**ORDER DESCRIPTION**

1. **Object of the contract**

The subject of the contract is a supply of thermoelectric coolers and TO39 8-pin headers in the amount of:

* thermoelectric cooler 1TE 250 pcs
* TO39 – 8 pin headers 350 pcs

1. **Detailed scope of the subject of the contract**

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| --- | --- | --- |
| Product name | Parameter | Specification |
| **Thermoelectric cooler 1TE** | Ceramic material | AlN |
| Metallization | Both side |
| Bottom side length [mm] | ≤ 3,2 |
| Bottom side width [mm] | ≤ 2,2 |
| Top side length [mm] | 1,8 - 3,2 |
| Top side width [mm] | 1,4 - 2,2 |
| Height [mm] | ≤ 2 |
| Maximum temperature difference ΔTmax [℃] | ≥ 72 |
| Maximum heat pumping capacity Qmax [W] | ≥ 0.22 |
| Electrical power (Umax Imax product) [W] | ≤ 1 |
| AC Resistance (ACR) [Ω] | ≥ 0.14 |
| Product name | Parameter | Specification |
| **TO39 – 8 pin header** | Header type | TO39 |
| External diameter | 9.14 ± 0.05 mm |
| Internal diameter | 7.62 ± 0.05 mm |
| Number of pins | 8 |
| Pin position diameter | 5.08 ± 0.05 mm |
| Header material | Kovar (alloy complying with ASTM F-15) or SPCC |
| Metallization of the header | Ni layer – metallization thickness: 1 – 5 µm  Au layer – metallization thickness ≥ 0.5 µm |
| Pin material | Kovar (alloy complying with ASTM F-15) or 4J50 |
| Metallization of the pins | Ni layer – metallization thickness: 1 – 5 µm  Au layer – metallization thickness: ≥ 0.5 µm |
| Mounting screw | No screw |
| Header sealing | Electrically non-conductive, non-transparent, helium leakage of a sealing material less than 10^-8 mbar \* l / s – e.g. Corning 7052 or equivalent |
|  | The internal length of the pins (from the mounting surface of the cooler) | 0.4 ± 0.15 mm |
|  | Pin surface roughness | Ra 0.8 or better |
|  | The outer length of the pins (from the surface with the thread mounted) | 13.5 ± 0.5 mm |