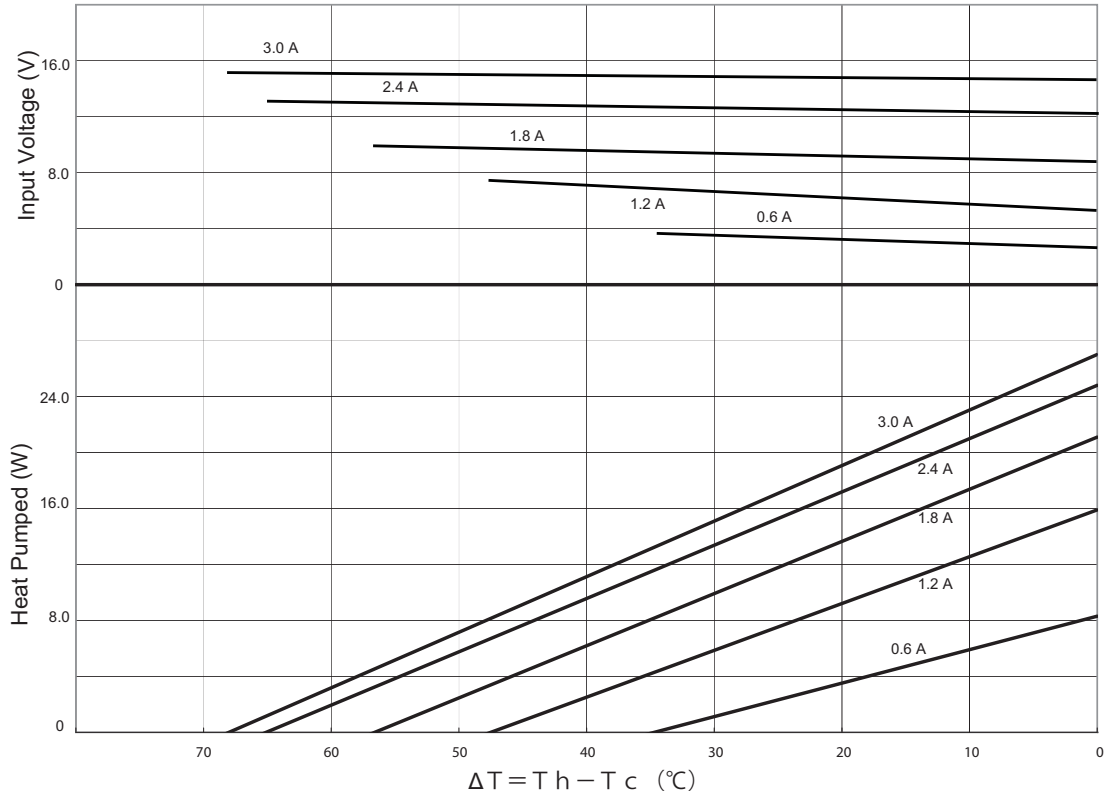
### CP30238 PERFORMANCE (Th=27°C)



