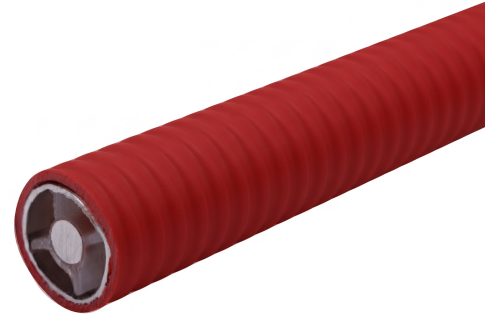


### Product Description

- Gamma's rigid PLN-AL-50R is ideal for public safety DAS and lower frequency cellular DAS installations. The rigid shield allows for easy cutting, trimming and pulling of the cable.
- Lower VSWR, perfect shielding effectiveness, lead to smaller energy loss and interference.
- UL 1581 Standard of UV Resistance
- Water-resistant



| Construction    |                          |              |
|-----------------|--------------------------|--------------|
| Component       | Material                 | Diameter, mm |
| Inner conductor | Copper-clad Aluminum     | 4.80±0.03    |
| Insulation      | Polyethylene spline      | 11.70±0.05   |
| Outer conductor | Ring-corrugated Aluminum | 13.85±0.25   |
| Jacket          | Polyvinylchloride (PVC)  | 16.3±0.30    |

| Mechanical Characteristics           |       |
|--------------------------------------|-------|
| Minimum single bending radius, mm    | 63.5  |
| Minimum repeated bending radius, mm  | 127   |
| Minimum number of bends              | 15    |
| Maximum tensile strength, N          | ≥790  |
| Bending moment, N-m                  | 6.779 |
| Fiat plate crush strength, kg/mm     | 1.429 |
| Recommended maximum clamp spacing, m | 1     |



## Rigid Aluminum-Shielded Coaxial Air- Core Plenum Cable

**PLN-AL-50R**

| Electrical Properties           |                 |
|---------------------------------|-----------------|
| Impedance, Ohms                 | 50±2            |
| Nominal capacitance, pF/m       | 75.459          |
| Nominal inductance, µH/m        | 0.19            |
| Propagation velocity, %         | 88              |
| DC breakdown voltage, kV        | 4.0             |
| Jacket spark-test voltage, Vrms | 5000            |
| Operating frequency band, MHz   | 1-6000          |
| Insulation resistance, MΩ·kms   | 10 <sup>5</sup> |
| Peak power rating, kW           | 40              |
| Cut-off frequency, MHz          | 8800            |

| Transmission Properties |                       |                        |                   |
|-------------------------|-----------------------|------------------------|-------------------|
| Frequency, MHz          | Attenuation, dB/100 m | Attenuation, dB/100 ft | Average Power, kW |
| 1.0                     | 0.216                 | 0.066                  | 35.37             |
| 1.5                     | 0.264                 | 0.081                  | 28.84             |
| 2.0                     | 0.306                 | 0.093                  | 24.95             |
| 10.0                    | 0.691                 | 0.211                  | 11.04             |
| 20.0                    | 0.985                 | 0.300                  | 7.75              |
| 30.0                    | 1.213                 | 0.370                  | 6.29              |
| 50.0                    | 1.581                 | 0.482                  | 4.83              |
| 85.0                    | 20.87                 | 0.636                  | 3.66              |
| 88.0                    | 2.126                 | 0.648                  | 3.59              |
| 100.0                   | 2.274                 | 0.693                  | 3.35              |
| 108.0                   | 2.368                 | 0.722                  | 3.22              |
| 150.0                   | 2.821                 | 0.860                  | 2.70              |
| 174.0                   | 3.054                 | 0.931                  | 2.50              |
| 200.0                   | 3.292                 | 1.003                  | 2.32              |
| 204.0                   | 3.327                 | 1.014                  | 2.29              |
| 300                     | 4.104                 | 1.251                  | 1.86              |

