# NL480

## Lightweight, Low Loss & Phase Stable RF Cable

Features:
* Low Insertion Loss
* High Phase Stability
* High Power
* Low PIM

Applications:
* Phased-array Radar
* Satellite Communication
* Avionics

### Electrical

| | |
|---|---|
| Operation Frequency: | 26.5GHz |
| Impedance: | 50Ω |
| Velocity of Propagation: | 83% |
| Sheilding Effectiveness: | 90dB min. |
| Voltage Withstand: | 1500V DC |
| Phase Stability: | 750PPM@-55 ~85 max. |

### Mechanical

| | |
|---|---|
| Bend Radius installation: | 23 mm |
| Bend Radius:repeated (mm): | 47 mm |
| Weight: | 44 g/m |

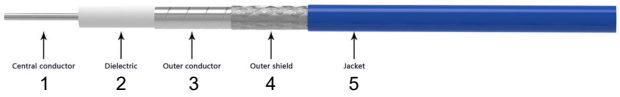
### Environmental

| | |
|---|---|
| Temp, Operating&Installation: | -55~+125 ºC |
| Temp, storage: | -25~+45 ºC |

### Features&Benefits

- Ultra-lightweight
- Ultra-low loss pecification
- 83%Vp PTFE + silver-plated copper tape wrapping
- Key materials, special manufacturing processes

### Construction




| No. | Description | Size (mm) | Tol. | Material |
|---|---|---|---|---|
| 1 | Center conductor | 1.40 | ±0.02 | Silver Plated Copper |
| 2 | Dielectric | 3.85 | ±0.05 | LD PTFE |
| 3 | Inner shield | 4.05 | ±0.05 | Silver plated copper foil |
| 4 | Outer shield | 4.35 | ±0.10 | Silver plated aramid fiber |
| 5 | Jacket | 4.65 | ±0.10 | FEP |

### Attenuation & Power Handling

| Frequency (MHz) | 300 | 500 | 1000 | 3000 | 6000 | 8000 | 10000 | 12000 | 16000 | 18000 | 26500 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Attenuation*1 (dB/100m) | 12.8 | 16.6 | 23.6 | 41.4 | 59.3 | 69.0 | 77.6 | 85.4 | 99.6 | 106.1 | 130.8 |
| Average Power*2 (W) | 1.609 | 1.243 | 0.874 | 0.498 | 0.347 | 0.299 | 0.266 | 0.241 | 0.207 | 0.194 | 0.158 |

[1] VSWR:1.0; Ambient: +25°C (77°F)
[2] VSWR:1.0; Ambient: +40°C (104°F); Sea level
Calcuate Cable Attenuation: Attenuation (dB/100m) = $0.7315930 * F\sqrt{(MHz)} + 0.0004400 * F$ (MHz)
Calcuate Connector Attenuation: Attenuation (dB) = $0.03 * \sqrt{F\ (GHz)}$

### How To Order

**NL480-X-Y-Z**

X: Frequency in GHz
Y: Connector type
Z: Length in meters

Examples:
To order a NL480 cable assembly, 26.5GHz, 3.5mm male to 3.5mm female, 0.8 meter, specify NL480-40-33F-0.8.

Connector naming rules:
K - 2.92mm (40GHz, VSWR 1.35)
3 - 3.5mm (33GHz, VSWR 1.35)
S - SMA (26.5GHz, VSWR 1.3)

Female Connector - Add 'F' after connector name
Right Angle - Add 'R' after connector name (VSWR increase 0.1)