

**SERIES:** CP60 | **DESCRIPTION:** PELTIER MODULE
**FEATURES**

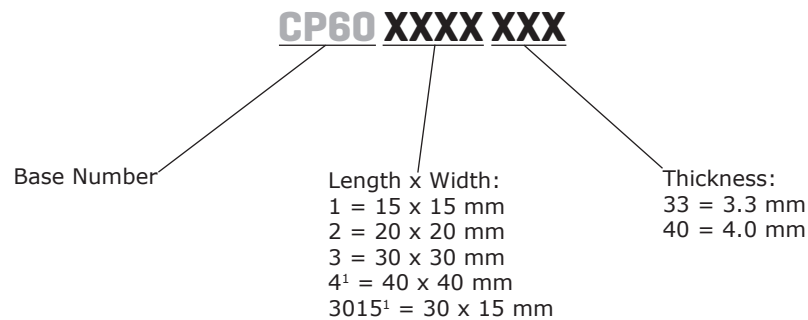
- solid state device
- precise temperature control
- quiet operation

**MODEL**

| MODEL      | input<br>voltage <sup>1</sup><br>max<br>(Vdc) | input<br>current <sup>2</sup><br>max<br>(A) | output<br>Qmax <sup>3</sup> |                             | output<br>ΔTmax <sup>4</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) |
| CP60133    | 3.8                                           | 6.0                                         | 12.2                        | 13.6                        | 66                           | 72                           |
| CP60233    | 8.6                                           | 6.0                                         | 27.9                        | 31.2                        | 66                           | 72                           |
| CP60333    | 15.4                                          | 6.0                                         | 50.5                        | 56.5                        | 66                           | 72                           |
| CP60140    | 2.1                                           | 6.0                                         | 7.1                         | 7.9                         | 68                           | 75                           |
| CP60240    | 3.8                                           | 6.0                                         | 13.0                        | 14.5                        | 68                           | 75                           |
| CP60301540 | 4.2                                           | 6.0                                         | 14.5                        | 16.1                        | 68                           | 75                           |
| CP60340    | 8.6                                           | 6.0                                         | 29.0                        | 32.4                        | 68                           | 75                           |
| CP60440    | 15.4                                          | 6.0                                         | 53.0                        | 59.3                        | 68                           | 75                           |

Notes:

1. Maximum voltage at ΔT max and T<sub>h</sub>=27°C
2. Maximum current to achieve ΔT max
3. Maximum heat absorbed at cold side occurs at I<sub>max</sub>, V<sub>max</sub>, and ΔT=0°C
4. Maximum temperature difference occurs at I<sub>max</sub>, V<sub>max</sub>, and Q=0W (ΔT max measured in a vacuum at 1.3 Pa)

**PART NUMBER KEY**

Notes:

1. Only available in 4.0 mm thickness

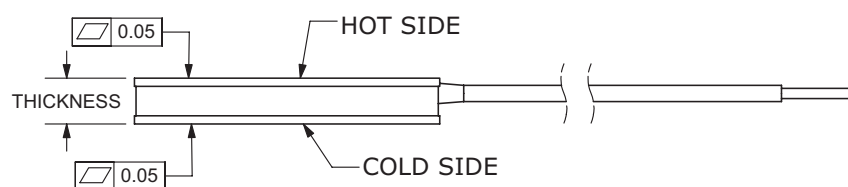
## SPECIFICATIONS

| parameter                        | conditions/description                  | min   | typ  | max   | units |
|----------------------------------|-----------------------------------------|-------|------|-------|-------|
| internal resistance <sup>1</sup> | CP60133                                 | 0.45  | 0.50 | 0.55  | Ω     |
|                                  | CP60233                                 | 1.08  | 1.20 | 1.32  | Ω     |
|                                  | CP60333                                 | 1.98  | 2.20 | 2.42  | Ω     |
|                                  | CP60140                                 | 0.261 | 0.29 | 0.319 | Ω     |
|                                  | CP60240                                 | 0.477 | 0.53 | 0.583 | Ω     |
|                                  | CP60301540                              | 0.513 | 0.57 | 0.627 | Ω     |
|                                  | CP60340                                 | 1.089 | 1.21 | 1.331 | Ω     |
|                                  | CP60440                                 | 1.953 | 2.17 | 2.387 | Ω     |
| solder melting temperature       | connection between thermoelectric pairs | 138   |      |       | °C    |
| assembly compression             | all other models                        |       |      | 0.98  | MPa   |
|                                  | CP60301540                              |       |      | 1     | MPa   |
| hot side plate                   |                                         |       |      | 80    | °C    |
| RoHS                             | 2011/65/EU                              |       |      |       |       |

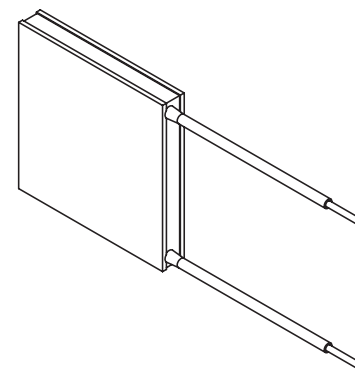
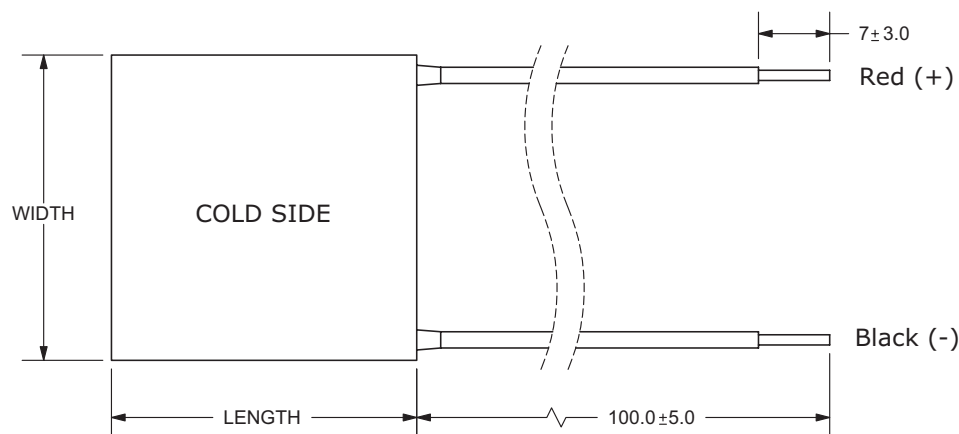
Note: 1. Measured by AC 4-terminal method at 25°C

