

Induction Soldering LED to aluminum housing

United Induction Heating Machine Limited

We are experienced in Induction Heating, induction heating machine, Induction Heating equipment. They are widely used in induction heating service, induction heat treatment, induction brazing, induction hardening, induction welding, induction forging, induction quenching, induction soldering induction melting and induction surface treatment applications
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Soldering LED to aluminum housing Objective Heat an aluminum spotlight housing to solder an LED assembly to the inside base

Material LED housing with copper plug, aluminum spotlight housing 5" (127mm) dia at top, 1.25" (31.75mm) dia at base, temperature sensing paint

Temperature 500 °F (260 °C)

Frequency 245 kHz

Equipment • Power of 10kW induction heating system, equipped with a remote workhead containing one 1.0μF capacitor.

- An induction heating coil designed and developed specifically for this application. Process A multi turn pancake coil is used to heat the bottom of the aluminum spotlight housing. The LED housing was not available so this application is done with temperature sensing paint to determine the feasibility. The temperature sensing paint is applied where the LED housing sits in the center of the spotlight housing. The base of the housing reaches 500 °F (260 °C) in 30 seconds.

Results/Benefits Induction heating provides:

- Hands-free heating that involves no operator skill for manufacturing
- Faster production times, more energy efficient
- Consistent, repeatable results
- Even distribution of heating



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