

## Customer Specification

**PART NO. FIT-221L-3/64**

## Construction

|                                         |                        |
|-----------------------------------------|------------------------|
| 1) Tubing Type                          | Heat Shrinkable Tubing |
| 2) Tubing Material                      | LSZH Polyolefin        |
| 3) Minimum Supplied ID(In)              | 0.046                  |
| 4) Maximum Recovered ID (In)            | 0.023                  |
| 5) Nominal Recovered Wall Thickness(In) | 0.013                  |
| 6) Color(s)                             | BLACK                  |
|                                         |                        |

## Applicable Specifications

|       |              |                              |
|-------|--------------|------------------------------|
| 1) UL | Standard 224 | 125°C / 600 V <sub>RMS</sub> |
|       | VW-1         |                              |
|       |              |                              |

## Environmental

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## Properties

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| Physical & Mechanical Properties  |                              |               |
|-----------------------------------|------------------------------|---------------|
| 1) Temperature Range              | -55 to 125°C                 |               |
| 2) Shrink Ratio                   | Approximately 2:1            |               |
| 3) Full Recovery Temperature      | 110°C                        |               |
| 4) Minimum Shrink Temperature     | 100°C                        |               |
| 5) Tensile Strength               | 1500psi, Min                 | ASTM D638     |
| 6) Elongation                     | 200%, Min                    | ASTM D638     |
| 7) Low Temperature Flex(-30°C)    | no cracking                  | AMS-DTL-23053 |
| 8) Heat Resistance(158°C,168hrs)  | 100% Elongation, Min         | ASTM D638     |
| 9) Heat Shock(250°C,4hrs)         | no cracking                  | AMS-DTL-23053 |
| 10) Secant Modulus                | 2.5x10 <sup>4</sup> psi, Min | ASTM D882     |
| 11) Longitudinal Change           | +/-5%                        | AMS-DTL-23053 |
| 12) Shelf Life                    | 25 Years @ 18 to 35°C        |               |
| Electrical Properties             |                              |               |
| Chemical Properties               |                              |               |
| 1) Water Absorption               | 0.70%, Max                   | ASTM D570     |
| 2) Copper stability(158°C,168hrs) | 100% Elongation, Min         | UL 224        |
| 3) Corrosion(158°C,16hrs)         | no corrosion                 | AMS-DTL-23053 |
| 4) Halogen Free                   | Yes                          |               |
| 5) Lead Free                      | Yes                          |               |

Other

| Packaging  |                                                             |
|------------|-------------------------------------------------------------|
| 1) 1000 FT | CR19-0.7: 19.75 x 0.75 x 8 Max. 3 pieces/Min length 125 FT. |

[www.alphawire.com](http://www.alphawire.com)

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## EU/UK/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: FIT-221L-3/64

FIT-221L-3/64, RoHS-Compliant Commencing With 1/27/2014 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above, including all packaging materials is fully compliant with Directive 2011/65/EU, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment. This product also complies with Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with U.S. definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this product is offered for cases where this product will be used within EEE that does fit within the Directive's scope. Additionally, Alpha c

RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2006. This product is also in compliance w

### Substance

Lead  
Mercury  
Cadmium  
Hexavalent Chromium  
Polybrominated Biphenyls (PBB)  
Polybrominated Diphenyl Ethers (PBDE) ,  
Including Deca-BDE  
Bis(2-ethylhexyl) phthalate (DEHP)  
Butyl benzyl phthalate (BBP)  
Dibutyl phthalate (DBP)  
Diisobutyl phthalate (DIBP)

### Maximum Control Value

0.1% by weight (1000 ppm)  
0.1% by weight (1000 ppm)  
0.01% by weight (100 ppm)  
0.1% by weight (1000 ppm )  
0.1% by weight (1000 ppm)  
  
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The information provided in this document and disclosure is correct to the best of Alpha Wire's knowledge, information and belief at the d. general guide for the safe handling, storage, and any other operation of the product itself or the one that it will become part of. The intent specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legisl product.

Authorized Signatory for the Alpha Wire:

A handwritten signature in blue ink, appearing to be 'Q. B. W.' followed by a long horizontal stroke.

Dave Watson, Director of Engineering 8/12/2024

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