

# Micro Coaxial Cable

There's More Than Meets the Eye



AlphaWire

*Cables you trust. Service you deserve.*



Alpha's micro coaxial cable is a great space-saving solution that makes routing easier in applications such as medical probes, endoscopy systems, oximetry systems, industrial inspection, and more.

Alpha Wire's micro coaxial cable is perfect for a wide range of applications where space is at a premium, from sensitive medical imaging to industrial inspection. Our broad offering includes a full range of standard sizes from 50 to 32 AWG using high-strength silver-plated or tinned-copper alloys and rated to +200°C. The PFA dielectric and jacket provide stable properties for outstanding signal integrity, low capacitance, and consistent controlled impedance.

All items are in stock and ready to sample or ship for immediate delivery.

- 50  $\Omega$  characteristic impedance
- Exceedingly small and light weight
- 50 AWG to 32 AWG conductor range
- Stranded conductors for increased flexibility
- 30  $V_{rms}$  voltage rating
- 90% shield coverage for excellent EMI protection and electrical characteristics
- Up to +200°C temperature range

## Alpha Wire

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# Specifications

### Operating Temperature

- 70°C to +200°C (Silver-plated copper alloy)
- 70°C to +150°C (Tinned copper alloy)

### Characteristic Impedance

- 50 Ω

### Voltage Rating

- 30 V<sub>rms</sub>

### Bend Radius

- 10x cable diameter

### Materials

- Silver-plated or tinned copper alloy center conductor
- PFA dielectric
- White PFA jacket

### Shielding

- Silver-plated or tinned copper alloy braid or spiral shield, 90% coverage minimum

### Availability

- 100 m (328 ft) spools

### Custom Configurations

- Composites
- Bundles



Part No.	Wire Size (AWG)		Stranding		Jacket Diameter		DCR, Max. (Ω/1000 ft @ 20°C)	Ground Cap, Nom. (@ 1 kHz)		Attenuation, Max. (@ 10 MHz)	
	AWG	mm <sup>2</sup>	AWG	mm	Inch	mm		pF/Ft	pF/m	(dB/100 Ft)	(dB/m)
Silver-Plated Copper Conductors Silver-Plated Copper Braid Shield, 90% Coverage								-70°C to +200°C VP: 69% Impedance: 50 Ω ± 2 Ω UL AWM 1745			
<b>9432</b>	32	0.034	7/40	7/.079	0.044	1.12	168.6	29.9	98.1	4.1	0.13
<b>9434</b>	34	0.022	7/42	7/.064	0.039	0.99	271.9	29.9	110.2	5.5	0.18
Tinned Copper Alloy Conductor Tinned Copper Spiral Shield, 90% Coverage								-70°C to +150°C VP: 70% Impedance: 50 Ω ± 5 Ω			
<b>9436</b>	36	0.014	7/44	7/.051	0.021	0.53	478.2	33.6	110.2	7.6	0.25
<b>9438</b>	38	0.0088	7/46	7/.040	0.018	0.46	1005.8	33.6	110.2	11.6	0.38
<b>9440</b>	40	0.0055	7/48	7/.031	0.014	0.36	1424	33.6	110.2	13.7	0.45
Silver Copper Alloy Conductor Tinned Copper Spiral Shield, 90% Coverage								-70°C to +150°C VP: 70% Impedance: 50 Ω ± 5 Ω			
<b>9442</b>	42	0.0035	7/50	7/.025	0.012	0.30	2286	33.6	110.2	21.3	0.70
<b>9444</b>	44	0.0022	7/52	7/.020	0.010	0.25	3352.8	33.6	110.2	30.5	1.00
Silver Copper Alloy Conductor Silver Copper Alloy Spiral Shield, 90% Coverage								-70°C to +200°C VP: 70% Impedance: 50 Ω ± 5 Ω			
<b>9446</b>	46	0.0014	7/54	7/.016	0.008	0.20	4724.4	35.1	115.2	42.7	1.40
<b>9448</b>	48	0.0008	7/56	7/.012	0.007	0.18	7010.4	36.6	120.1	61	2.00
<b>9450</b>	50	0.0005	7/58	7/.010	0.006	0.15	11430	38.1	125.0	85.3	2.80

We can offer our micro coax cables in composite and bundled configurations using our Coast Custom capabilities. Create probe, catheter, and ultrasound cable for your custom medical or industrial application. Our custom hybrid bundled cables can combine multiple size coax cables along with other types of conductors or even lumens to carry gas or liquid!



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