

BCE APPLICATION NOTE

HOT CHUCK HEATER 300mm:

AL 6061 T6 WITH MIRROR SURFACE FINISH 2-3 Ra μ m



ELECTRIC HEATING
ELEMENTS

VACUUM
FEEDTHROUGHS

CUSTOM THERMAL
SYSTEMS

SCOPE:

HOT CHUCK HEATER 300mm needed to satisfy the following criteria:

- Temperature uniformity +/- 1%
- 50°C - 450°C Temperature range
- Surface finish of 2-3 Ra μ m
- Hard coat Anodize
- 6061 T6 Aluminum
- Be able to heat ceramic top plate
- 20 Meg-ohm isolation at 1000 VDC
- Hi-pot 2E + 1K at 3 mA
- All tests performed at room temperature

OUTCOME:

BCE designed a unit using proprietary internal element patterns, notches, and thermocouple holes, as well as adding additional manufacturing steps to provide the 2-3 Ra μ m finish. Vacuum integrity for the customer has been greatly increased as well as contact with the ceramic workpiece and temperature uniformity.

[Click here for more information on the CHUCK HEATER 300mm.](#)



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