## MECHANICAL DRAWING

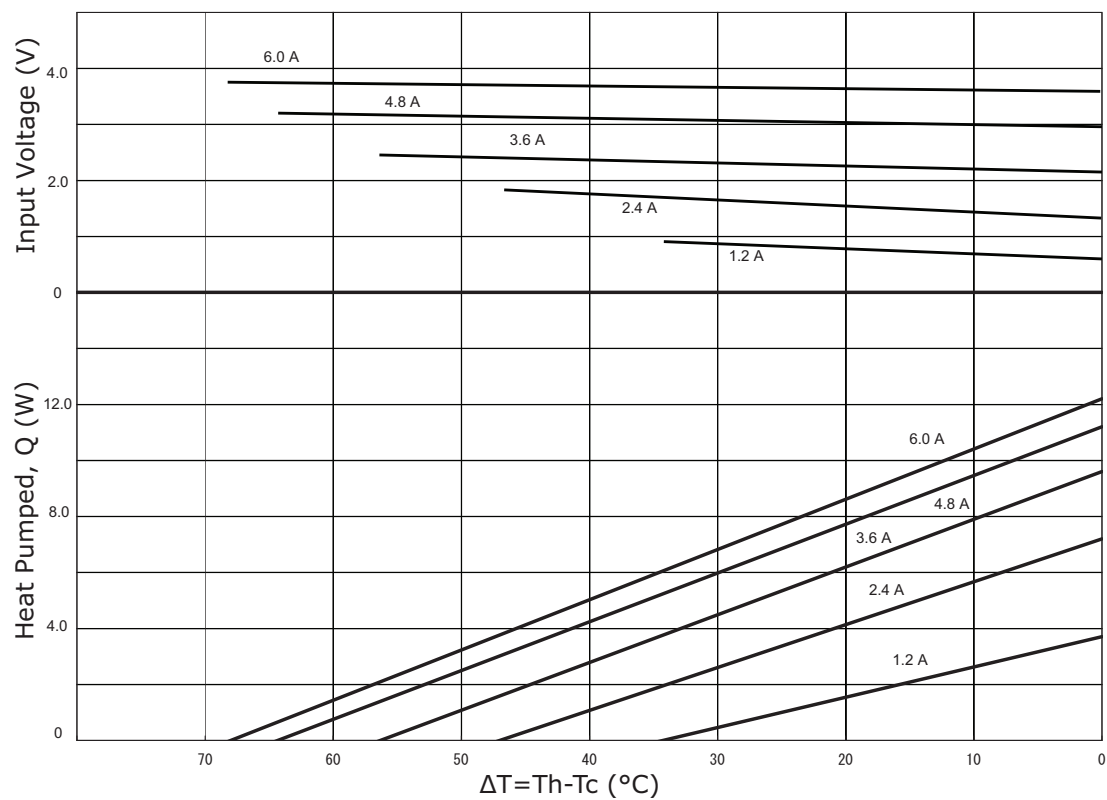
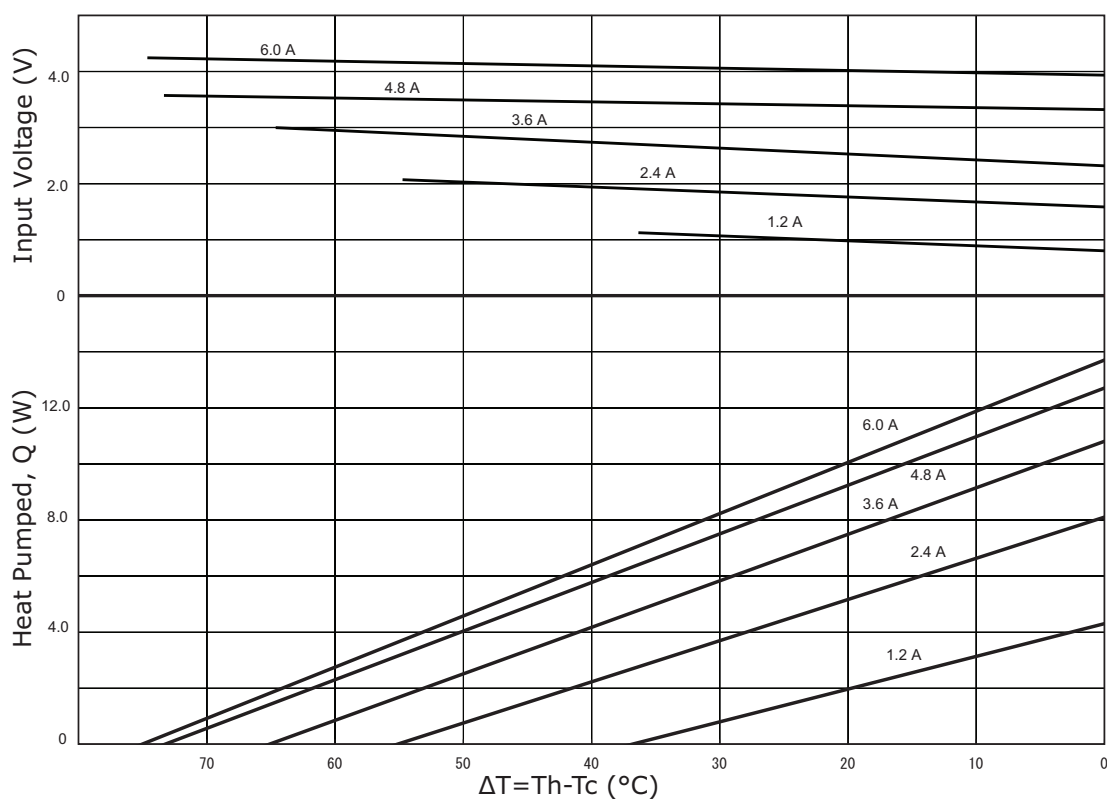
units: mm

