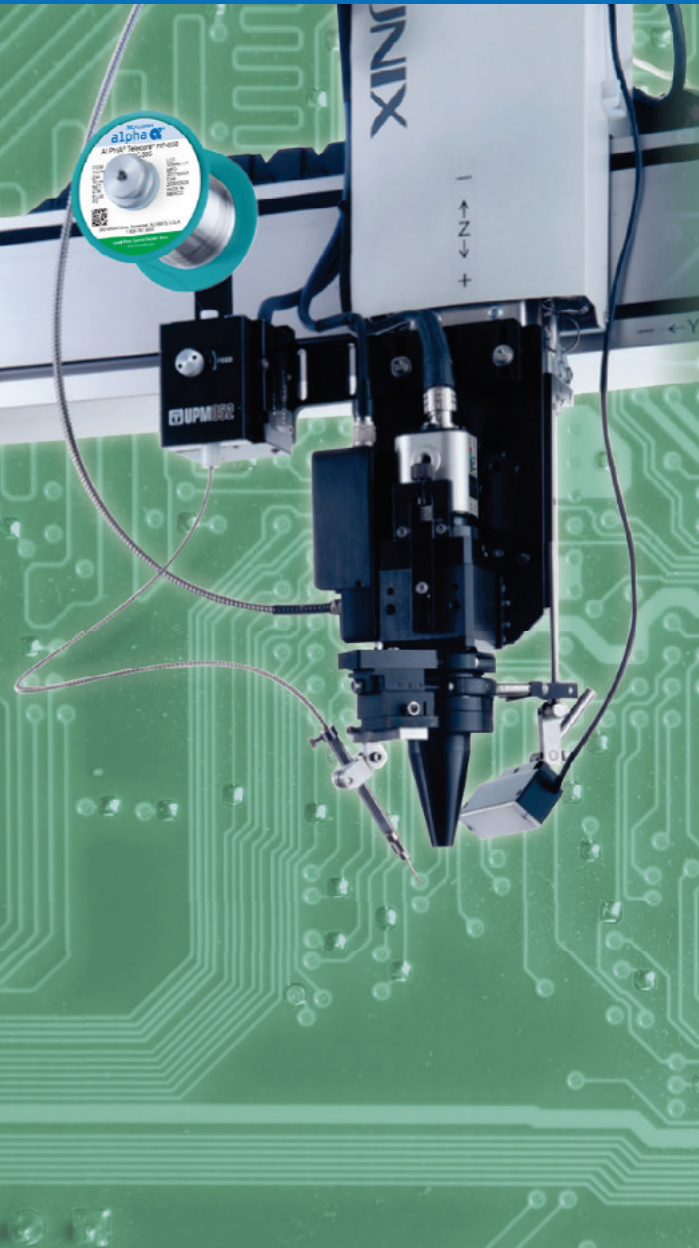


## ALPHA® SAC305 ULTRAFINE CORED WIRE FOR FINE PITCH COMPONENT SOLDERING

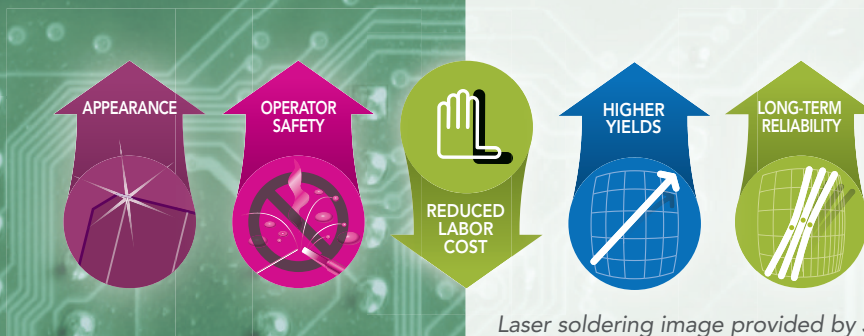


Both PCB and component size has become increasingly smaller in recent years creating a strong demand for ultrafine wire (diameter  $\leq 0.20\text{mm}$ ) technology. With the maturity in laser soldering technology, ultrafine cored wire maximizes the potential of fine wire application in high density boards.

ALPHA® SAC305 Ultrafine Cored Wire was developed for fine pitch component attachment and manual rework by robotic soldering or manual soldering. It is available with different diameter size and flux content to fit different soldering requirements.

### Key Attributes

- Alloy provided in cored wire for convenient use
- Available in different diameter sizes to fit different small footprint SMT components
- Available in different flux chemistries that offers excellent wetting and high reliability
- Suitable for fine pitch component attachment and manual rework
- Consistent diameter size and flux continuity to ensure unfailing wire feeding in robotic soldering
- Good spooling quality for smooth wire feeding



Laser soldering image provided by Japan Unix

## ALPHA® SAC305 ULTRAFINE CORED WIRE FOR FINE PITCH COMPONENT SOLDERING

### HOW TO ENSURE SUCCESSFUL ROBOTIC SOLDERING WITH CORED WIRE

In order to maximize the high-speed assembly benefits of robotic soldering, and to be more confident in the quality of the results. Take note of the following guidelines for **selecting the right cored wire for robotic soldering**:

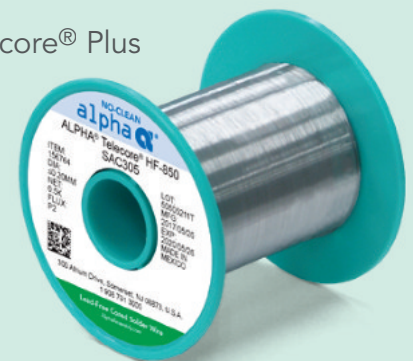
- **Determine the type of flux** – Flux cored solder wire can be specifically formulated for robotic soldering to make sure that the process can produce consistently excellent solder joints and deliver high throughput yields.
- **Determine the flux content** – In laser soldering, a higher flux content is needed as compared to contact tip soldering. This is to compensate the flux evaporation during the rapid ramp up rate in laser soldering.
- **Determine correct wire diameter size** – There is no given rule for an exact size between the cored wire size and the component size. Try to use a solder about the same diameter or slightly smaller than what you are soldering. Generally, 0.2 mm cored wire works well for 0402 component. For smaller component, you will need a thinner cored wire.
- **Work with reputed robotic soldering servicer** – Work with your robotic soldering servicer to implement your fine pitch component soldering. Selection of correct wire feeder and optimizing your process setting are essential for successful implementation.

#### PRODUCT AVAILABILITY

- Alloy: SAC305 (other alloy type is available upon request)
- Diameter size: 0.2mm, 0.15mm and 0.1mm
- Flux content: 1.1%, 2.2%, 3.5%, 4.5% (upon request)
- Packaging:
  - 0.2mm – 30g/spool
  - 0.15mm and 0.10mm – 10g/spool

ALPHA® SAC305 Ultrafine Cored Wire can be used for any customer who has previously approved larger diameter wire using:

- ALPHA® Telecore® HF-850
- ALPHA® Telecore® XL-825
- ALPHA® Telecore® Plus



*ALPHA® Cored Wire is qualified for Japan Unix robotic soldering machines*

For more information about ALPHA® SAC305 Ultrafine Cored Solder Wire, please contact your Alpha Representative.

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