

# 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

US/International: 1-800-52 ALPHA | Europe: 01 932 772 422 | Asia Pacific: +86-21-61498201/61498205  
www.alphawire.com | info@alphawire.com

# 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			
9432	32	0.034	7/40	7/.079	0.044	1.12	168.6	29.9	98.1	4.1	0.13
9434	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			
9436	36	0.014	7/44	7/.051	0.021	0.53	478.2	33.6	110.2	7.6	0.25
9438	38	0.0088	7/46	7/.040	0.018	0.46	1005.8	33.6	110.2	11.6	0.38
9440	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			
9442	42	0.0035	7/50	7/.025	0.012	0.30	2286	33.6	110.2	21.3	0.70
9444	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			
9446	46	0.0014	7/54	7/.016	0.008	0.20	4724.4	35.1	115.2	42.7	1.40
9448	48	0.0008	7/56	7/.012	0.007	0.18	7010.4	36.6	120.1	61	2.00
9450	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!



GLOBAL HEADQUARTERS  
711 Lidgerwood Avenue  
Elizabeth, NJ 07207-0711 USA  
Toll Free: 1-800-52 ALPHA  
Tel: 1-908-925-8000  
Fax: 1-908-925-5411  
E-mail: info@alphawire.com

EUROPE  
Alpha Wire International  
Saxon House  
1 Downside | Sunbury-on-Thames  
Middlesex | United Kingdom | TW16 6RT  
Tel: +44 1 932 772 422  
Fax: +44 1 932 772 433  
E-mail: europe@alphawire.com

ASIA PACIFIC  
Alpha Wire  
Silver Center | Room 1712  
North Shanxi Road 1388  
Shanghai | China | 200060  
Tel: +86-21-61498201/61498205  
Fax: +86-21-61498001  
E-mail: apac@alphawire.com



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