# YSLLPS-400A

40 GHz, φ4.0 mm Low-Loss Phase-Stable RF Cable Assembly

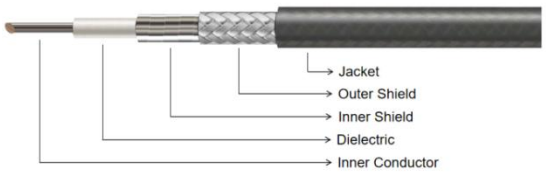
**Key Features**

- Outstanding Phase Stability vs. Temperature
- Ultra-Low Insertion Loss
- High Power Capability
- Excellent Low PIM Performance
- Lightweight and Rugged Construction

**Applications**

- Phased Array Radar
- Aerospace & Avionics Systems
- Electronic Warfare and Defense Systems
- Low-Loss Phase-Critical Applications

**Cable Construction**




| Cable Type | Dia.(mm) | Material |
|---|---|---|
| Inner Conductor | φ1.05 | Silver plated Copper |
| Dielectric | φ2.85 | Low Density PTFE |
| Inner Shield | φ3.05 | Silver Plated Copper Strip |
| Outer Shield | φ3.40 | Silver Plated Copper Braid |
| Jacket | φ4.00 | PFA |

| **Electrical Specifications** | | **Mechanical Specifications** | |
|---|---|---|---|
| Operating Freq. | 40 GHz | Static Bending Radius | 20 mm |
| Cut-off Freq. | 41 GHz | Dynamic Bending Radius | 40 mm |
| Impedance | 50 Ω | Weight | 36 g/m |
| Velocity of Propagation | 82% | **Environmental Specifications** | |
| Shielding Effectiveness | >90 dB | Operating Temperature | -55 to +165°C |
| Dielectric Withstanding Voltage | 1500 VDC | | |
| Passive Intermodulation (PIM) | <-155 dBc | | |
| Phase Stability vs. Temperature | <750 PPM @ -55 to +85°C | | |

**Attenuation** (dB/100 M,Typical at +25°C) **& Power Handling** (W,Typical at +40°C)

| Freq.(GHz) | 1 | 2 | 3 | 6 | 8 | 10 | 12.4 | 18 | 26.5 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|
| Attenuation | 33.5 | 47.5 | 58.3 | 82.8 | 95.8 | 107.2 | 119.7 | 144.7 | 176.4 | 218.1 |
| Avg. Power | 634 | 447 | 365 | 257 | 222 | 198 | 178 | 147 | 120 | 97 |

Typical Cable Attenuation Calculation Formula: $K1*\sqrt{F(MHz)} + K2*F(MHz)$
K1=1.054470, K2=0.000180

**Connectors Options**

| Connectors | Freq.(Max) | VSWR (Max) | Connectors | Freq.(Max) | VSWR (Max) |
|---|---|---|---|---|---|
| 2.92 mm (K) | 40 GHz | 1.30:1 | TNC(T) | 12 GHz | 1.25:1 |
| 3.5 mm (3) | 27 GHz | 1.30:1 | BNC(B) | 4 GHz | 1.30:1 |
| SMA (S) | 27 GHz | 1.25:1 | N(N) | 18 GHz | 1.25:1 |
| TNC(T) | 12 GHz | 1.25:1 | | | |

**Cable Assemblies Naming Rule:**

PN: Cable-Length(M)-Connector 1-Connector 2

Eg.: YSLLPS-400A-*1M-SM-SF* means YSLLPS-400A cable,L=1M, SMA(M)-SMA(F).

Add “R” for Right-Angle Connector, Add “H” for Bulkhead Connector (e.g., SMR, SFH).