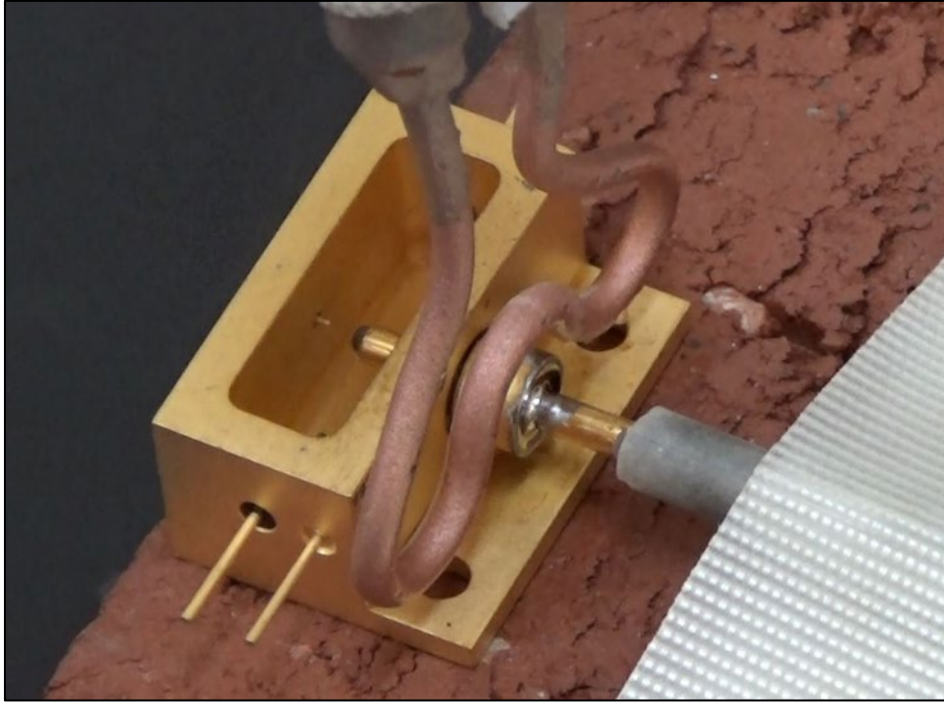


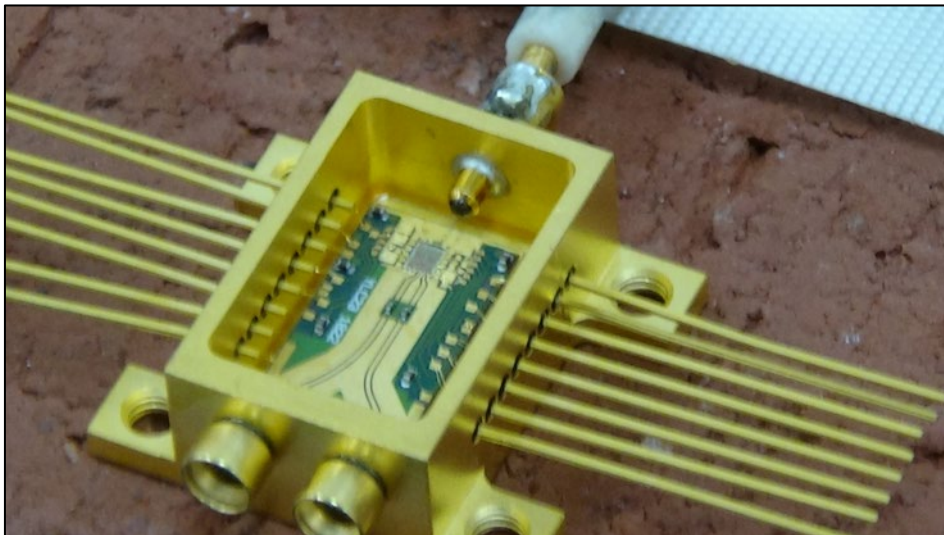
Application Note

Soldering Ferrule and Module Assemblies

- Objective:** To heat ferrule and module assemblies for a soldering application in the fiber optics industry.
- Equipment:** Ambrell EASYHEAT™ 1.2 kW, 150-400 kHz induction heating power supply with a workhead and coil specifically designed for this application.
- Frequency:** 280 kHz
- Material:** Kovar
- Temperature:** 358 °F (180 °C)
- Testing:** A custom-designed single position multiple-turn helical coil was built to generate the required heating for this application. A small amount of energy was used so that the client would have time to adjust the ferrule inside of the module while the solder is in a liquid state. It was observed that the first module soldered within a minute and the second module was soldered within three minutes. This achieved the objectives required from the client's process.
- Benefits:**
- **Repeatability:** The client had been using a soldering iron and induction offers superior repeatability.
 - **Speed:** While speed was not of particular concern in this application, induction can offer superior speed compared to a soldering iron.
 - **Part Quality:** Superior repeatability means a more consistent result and enhanced product quality.



The first assembly after soldering.



The first assembly after soldering.