

# Induction Heating Graphite Susceptor

United Induction Heating Machine Limited

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**Heating Graphite Susceptor**  
**Objective** To Heat a graphite susceptor to 1100°C in an inert atmosphere of Nitrogen and Hydrogen. The susceptor is to be used for metal oxide chemical vapor deposition (MOCVD) crystal growth experiments. Verification of temperature reached is critical.

**Material** Graphite Susceptor measuring 3 in diameter and 1 1/4 thick.

**Temperature** 1100°C

**Frequency** 171 kHz

**Equipment** Power of 30KW solid state induction power supply including one (1) remote heat station containing two (2) 1.0 µF capacitors and a high voltage transformer, and a four (4) turn helical coil with a 5 inside diameter and a length of 1 1/2.

**Process** The Power of 30KW solid state induction power supply with a four (4) turn helical coil and a two color IR optical pyrometer were used to achieve the following results:

**Results** • 1100°C was reached in five (5) minutes as read from the two color IR optical pyrometer.

• An even heat pattern was observed.

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