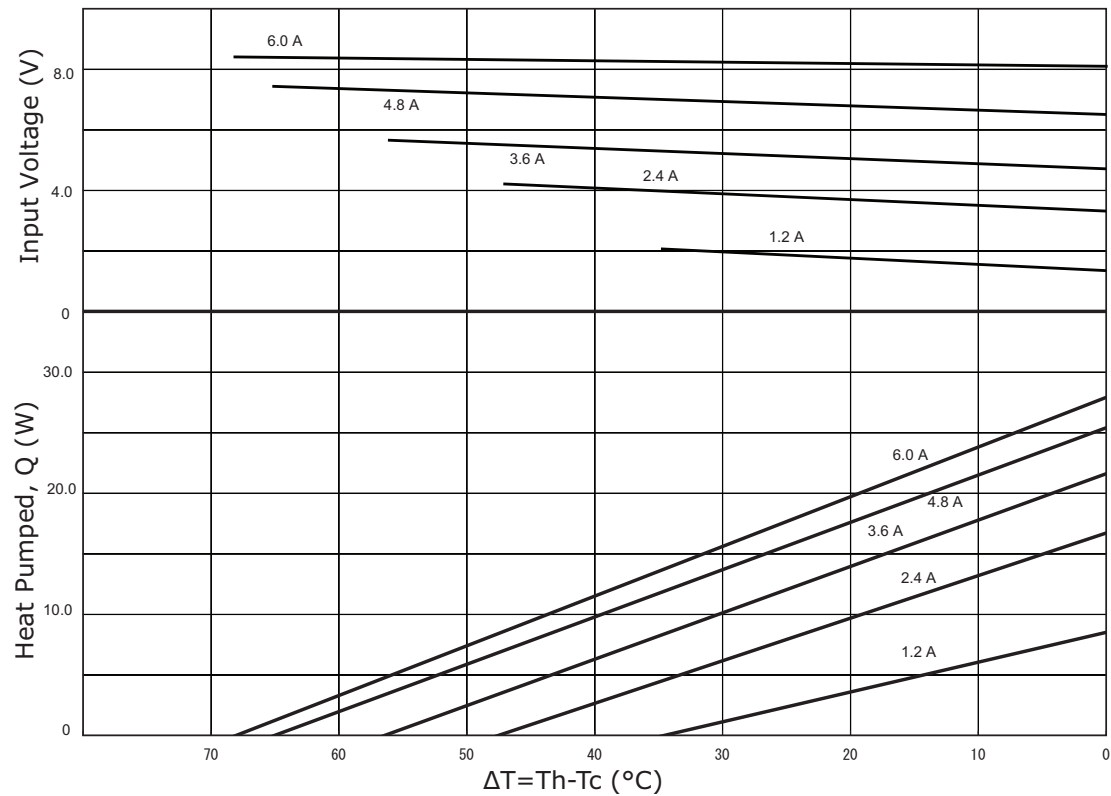
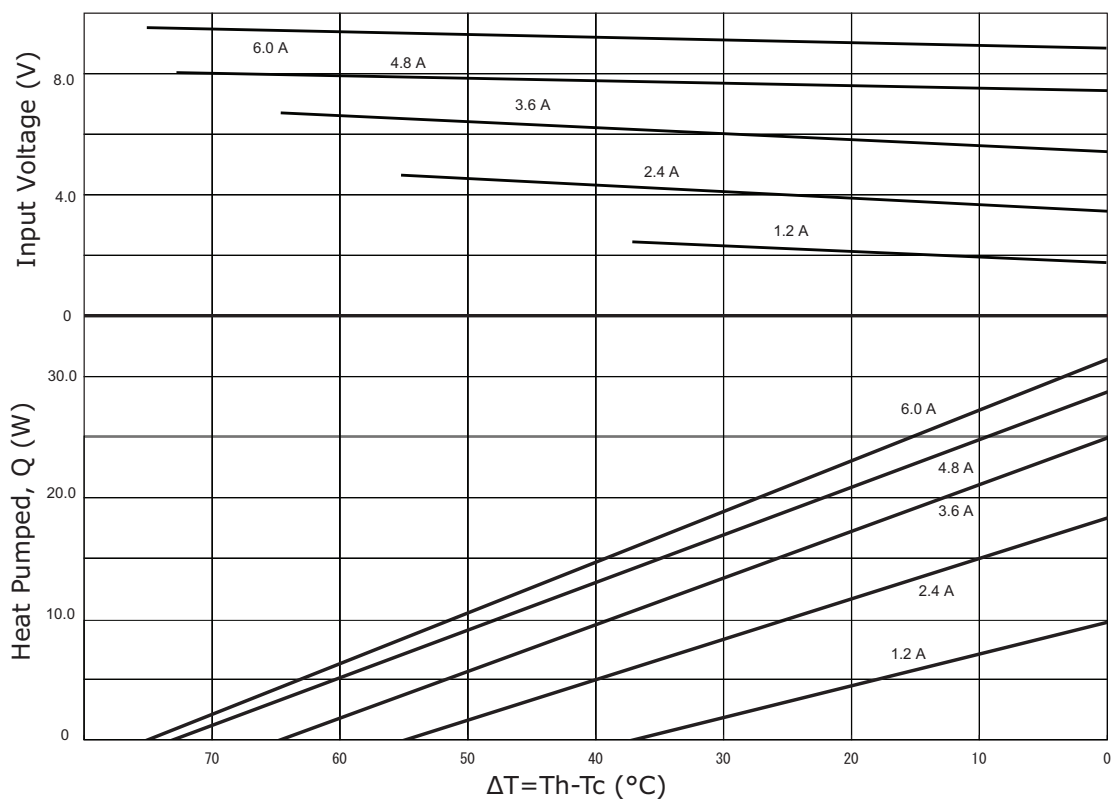


