

Description

Mi-Wave's 691 Series Unflanged Waveguide is manufactured to precise specifications in accordance with MIL-W-85. It is available in various maximum lengths and optional materials. Typically, larger waveguide sizes are manufactured in larger lengths than the smaller sizes.

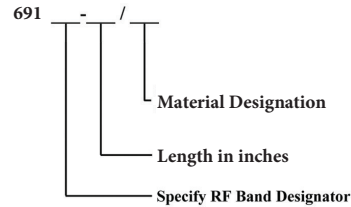
Please consult Mi-Wave for maximum available length.



| Material Designation | Material |
|----------------------|---|
| CS | Coin Silver |
| SS | Stainless Steel (0.010" wall thickness) |
| OFC | Oxygen Free Copper |
| BR | Bronze |
| AL | Aluminum |

WR-4.3 and 3.4 available

Ordering Information



| Rectangular Waveguides | | | | | | | | | | | |
|------------------------|------------------------------------|--------------------------------------|---|-----------------|-----------------------------------|-----------------|---|---|--|-----------------------------------|--|
| | | | Recommended Operating Range for TE ₁₀ Mode | | Cut-off for TE ₁₀ Mode | | | | | | |
| Mi-Wave Band | Waveguide Designator(s) (JAN & WR) | Waveguide Inner Dimensions in Inches | Frequency (GHz) | Wavelength (mm) | Frequency (GHz) | Wavelength (mm) | Theoretical Power CW Breakdown Lowest to Highest Frequency (KW) | Theoretical Attenuation Lowest to Highest Frequency (dB/ft) | Flange Type | Historic Designation | New MIL Part Number |
| KU | RG-91/U WR-62 | 0.622 x 0.311 | 12.4–18.0 | 24.2–16.6 | 9.486 | 31.60 | 400–600 | .064–.030 | Cover ¹ Choke | UG-419/U UG-541/U | M3922/53-4/005 M3922/59-2/001 |
| K | RG-53/U WR-42 | 0.420 x 0.170 | 18.0–26.5 | 16.6–11.3 | 14.047 | 21.34 | 160–240 | .17–.11 | Cover ¹ Choke Cover | UG-595/U UG-596A/U UG-425/U | M3922/54-4/001 M3922/59-2/003 M3922/67-2/004 |
| A | RG-96/U WR-28 | 0.280 x 0.140 | 26.5–40.0 | 11.3–7.5 | 21.081 | 14.22 | 95–145 | 0.22–0.15 | Cover ¹ Choke Cover | UG-599/U UG-600/U UG-381/U | M3922/54-4/003 M3922/59-2/005 M3922/67-2/005 |
| B | RG-97/U WR-22 | 0.224 X 0.112 | 33.0–50.0 | 9.1–6.0 | 26.342 | 11.38 | 62–90 | 0.31–0.21 | Cover ¹ Cover Cover | UG-383/U 719 719T | M3922/67-2/006 N/A N/A |
| U | WR-19 | 0.188 x 0.094 | 40.0–60.0 | 7.5–5.0 | 31.357 | 9.56 | 47–64 | 0.39–0.27 | Cover ^{1,2} Cover Cover | UG-385/U-M 710 720T | M3922/67-2/007 N/A N/A |
| V | RG-98/U WR-15 | 0.148 x 0.074 | 50.0–75.0 | 6.0–4.0 | 39.863 | 7.52 | 29–42 | 0.78–0.53 | Cover ¹ | UG-385/U | M3922/67-2/008 |
| E | RG-99/U WR-12 | 0.122 x 0.061 | 60.0–90.0 | 5.0–3.3 | 48.350 | 6.20 | 20–29 | 0.78–0.53 | Cover ¹ | UG-387/U | M3922/67-2/009 |
| W | WR-10 | 0.100 x 0.050 | 75.0–110 | 4.0–2.7 | 59.010 | 5.08 | 14–20 | 1.02–0.71 | Cover ^{1,2} | UG-387/U-M | M3922/67-2/010 |
| F | RG-138/U WR-8 | 0.080 x 0.040 | 90.0–140.0 | 3.3–2.1 | 73.764 | 4.06 | 8.5–13.5 | 1.52–0.98 | Pin ¹ Cover ² | 714 UG-387/U-M | M3922/74-001 N/A |
| D | RG-136/U WR-7 | 0.065 x 0.0325 | 110.0–170.0 | 2.7–1.8 | 90.786 | 3.30 | 5.8–9.0 | 2.12–1.35 | Pin ¹ Cover ² | 716 UG-387/U-M | M3922/74-002 N/A |
| G | RG-135/U WR-5 | 0.051 x 0.0255 | 140.0–220.0 | 2.1–1.4 | 115.71 | 2.59 | 3.7–6.1 | 3.05–1.93 | Pin ¹ Cover ² | 715 UG-387/U-M | M3922/74-003 N/A |

1. Standard flange unless otherwise specified.
 2. Modified (-M) means waveguide opening has been reduced appropriately. Screw and pin pattern are unchanged.