

# Engineering Your Success with Coast™ Custom Cables



From AlphaWire



**AlphaWire**

*Cables you trust. Service you deserve.*

## Get the Market-Specific Custom Cable You Need

### Medical



With the medical market's trends of microminiaturization and higher performance requirements, we continue to develop capabilities to provide smaller hybrid and composite cables with ultra-high flexibility, autoclavable, low noise, low-elongation, and high tensile strength.

We offer a range of medical-grade Class VI and FDA-approved materials

#### Medical Applications

- Imaging/Radiology
  - MRI
- Minimally-invasive surgical instruments
  - Endoscopy
  - Arthroscopy
  - Laparoscopy
  - GYN
  - Orthopedic
  - Cardiac
- Patient monitoring
- Implantables
- Dental

### Semiconductor



From wafer handling to packaging, Alpha Wire can help you make semiconductor equipment faster, more reliable, and easier to maintain. Whether refurbishing or developing new equipment, our extensive line of wire, cable, and accessories provides unrivaled performance and durability in the harshest environments. We offer low-outgassing cables.

#### Semiconductor Applications

- Wafer fabrication
- Lasers
- Vacuum deposition

### Industrial



Our range of industrial automation cables combines the industry-leading quality and exceptional reliability you expect from Alpha Wire, with the performance to meet the rigorous requirements of the major automation communication architectures.

#### Industrial Applications

- Automation
- Automotive
- Instrumentation
- Power supplies
- Agriculture
- Security
- Sensing
- Robotics
- Lighting

### Energy



With our broad range of wire and cable for the energy industry, we can satisfy your demanding requirements in energy applications—from flex cables that can withstand the harsh environments of wind power systems to solar cable and photovoltaic wire for solar energy systems.