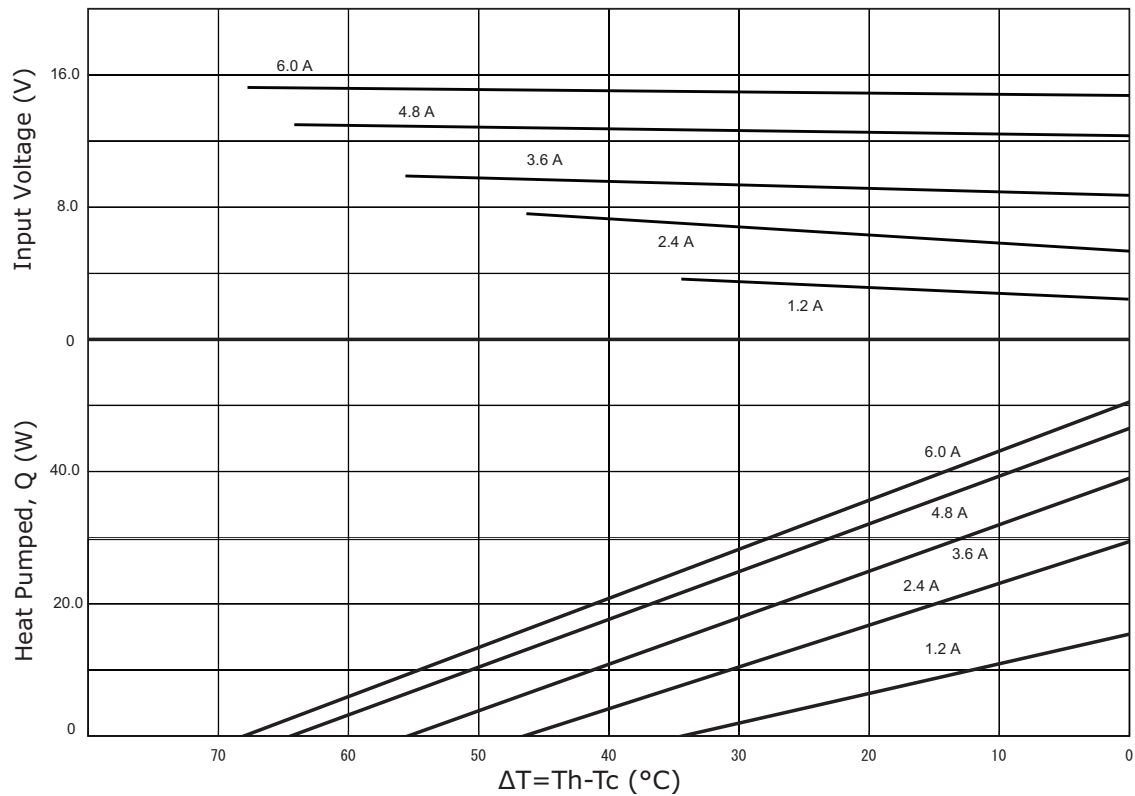
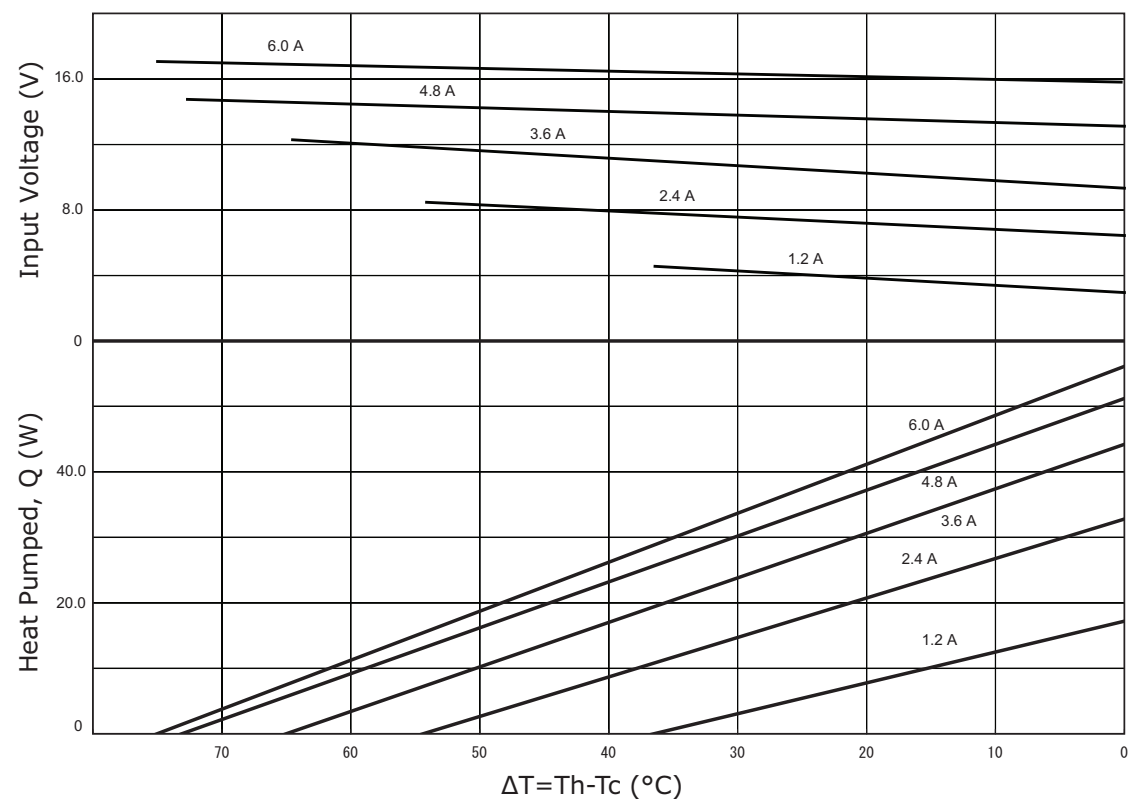
|               | MATERIAL                                                  | PLATING |
|---------------|-----------------------------------------------------------|---------|
| ceramic plate | 96% AL <sub>2</sub> O <sub>3</sub>                        |         |
| wire leads    | 20 AWG                                                    | 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                    |         |

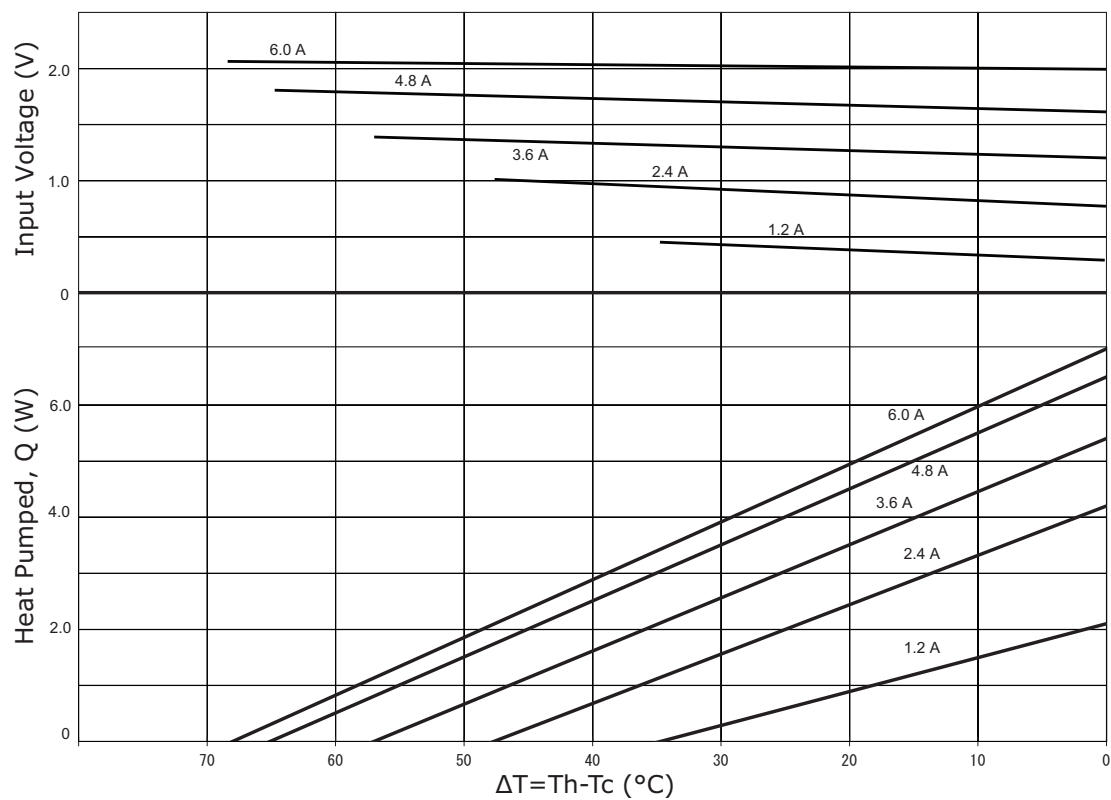
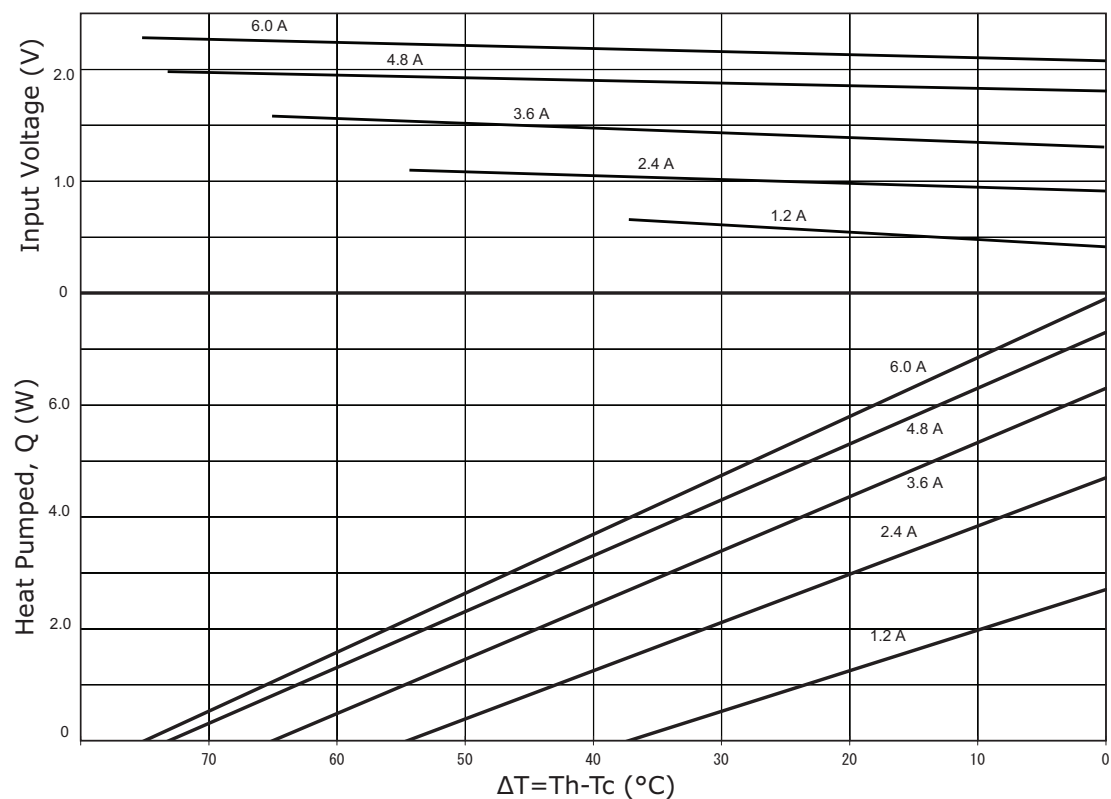


