

LA190S

Product Overview

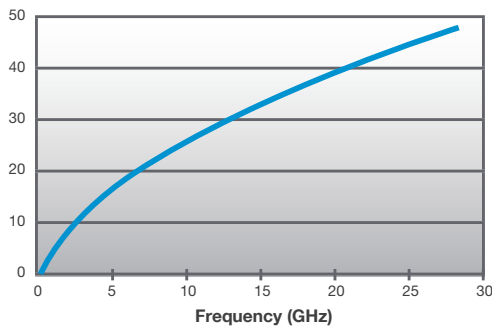
LA Series of Semflex Cables

With over 40 years of experience, Cinch's Semflex line has been manufacturing some of the highest quality coaxial cable in the world. Over the years, Semflex has developed the expertise necessary to rapidly design and manufacture cable solutions to meet specific and unique requirements for a variety of environmental, mechanical and electrical conditions.

The Semflex LA190S cables have been tested as per ASTM E595 and meet or exceed low outgassing requirements of <1% TML (Total Material Loss), and <0.1% CVCM (Collected Volatile Condensable Material) as required by NASA. In addition, Semflex LA series of cables are built with ultra-low-density PTFE providing high velocity of propagation, high phase stability, and the lowest weight on the market. The Semflex LA190S cables are ideally suited for use in high altitude and space flight applications.

Features

- Mass of 34 lbs/1,000 ft, 5-15% lower than similarly sized competitors' cables
- DC to 28 GHz operation
- Low attenuation
- High phase stability
- All outgassing material meet or exceed 1% TML (Total Mass Loss) and 0.1% CVCM (Collected Volatile Condensable Materials) requirements as tested per ASTM E595
- Tefzel® jacket available



| Guaranteed Maximum | | | | | | | |
|--------------------|------|-----|------|----|------|------|------|
| GHz | 0.45 | 1 | 3 | 6 | 12 | 18 | 28 |
| LA190S | 5.09 | 7.7 | 13.7 | 20 | 29.4 | 37.1 | 47.9 |

| Cable Constants | |
|-----------------|------|
| *k1 | 7.38 |
| *k2 | 0.32 |

*Attenuation at any frequency = (k1 x √freq(GHz)) + (k2 x freq(GHz))

Mechanical

| | |
|----------------------------|-----------------|
| Center Conductor Type | Solid |
| Inside Minimum Bend Radius | 1.1 inch |
| Operating Temperature | -65°C to +200°C |
| Weight | 34 lbs/1,000 ft |

Electrical

| | |
|-------------------------|------------|
| Impedance | 50 Ohms |
| Capacitance | 23.8 pF/ft |
| Inductance | 59 nH.ft |
| Shielding Effectiveness | >100 dB |
| Cut off Frequency | 28 GHz |
| Velocity of Propagation | 85% |
| Breakdown Voltage | >10 kV |
| Max Structural VSWR | 1.20:1 |

Materials

| Part | Description | Diameter |
|--------------------|---|----------------------|
| 1 Center Conductor | Silver Plated Copper | 0.055 inch ±0.001 |
| 2 Dielectric | Microporous ePTFE | 0.140 inch (nominal) |
| 3 Outer Conductor | Helically Wrapped Silver Plated Copper Flat Braid | 0.158 inch (nominal) |
| 4 Shield | Silver Plated Copper Round Wire | 0.174 inch (nominal) |
| 5 Jacket | Extruded FEP | 0.189 inch ±0.005 |