#### Energy Applications

- Power generation
  - turbine engines
- Oil and Gas
- Nuclear
- Solar
- Wind

### Entertainment

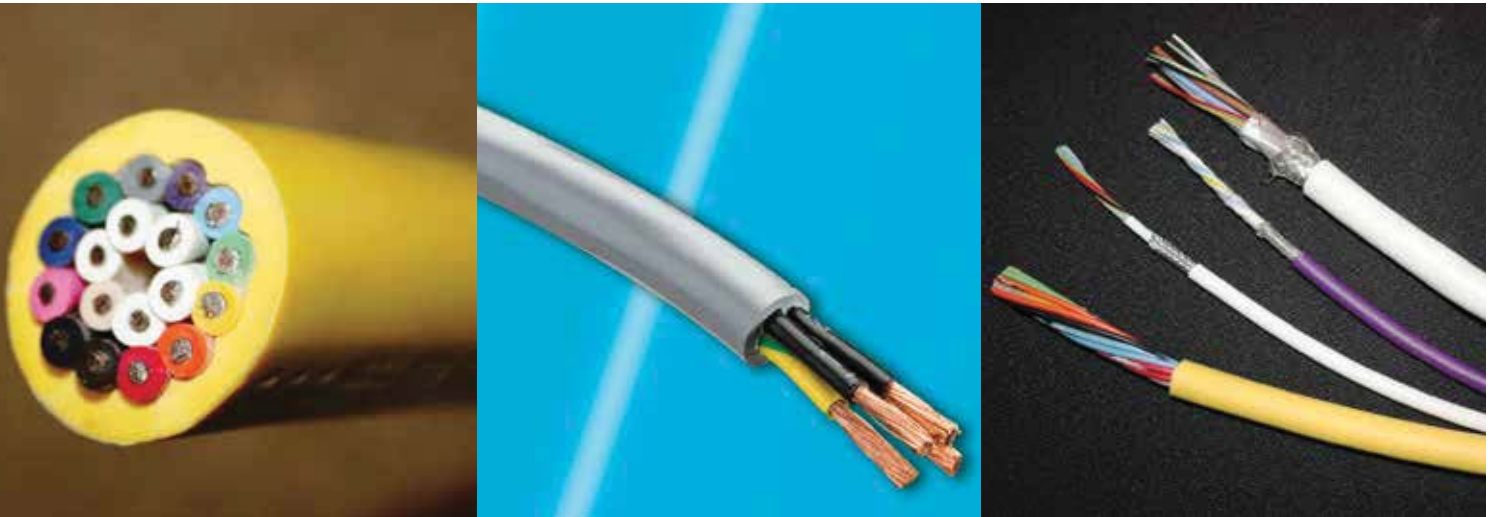


Whether you need something as simple as a power cord or a cable that can maintain audio-video signal integrity in a noisy environment, you'll find the breadth and depth of products to ensure an optimum solution to your application.

#### Entertainment Applications

- Audio
- Lighting
- Video

# The Right Cable . . . Just the Way You Want It



Turn to Alpha Wire to get the precise custom cable needed for your application. We offer you more choice in materials and configurations, sizes and shielding options, and have the ability to fulfill your request fast—with minimum order quantities as low as 100 feet.

## More Choice in Cable Configurations

### Custom Engineered to Your Specifications and Designs

- Multiconductor cables
- Multipair cables
- Microminiature cables
- Coaxial cables
- Microcoaxial cables
- Hybrid cables
- Composite cables
- Power cables
- Lead wires
- Litz wires
- Flat, ribbon, zip cables
- Flat, round braids
- Retractable coil cords

## Conductor Materials

### Conductors: 50 AWG to 4/0 AWG

#### Copper

- Bare copper
- Tinned copper
- Silver-plated copper
- Nickel-plated copper
- Copper alloys

## Specialty

- Magnet wire
- Tinsel wire
- Thermocouple wire

## Fibers and Yarns

- Carbon fiber (.5K - 12K)
- Metalized carbon fiber
- Aramid fiber
- Stainless steel yarn

## Precious Metals and Alloys

- Silver, platinum, gold
- Other exotic materials

## Insulating and Jacketing Compounds

### Thermoplastics

- PVC, SR-PVC
- PP
- PE
- PUR
- Nylon
- TPE
- TPR
- TPA
- mPPE

## Thermosets

- XLPE

## Fluoropolymers

- PTFE
- FEP
- PFA
- ETFE
- PVDF

## Silicones — Thermosets

- Silicone
- Flame-retardant silicone
- High-voltage silicone

## Rubbers

- Neoprene
- Thermoplastic vulcanite
- Melt-processible rubber

## Shielding

**Application:** Overall and individual conductors/pairs

**Types:** Foil, braid, spiral, Supra-Shield® foil + braid



## Flexing

**Flex types:** Rolling, bending, torsional, continuous

**Flex cycles:** Up to 20 million

## Ratings

**Temperature:** -80° to +450°C

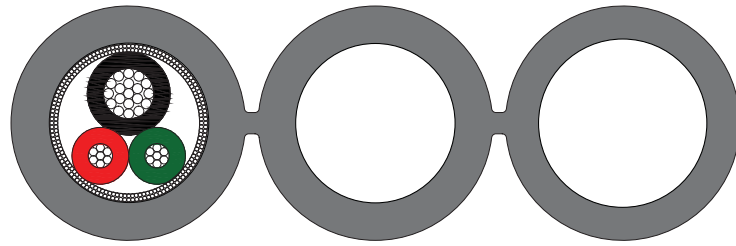
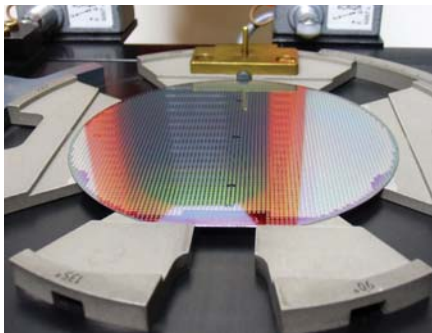
**Electrical:** 30, 150, 300, 600, 1000 V . . . up to 75 kV