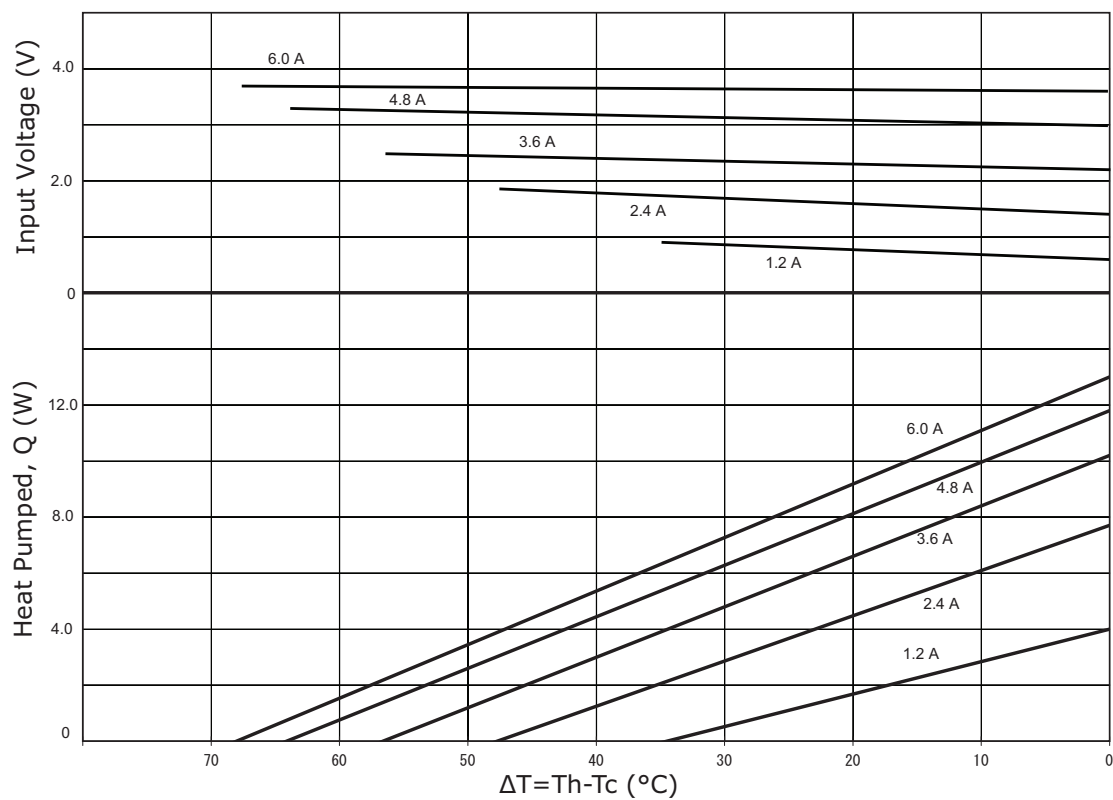
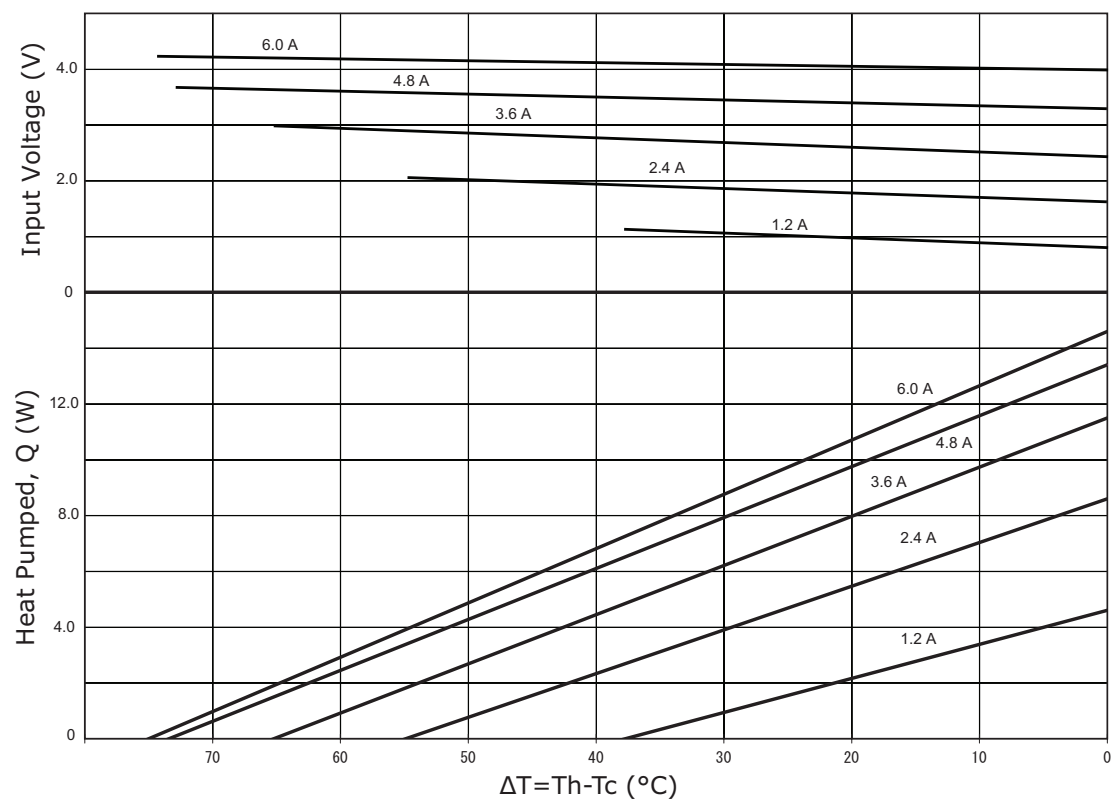
| MODEL NO.  | LENGTH (mm) | WIDTH (mm) | THICKNESS (mm) |
|------------|-------------|------------|----------------|
| CP60133    | 15 ±0.3     | 15 ±0.3    | 3.3 ±0.1       |
| CP60233    | 20 ±0.3     | 20 ±0.3    | 3.3 ±0.1       |
| CP60333    | 30 ±0.3     | 30 ±0.3    | 3.3 ±0.1       |
| CP60140    | 15 ±0.3     | 15 ±0.3    | 4.0 ±0.1       |
| CP60240    | 20 ±0.3     | 20 ±0.3    | 4.0 ±0.1       |
| CP60301540 | 30 ±0.3     | 15 ±0.3    | 4.05 ±0.1      |
| CP60340    | 30 ±0.3     | 30 ±0.3    | 4.0 ±0.1       |
| CP60440    | 40 ±0.3     | 40 ±0.3    | 4.0 ±0.1       |

