

# PS1200L-10G-F

## 10GHz Low Loss Phase Stable Coaxial Cable (12mm)

The PS1200L-10G-F is a 50 Ohm large-diameter low-loss phase-stable coaxial cable rated up to 10 GHz. Designed with a high dielectric velocity of 84% and double shielding, it ensures maximum power handling capability and stable signal performance.



- Frequency Range:** DC to 10 GHz
- Velocity of Propagation:** 84%
- Screening Effectiveness:** > 90 dB
- Dielectric Withstand Voltage:** 5000 V DC
- Outer Diameter:** 12.00 mm

## Structure & Mechanical Construction

| Layer           | Material                        | Nom. O.D. (mm) | Parameter                  | Specification Value |
|-----------------|---------------------------------|----------------|----------------------------|---------------------|
| Inner Conductor | Silver Plated Copper (1/3.80mm) | 3.80           | Min. Bend Radius (Static)  | 60.0 mm             |
| Insulation      | LD-PTFE                         | 10.30          | Min. Bend Radius (Dynamic) | 120.0 mm            |
| Inner Shield    | Silver Plated Copper Strip      | 10.60          | Nominal Weight             | 0.282 kg/m          |
| Outer Shield    | Silver Plated Copper Wire Braid | 11.15          | Operating Temp. Range      | -55 °C to +165 °C   |
| Jacket          | Gray FEP                        | 12.00          |                            |                     |

## Electrical Characteristics

| Electrical Parameter    | Standard Value | Electrical Parameter    | Standard Value        |
|-------------------------|----------------|-------------------------|-----------------------|
| Impedance               | 50 Ω           | Capacitance             | 80 pF/m               |
| Velocity Ratio          | 84%            | Max Operating Frequency | 10 GHz                |
| Screening Effectiveness | > 90 dB        | Dielectric Voltage      | 5000 V DC             |
| Phase Change vs Bending | ±0.3 °/GHz     | Phase Change vs Temp.   | ≤ 750 PPM (-45~+85°C) |

## Attenuation & Power Handling (@ 25°C & Sea Level)

Insertion Loss Formula:  $IL = K1 * \sqrt{F\_MHz} + K2 * F\_MHz$  (dB/100m) |  $K1 = 0.298515$ ,  $K2 = 0.000510$

| Frequency (MHz) | Nom. Attenuation (dB/100m) | Max. Power Handling (W @ 40°C) |
|-----------------|----------------------------|--------------------------------|
| 300             | 5.32                       | 5691                           |
| 500             | 6.93                       | 4372                           |
| 1000            | 9.95                       | 3045                           |
| 2000            | 14.37                      | 2108                           |
| 3000            | 17.88                      | 1694                           |
| 4000            | 20.92                      | 1448                           |
| 5000            | 23.66                      | 1281                           |
| 6000            | 26.18                      | 1157                           |
| 7000            | 28.55                      | 1061                           |
| 8000            | 30.78                      | 984                            |
| 10000           | 34.95                      | 867                            |