## Approvals

UL, CSA, CE, IEC, ISO  
USP Class VI, ISO 10933  
RoHS, REACH

## Mechanical/Environmental

- Abrasion resistance
- Oil resistance
- Chemical/solvent resistance
- Sunlight resistance
- Sterilizable
- Low outgassing



*Cable with  
Integrated  
Lumens*

## Packaging

Reeled in small or large put ups, cut to length, custom printing, custom jacket colors, 100' minimum order

## Other

Can design custom cables with lumens

## Manufactured Products

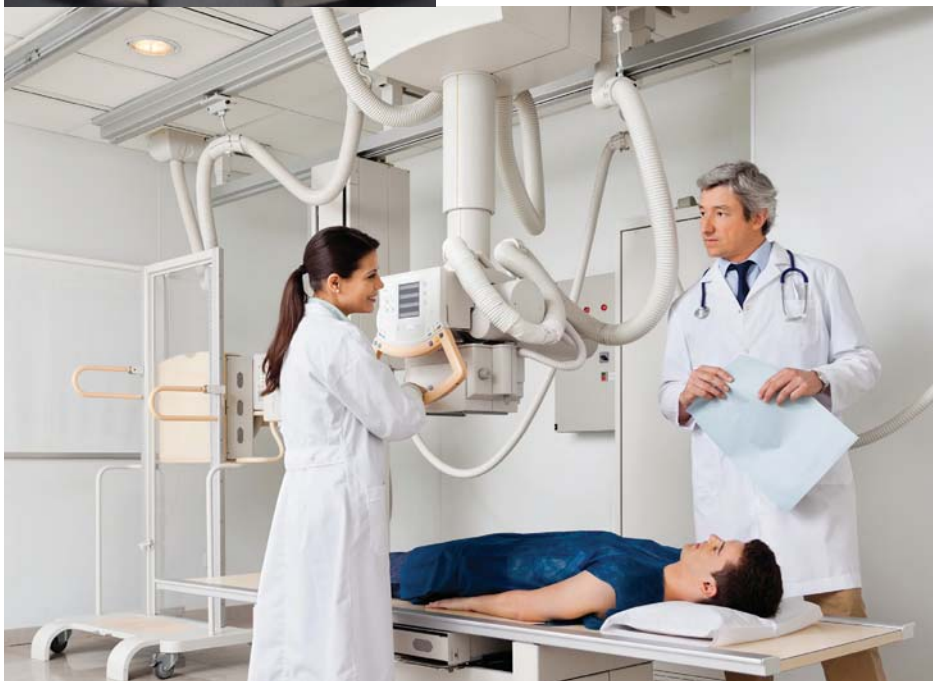
### Value-Added Capabilities

- Cable assembly with Tier 2 partners
- Coil cords
- Custom packaging
- Cut-to-length
- Dying
- Etching
  - Non-chemical
  - PTFE materials
  - Connector end for assembly

- Marking
- Spooling (UL, CSA)
- Striping
- Stripping
- Tinning
- Twisting

## Intellectual Property (IP) Protection

The custom specifications provide IP protection, as each part number and specification are unique to each customer requirement. The custom specification requires customer approval with formal written consent as part of the PO acknowledgment process, and prevents any design changes or material substitutions without a new spec revision level and approval.



## Custom Cable Design Worksheet

Custom cable design requires detail when designing with our team of engineers. We work with you to optimize your design, giving you the best match of electrical, mechanical, and environmental properties. Below are some items to consider when determining the design of your custom cable.

### Design:

Wire Size, Stranding, Plating:

---

Insulation:

---

Temperature Rating:

---

Voltage Rating:

---

No. of Conductors:

---

Color Code:

---

Filler:

---

Binder:

---

Shield:

---

Jacket:

---

Color:

---

Temperature Rating:

---

Voltage Rating:

---

Printing:

---

Overall Construction Details:

### Special Requirements:

Critical Requirements:

---

Put-ups:

---

Reel:

---

Special Packaging:

---

Minimum Length:

---