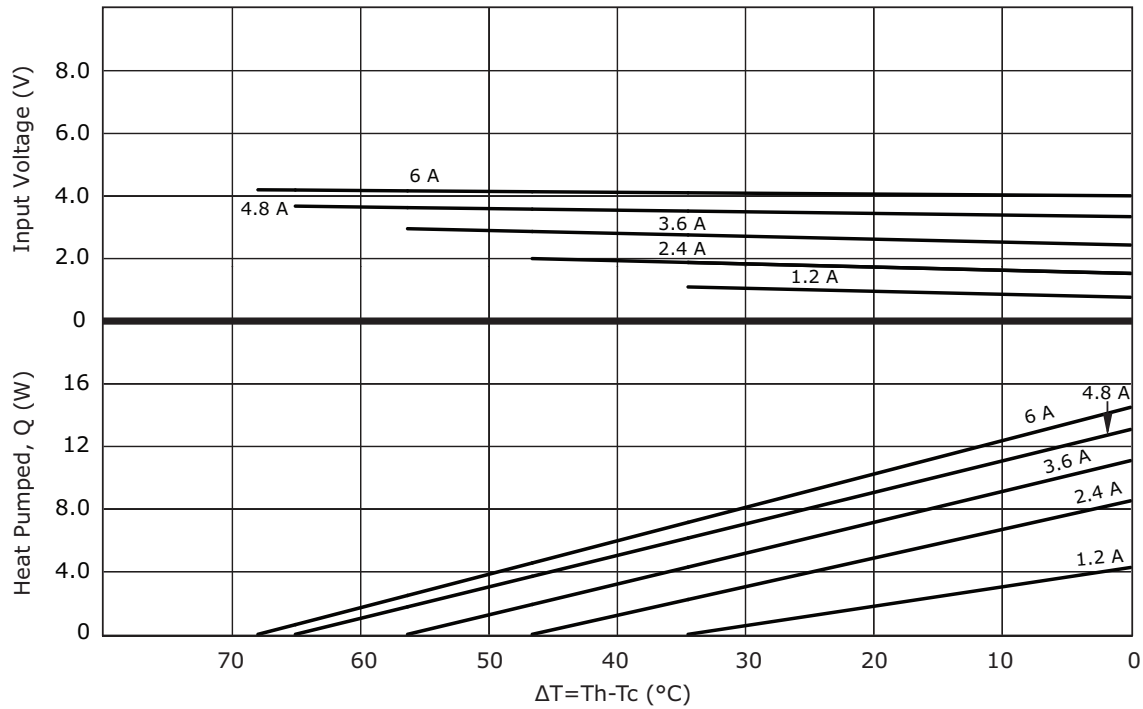
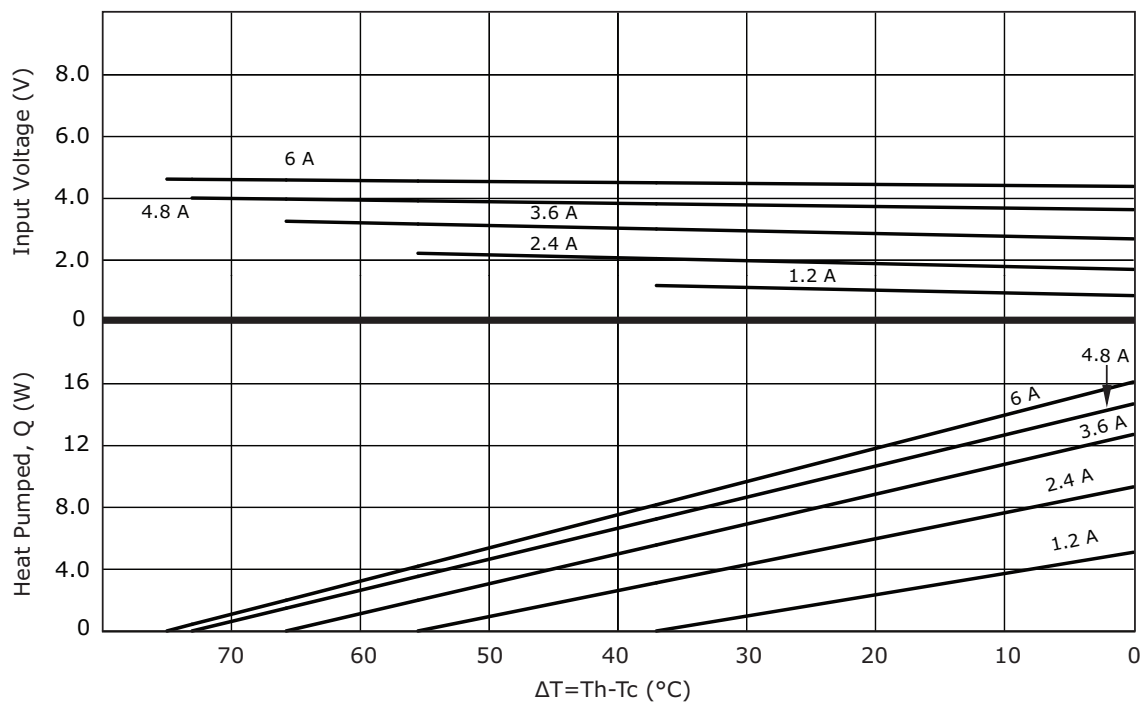
**CP60133 PERFORMANCE (Th=27°C)****CP60133 PERFORMANCE (Th=50°C)**

