

INFRAWELD®

Infrared Welding for Automotive Headliner Assemblies

The InfraWeld® process is a proven, robust, cost-saving alternative to adhesives. This safe, clean technology has been utilized in a variety of automotive headliner assembly applications including HIC components, wire harness clips, magnet holders, edge stiffeners, and sunroof trim rings.

- Significant weight savings over adhesives
- Easy to implement: no need for extra design work in weld ribs/beads, bosses, holes, flash traps, etc.
- Strong, tight final assembly
- Reduced costs: no expensive consumables (glue or fasteners), and reduced energy consumption



InfraWeld is a method of joining materials together using through-beam infrared (IR) light. This innovative welding process applies focused IR light energy to precisely heat, melt, and join two materials together. The result is a robust, tightly-bonded final assembly.

**Innovative Welding
Technology**

*Exceptional
Plastics Joining Solutions*



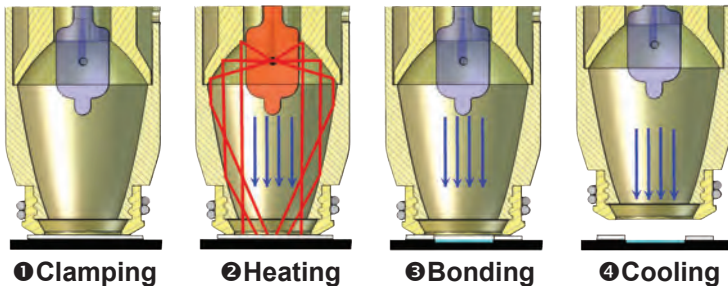
Utilizing Infrared Light for Automotive Headliner Assemblies

A Superior Method for Bonding Components

BENEFITS:

- **Weight Reduction:** a 10-15% decrease in headliner weight by eliminating hot melt adhesive
- **Lower Cost:** significant savings from decreased electrical usage, reduced cycle times, lower capital equipment investment, labor reduction, reduced maintenance costs, and adhesive elimination
- **Higher Quality:** tighter, stronger weld eliminates BSR; no issues associated with poor adhesive performance; no marking or glue strings on A-surface
- **Safer:** eliminates operator burn risk caused by touching hot equipment or hot glue/adhesive
- **Eco-friendly:** easier to recycle, lower energy consumption reduces carbon footprint

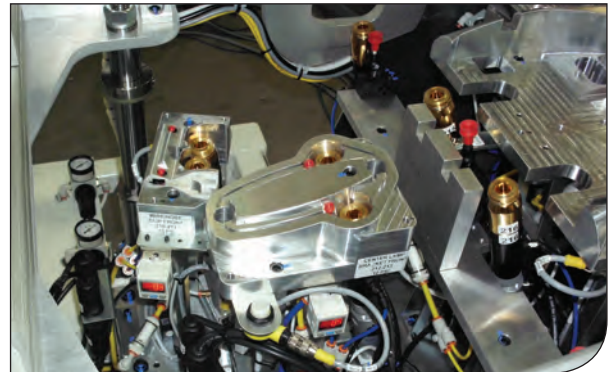
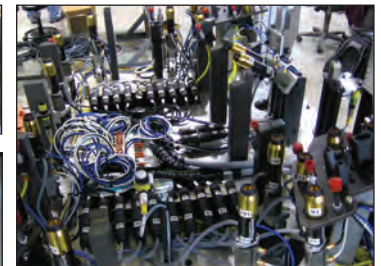
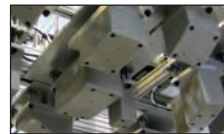
PROCESS:



- 1 Clamping:** Clamp force applied directly by module
- 2 Heating:** IR light is transmitted through transparent material and absorbed by opaque substrate, interface is heated
- 3 Bonding:** Achieved by air pressurization and mechanical clamping
- 4 Cooling:** Air passes over bonded area, materials resolidify

IDEAL HEADLINER ASSEMBLY APPLICATIONS:

- Head injury criterion (HIC) components / safety plastic
- Wire harness clips
- Magnet holders
- Sunroof/moonroof trim rings
- Console retainers
- Edge stiffeners
- Wire connector holders
- Dual Lock™ standoffs



Providing excellence in
assembly equipment innovation
for over 30 years.