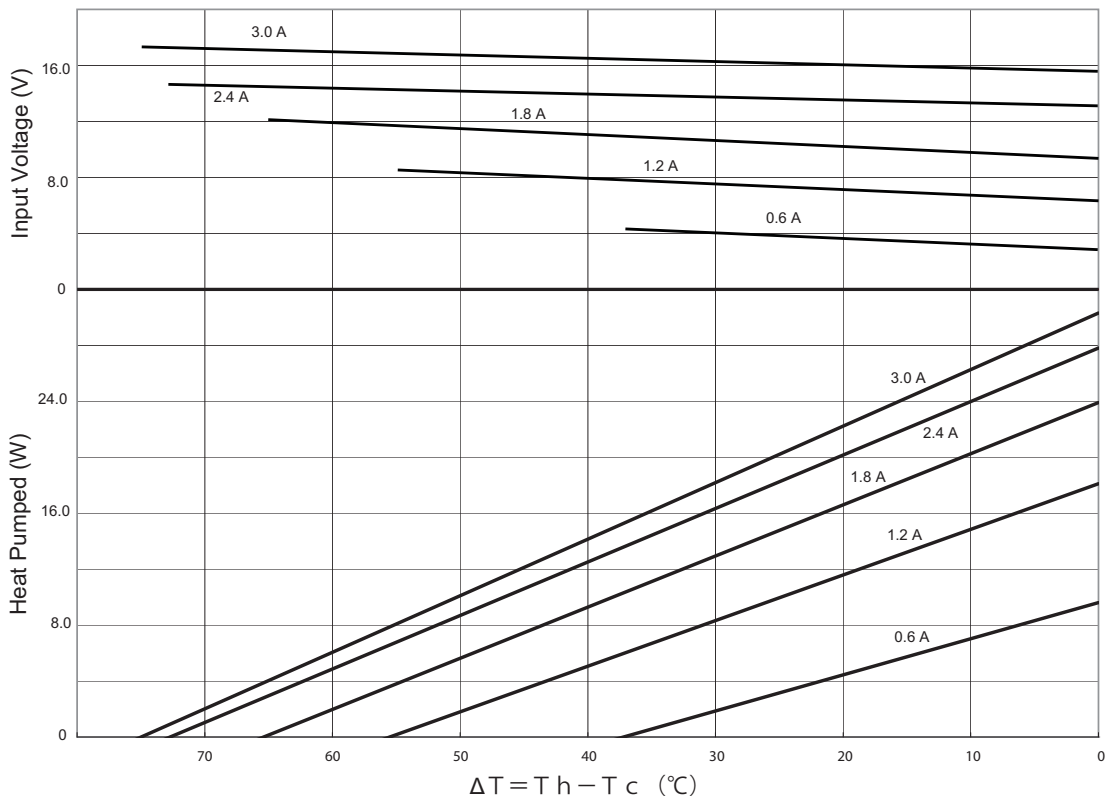
### CP30238 PERFORMANCE (Th=50°C)



### CP30338 PERFORMANCE (Th=27°C)

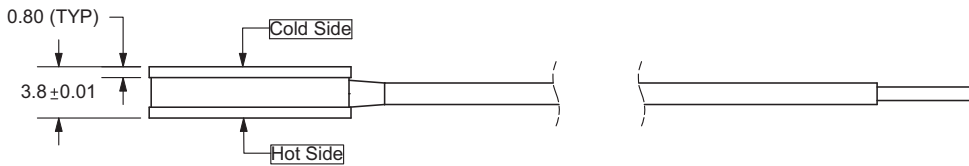


### CP30338 PERFORMANCE (Th=50°C)

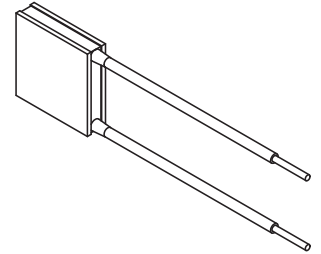
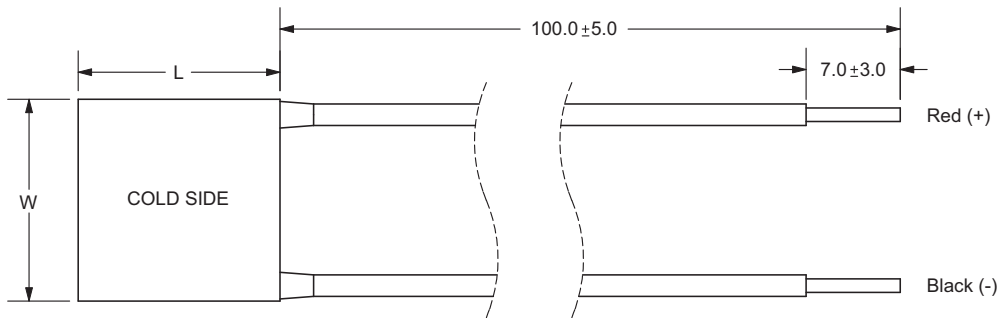


## MECHANICAL DRAWING

units: mm



|               | MATERIAL                                 | PLATING |
|---------------|--|---------|
| ceramic plate | Al <sub>2</sub> O <sub>3</sub> (Alumina) |         |
| sealer        | silicon rubber RTV                       |         |
| lead wire     | UL1430 (22AWG)                           | tin     |
| joint cover   | silicon rubber RTV                       |         |



| MODEL   | LENGTH x WIDTH (mm) |
|---------|---------------------|
| CP30138 | 15 x 15 ±0.3        |
| CP30238 | 20 x 20 ±0.3        |
| CP30338 | 30 x 30 ±0.3        |

## REVISION HISTORY

| rev. | description          | date       |
|------|----------------------|------------|
| 1.0  | initial release      | 09/03/2009 |
| 1.01 | applied new template | 05/07/2012 |

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



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