**CP60233 PERFORMANCE (Th=27°C)****CP60233 PERFORMANCE (Th=50°C)**

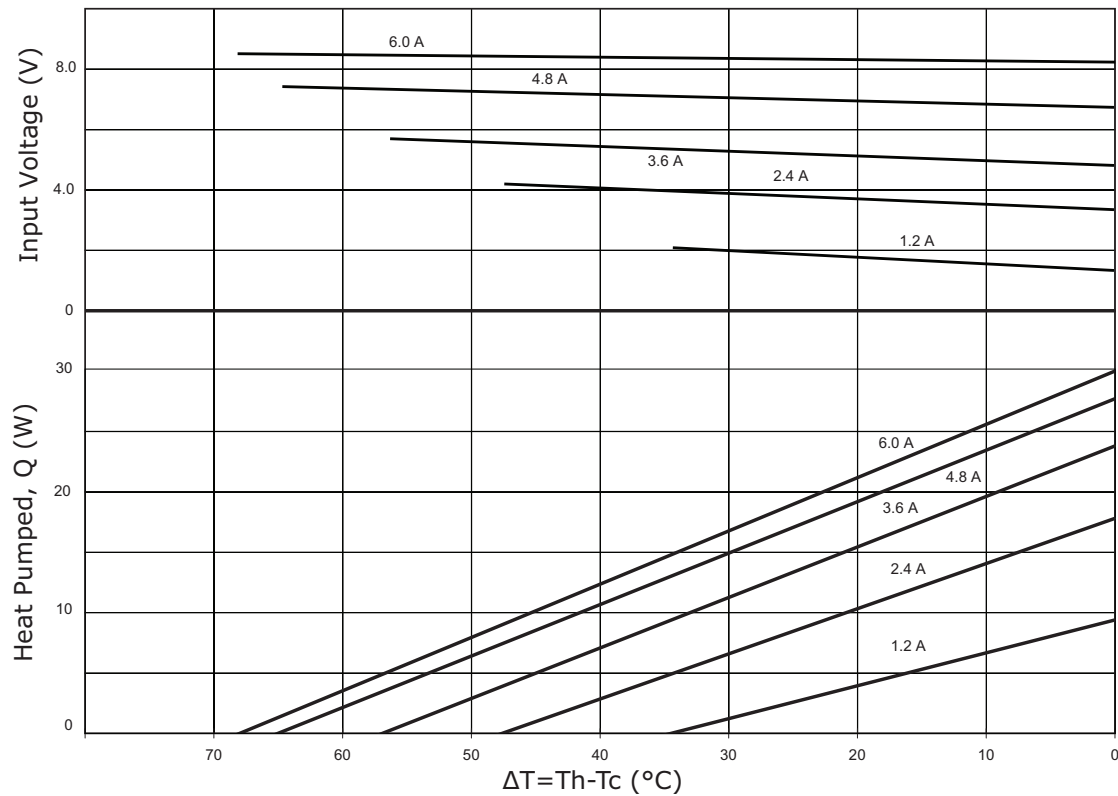
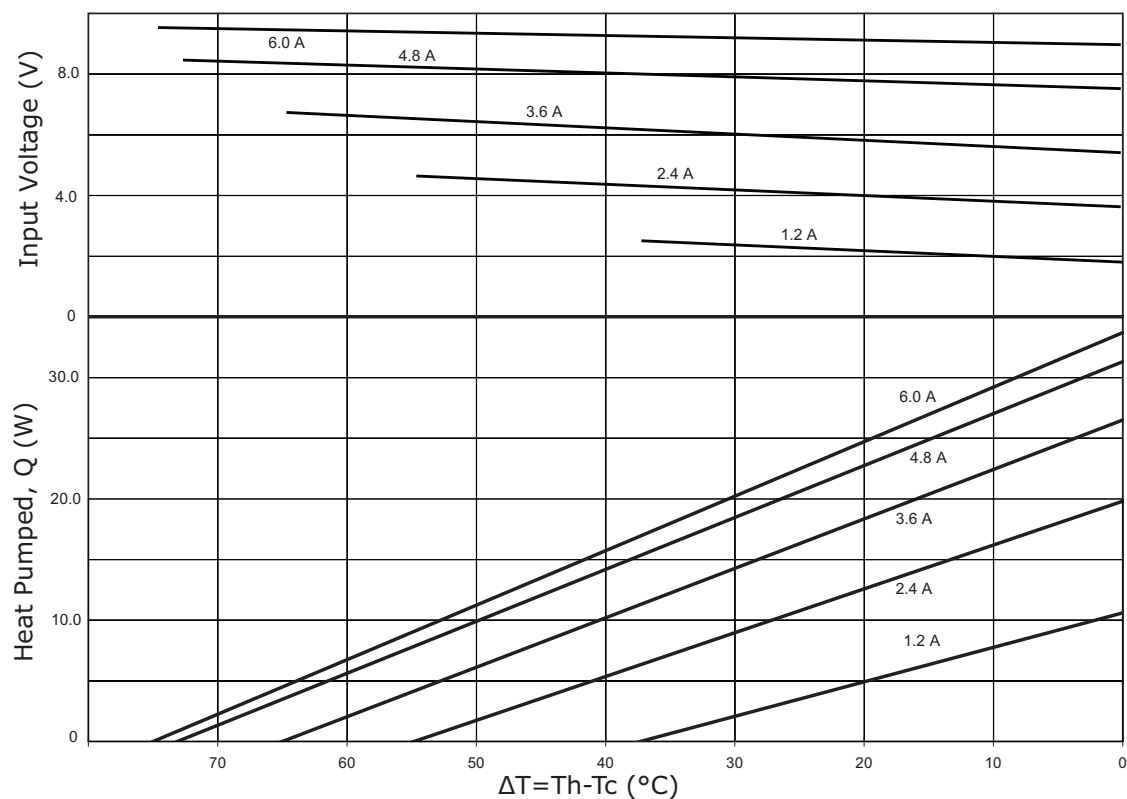
**CP60333 PERFORMANCE (Th=27°C)****CP60333 PERFORMANCE (Th=50°C)**

