**ORDER DESCRIPTION**

1. **Object of the contract**

The subject of the contract is a thermoelectric cooler in the amount of

* thermoelectric cooler 2TE on TO8-12 header 50 pcs
* thermoelectric cooler 4TE on TO8-12 header 50 pcs
* header TO8 200 pcs

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

A detailed description of the subject of the contract is provided in section 5 of this document.

1. **Criterion**

Offers will be evaluated according to a point scale with a maximum number of points of 100.

|  |  |  |
| --- | --- | --- |
| Criterion | Maximum number of points S | Method of awarding points |
| Price (P) | 100 | S x Pmin/Pi |

Where:

* Pi – price of goods with delivery - for the given offer
* Pmin - the minimum delivery price for the ordered goods from all offers submitted
* S – number of points

The final score will be calculated by adding up the partial components and then rounded to two decimal places (rounded from "5" up).

1. **Deadline for completing the order**

10 weeks from signing date on cotract. The ordering party requires the application of the FCA Incoterms 2020 delivery principle. FCA (free carrier), i.e. the moment of delivery of the goods is considered to be at the disposal of the courier or other designated person through buyer in the area indicated by the supplier.

1. **Parameters**

**5.1 Detailed scope of the subject**

|  |  |  |
| --- | --- | --- |
| Product name | Parametrer | Specification |
| **Thermoelectric cooler 2TE on TO8 12 pin heade**r | Top Ceramics (cold side) | material Al2O3 blank, no metallization, upper stage size 3,2x3,2mm 0,1mm, Ra<0,1 |
| Middle ceramics | Al2O3 with VIAS |
| bottom ceramics | Al2O3, Au plated 0,2 um |
| pellets | BiTe with Ni barrier layer |
| terminal wires AWG32 | blank tinned copper 0,202 mm dia |
| Assembling Solder | Sn-Sb lead free RoHs Tmelt = 230°C |
| TEC bonding | Sn-Sb lead free RoHs Tmelt = 230°C |
| Header | TO812.01 |
| TEC mounting | lead free RoHs Tmelt = 206°C |
| Height | 3.70±0.15 |
| ΔTmax K | 94±3 |
| Qmax W | 0.4±0.04 |
| Imax A  Umax V  ACR Ohm | 1.30+/-0,12  0.90+/-0,1  0.66±0.7 |
| power connection | 2(+) i 8(-) |
| **Standard TO8 header** | Number of pins | 12 |
| Screw | 4-40 UNC |
| Material | Kovar |
| header height | 1, 52 mm |
| height of the pins below the header | 7.9±0.3mm |
| height of the pins above the header | 2.54mm |
| diameter of pins | Ø0.46±0.05 |
| diameter of header | Ø15.2 mm |
| covering | 1.27 um thick gold on a Ni base |
| **Thermoelectric cooler 4TE on TO8 12 pin header** | Top Ceramics (cold side) | Al2O3 polished Ra<0.1, no metallization, dimensions 2,6x2,6 mm ±0,1mm |
| Middle ceramics | Al2O3 with VIAS |
| bottom ceramics | Al2O3 Au metallization 0,2 um, dimensions 7,4x7,4mm ±0,1mm |
| pellets | BiTe with Ni barrier layer |
| terminal wires AWG30 | Cu blank tinned copper 0,202 mm  mm dia |
| Assembling Solder | Sn-Sb lead free RoHs Tmelt = 230°C |
| TEC bonding | Sn-Sb lead free RoHs Tmelt = 230°C |
| Header | TO812 |
| TEC mounting | lead free RoHs Tmelt = 206°C |
| Height | 6.9±0.25 |
| ΔTmax K | 127±3 |
| Qmax W | 0.30±0.03 |
| Imax A  Umax V  ACR Ohm | 0,5±0,05  8,4±0,84  14.90±1.49 |
| power connection | 2(+) i 8(-) |

5.2 CPV

CPV - 31711100-4 Electronic components