Coil Part Numbering System

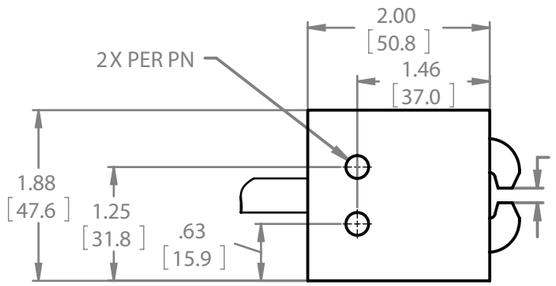
iTherm's standard coils are easily customized to meet your application needs. Dimension A is specified in tens of mils, i.e. 0.18" is coded as 018.

Coil - Material - Dimension A - Thread

Material	Code
ABS	ABS
Teflon	PTF
G10	G10

Size	Pitch	Code
#6	32	0632
#8	32	0832
#10	32	1032

Transverse Flux Coil

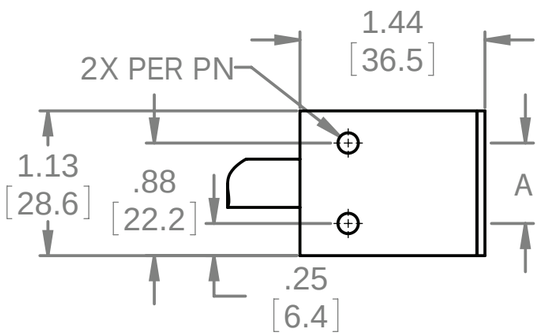


Example Part Number

C01 - ABS - 018 - 0632

Note: 0.160" ≤ A ≤ 0.310"
Other dimensions available. Contact iTherm.

Orthos Flux Coil



Example Part Number

C03 - PTF - 012 - 1032

Note: 0.120" ≤ A ≤ 1.00"
Other dimensions available. Contact iTherm.

Custom geometries, thread, materials, and coil designs are available.
Contact iTherm with your specific requirements.

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www.iTherm.com

Induction Soldering

with HIG inside

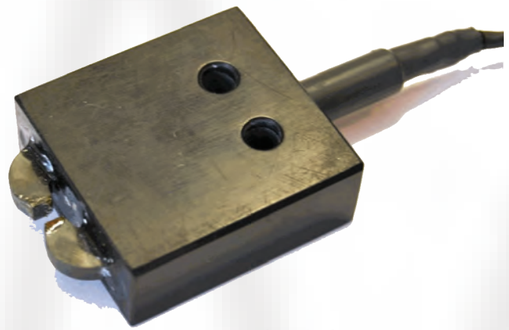
Reliable • Repeatable • Air Cooled

Induction Soldering

iTherm's induction soldering system provides process engineers the ability to rapidly heat a localized area of a part often eliminating metallurgical changes and mechanical distortion. The ability to heat only a local area prevents the filler material from flowing away from the intended joining location of two parts. High joining consistency and reliability are achieved due to high accuracy power control of the HIG generator, better than 1% of set value across all power levels, and cycle time resolution to 100 ms.

HIG 1.4 Power Supply

The high automation potential of the induction soldering process significantly reduces the possiblity of human error. Powerful, non-contact soldering systems are available for integration or stand-alone use.



Transverse Flux Coil

HIG Induction vs Traditional Induction

All induction heating systems have three common components: an alternating currect (AC) power supply, a coil, and a part to be heated (the works).

Traditional induction heating power supplies rely on high currents at low voltages and high frequency to generate an AC magnetic field which induces eddy currents on the works. Traditional induction heating coils are constructed from copper tubing and are water cooled.

HIG power supplies rely on lower RMS currents at slightly higher RMS voltages and high frequency harmonic pulses to generate an AC field which induces eddy currents on the works. HIG induction heating coils are constructed from high efficiency Litz wire and utilize custom designed flux concentrators for optimal performance. **HIG power supplies and coils are air cooled.**

Sample Applications

Coax Connector Soldering

This application requires a coax cable to be soldered to its mating connector. The application is completed using a Transverse Flux Coil (part number C01-ABS-020-1032) and a HIG 1.4 power supply. The time to solder is 2.5s at 250 W.

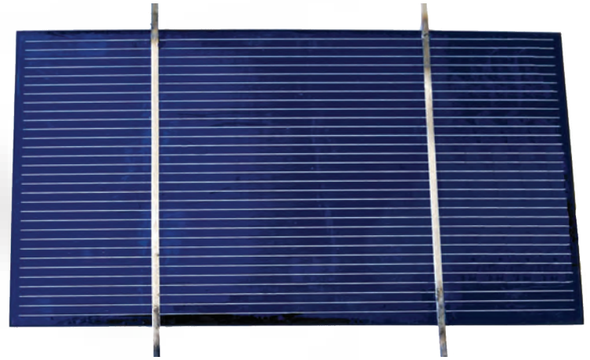
Wire to PCB

Here three wires are simultaneously soldered to a PCB. The heat is focused so that the insulation on the wires does not melt. Similar applications have been solved for twinaxial cables. This application was completed with an Orthos Coil part number C03-ABS-280-0632. Soldering time is 2.0s at 190 W. The pad dimensions are 0.75mm x 2mm for this application.

Othos Flux Coil

Conductor to Wafer

A continuous conductive ribbon is soldered to photovoltaic cells. The coil used for this application is a modified Orthos coil.



Applications

- THT
- SMT
- Connector to Cable
- Wire to PCB
- Conductor to Wafer

Industries

- Avionics
- Communications
- Sensors
- Test Equipment
- Automotive

Contact us for a free in lab parts evaluation.