

## Customer Specification

### PART NO. FIT-221L-1/16

### Construction

1) Tubing Type	Heat Shrinkable Tubing
2) Tubing Material	LSZH Polyolefin
3) Minimum Supplied ID(In)	0.063
4) Maximum Recovered ID (In)	0.031
5) Nominal Recovered Wall Thickness(In)	0.014
6) Color(s)	BLACK

### Applicable Specifications

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

### Environmental

1) EU Directive 2011/65/EU(RoHS2), EU Directive 2015/863/EU (RoHS3):	All materials used in the manufacture of this part are in compliance with European Directive 2011/65/EU, and the amending Directive 2015/863/EU of 4 June 2015 regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. regarding the restriction of use of certain hazardous substances in electrical and electronic equipment.
2) REACH Regulation (EC 1907/2006):	This product does not contain Substances of Very High Concern (SVHC) listed on the European Union's REACH candidate list in excess of 0.1% mass of the item.

# Properties

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	$2.5 \times 10^4$ psi, Min	ASTM D882
11) Longitudinal Change	+/-5%	AMS-DTL-23053
12) Shelf Life	25 Years @ 18 to 35°C	
<b>Electrical Properties</b>		
<b>Chemical Properties</b>		
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-1/16

FIT-221L-1/16, 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/ Directive, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipr 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). This product also complies with U definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this prc this Certificate 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:

Dave Watson, Director of Engineering 7/17/2024

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