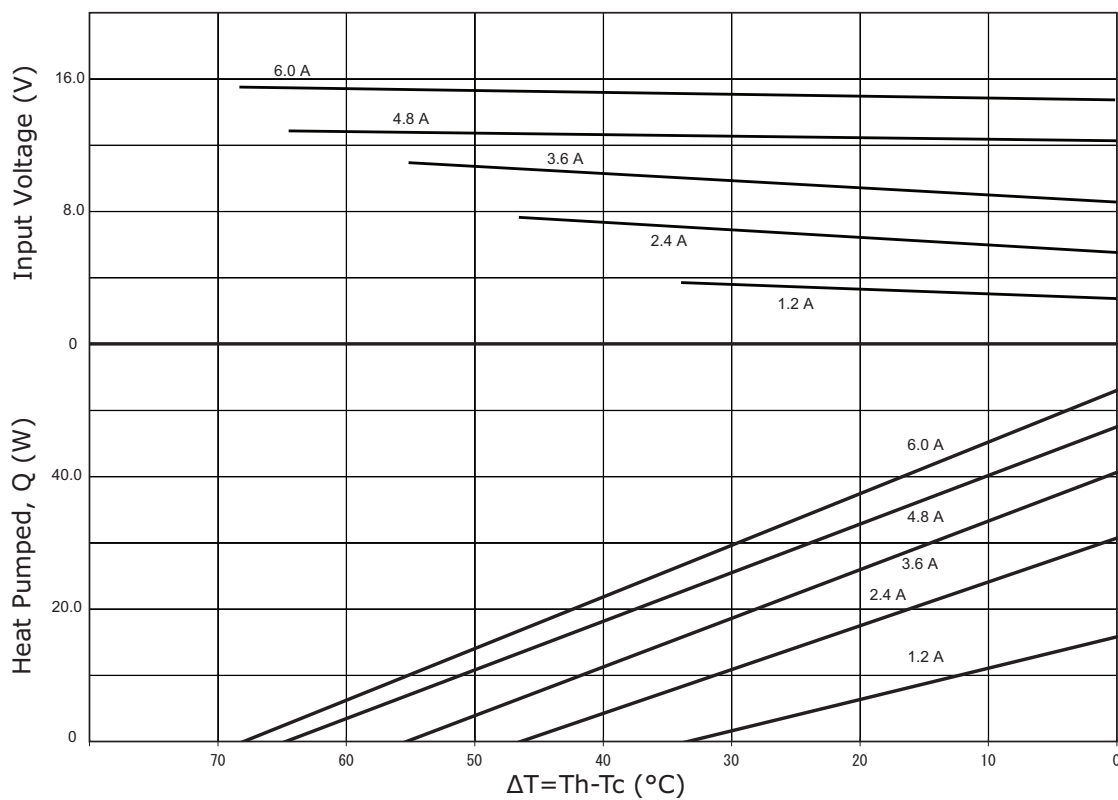
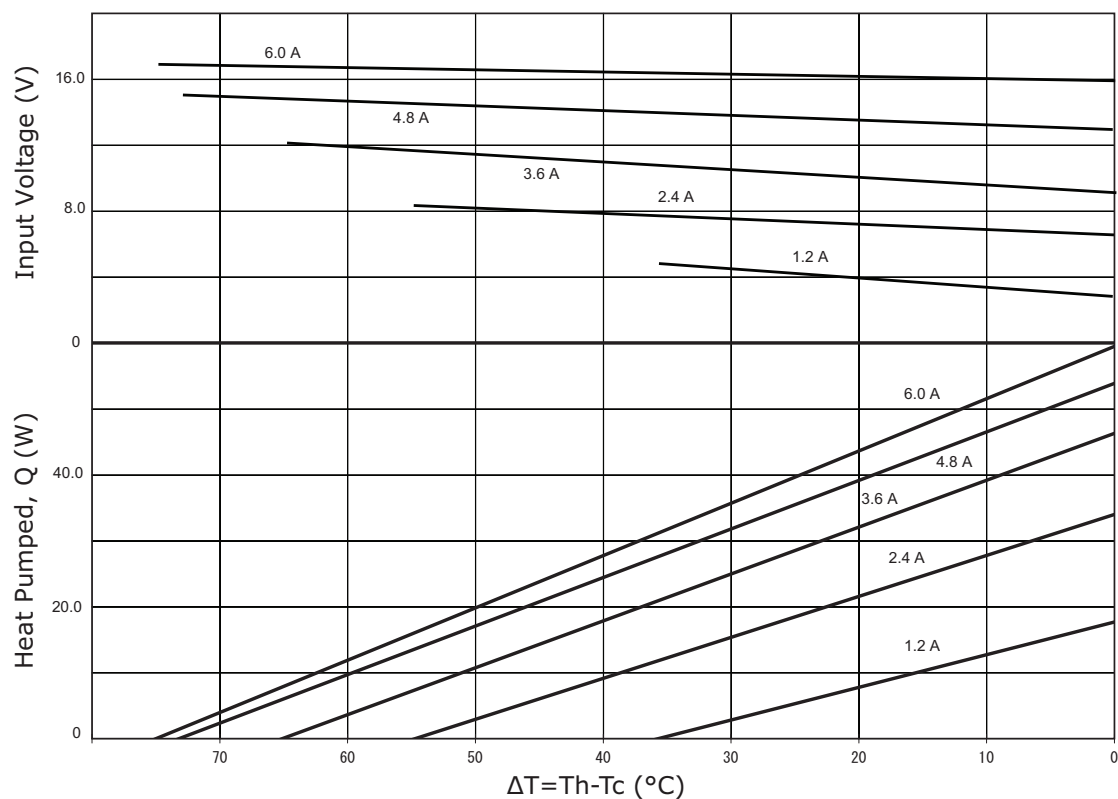
**CP60140 PERFORMANCE (Th=27°C)****CP60140 PERFORMANCE (Th=50°C)**

**CP60240 PERFORMANCE (Th=27°C)****CP60240 PERFORMANCE (Th=50°C)**

**CP60301540 PERFORMANCE (Th=27°C)****CP60301540 PERFORMANCE (Th=50°C)**



**CP60340 PERFORMANCE (Th=27°C)****CP60340 PERFORMANCE (Th=50°C)**

**CP60440 PERFORMANCE (Th=27°C)****CP60440 PERFORMANCE (Th=50°C)**

## REVISION HISTORY

| rev. | description          | date       |
|------|----------------------|------------|
| 1.0  | initial release      | 09/03/2009 |
| 1.01 | applied new template | 05/08/2012 |
| 1.02 | added new models     | 09/09/2016 |

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

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