| Transmission Properties |                       |                        |                   |
|-------------------------|-----------------------|------------------------|-------------------|
| Frequency, MHz          | Attenuation, dB/100 m | Attenuation, dB/100 ft | Average Power, kW |
| 400.0                   | 4.808                 | 1.465                  | 1.59              |
| 450.0                   | 5.134                 | 1.565                  | 1.49              |
| 460.0                   | 5.194                 | 1.584                  | 1.47              |
| 500.0                   | 5.445                 | 0.211                  | 1.40              |
| 512.0                   | 5.517                 | 1.659                  | 1.38              |
| 600.0                   | 6.032                 | 1.682                  | 1.26              |
| 700.0                   | 6.583                 | 1.839                  | 1.16              |
| 800.0                   | 7.105                 | 2.007                  | 1.07              |
| 824.0                   | 7.227                 | 2.166                  | 1.06              |
| 894.0                   | 7.574                 | 2.203                  | 1.01              |
| 960.0                   | 7.892                 | 2.308                  | 0.97              |
| 1000.0                  | 8.081                 | 2.405                  | 0.94              |
| 1218.0                  | 9.068                 | 2.463                  | 0.84              |
| 1250.0                  | 9.207                 | 2.764                  | 0.83              |
| 1500.0                  | 10.256                | 2.806                  | 0.74              |
| 1700.0                  | 11.053                | 3.126                  | 0.69              |
| 1794.0                  | 11.416                | 3.480                  | 0.67              |
| 1800.0                  | 11.439                | 3.487                  | 0.67              |
| 2000.0                  | 12.192                | 3.716                  | 0.63              |
| 2100.0                  | 12.559                | 3.828                  | 0.61              |
| 2200.0                  | 12.920                | 3.938                  | 0.59              |
| 2300.0                  | 13.276                | 4.046                  | 0.57              |
| 2500.0                  | 13.975                | 4.259                  | 0.55              |
| 2700.0                  | 14.656                | 4.467                  | 0.52              |

| Transmission Properties |                       |                        |                   |
|-------------------------|-----------------------|------------------------|-------------------|
| Frequency, MHz          | Attenuation, dB/100 m | Attenuation, dB/100 ft | Average Power, kW |
| 3000.0                  | 15.649                | 4.770                  | 0.49              |
| 3400.0                  | 16.928                | 5.159                  | 0.45              |
| 3600.0                  | 17.551                | 5.349                  | 0.43              |
| 3700.0                  | 17.859                | 5.443                  | 0.43              |
| 3800.0                  | 18.164                | 5.536                  | 0.42              |
| 3900.0                  | 18.467                | 5.628                  | 0.41              |
| 4000.0                  | 18.768                | 5.72                   | 0.41              |
| 4100.0                  | 19.066                | 5.811                  | 0.40              |
| 4200.0                  | 19.363                | 5.902                  | 0.39              |
| 4300.0                  | 19.658                | 5.991                  | 0.39              |
| 4400.0                  | 19.951                | 6.081                  | 0.38              |
| 4500.0                  | 20.241                | 6.169                  | 0.38              |
| 4600.0                  | 20.531                | 6.257                  | 0.37              |
| 4700.0                  | 21.818                | 6.345                  | 0.37              |
| 4800.0                  | 21.108                | 6.432                  | 0.36              |
| 4900.0                  | 21.388                | 6.519                  | 0.36              |
| 5000.0                  | 21.671                | 6.605                  | 0.35              |
| 6000.0                  | 24.420                | 7.443                  | 0.31              |



## PLN-AL-50R

| Return Loss     |                  |
|-----------------|------------------|
| Frequency Range | VSWR (dB)        |
| 700-894MHz      | $\leq 1.25(-19)$ |
| 806-960MHz      | $\leq 1.25(-19)$ |
| 1700-2200MHz    | $\leq 1.25(-19)$ |

| Environmental Properties                 |           |
|------------------------------------------|-----------|
| Recommended storage temperature, °C      | -20 to 85 |
| Recommended installation temperature, °C | -5 to 60  |
| Recommended operating temperature, °C    | -20 to 85 |

| Regulatory Compliance                   |                           |
|-----------------------------------------|---------------------------|
| 2011/California Proposition 65/EU(RoHS) | Compliant                 |
| REACH-SVHC                              | Compliant                 |
| ETL Certification                       | PLENUM CMP/CATVP/NFPA 262 |

| Ordering Information                 |                           |                    |
|--------------------------------------|---------------------------|--------------------|
| Description                          | Part Number               | Spool Length, Feet |
| Rigid Aluminum Shielded Plenum Cable | PLN-AL-50R-[COLOR]-[LGTH] | 1000 or 500        |

[COLOR]: White=WHT, Red=RED

P/N Example: PLN-AL-50R-RED-SP = 1,000 FT spool of Red Aluminum Shielded Cable

PLN-AL-50R-WHT-500 = 500 FT spool of White Aluminum Shielded Cable

Cable is sold in 100 FT Quantities

02-13-2026