

Mechanical and Electrical Specifications for Rigid Waveguides

| E.I. A. | Type MIL- W-85G | 153- IEC | British Std. | Material Δ | Dimensions (Inches/mm) | | | Freq.GHz | Cut-Off Freq. (Ghz) | Cover Flange | Choke Flange | CMR Flange | CPR G Flange | CPR F Flange |
|------------|----------------------|-------------|-----------------|-----------------------|------------------------|------------------|------|-------------|---------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | | Inside | Outside | Wall | | | | | | | |
| WR-650 | RG-69/U RG-103/U | R 14 | WG 6 | Bronze Alum (6061) | 6.500/ 3.250/ | 6.660/ 3.410/ | .080 | 1.12-1.70 | ----- | UG-417A/U UG-418A/U | ----- | ----- | UG-1362/U UG1343/U | UG-1714/U UG-1720/U |
| WR-430 | RG-104/U RG-105/U | R 22 | WG 8 | Bronze Alum (6061) | 3.250/ 2.150/ | 4.460/ 2.310/ | .080 | 1.70-2.60 | ----- | UG-435A UG-437A/U | ----- | ----- | UG-1344/U UG-1345/U | UG-1716/U UG-1711/U |
| WR-340 | RG-112/U RG-113/U | R 26 | WG 9A | Bronze Alum (6061) | 3.400/ 1.700/ | 3.560/ 1.860/ | .080 | 2.20-3.30 | ----- | ----- | ----- | ----- | UG-1346/U UG-1347/U | UG-1712/U UG-1713/U |
| WR-284 | RG-48/U RG-75/U | R 32 | WG 10 | Bronze Alum (6061) | 2.840/ 1.340/ | 3.000/ 1.500/ | .080 | 2.60-3.95 | ----- | UG-53/U UG-584/U | UG-54B/U UG-585A/U | UG-1479/U UG-1484/U | UG-1348/U UG-1349/U | UG-1721/U UG-1725/U |
| WR-229 | RG-340/U RG-341/U | R 40 | WG 11A | Bronze Alum (6061) | 2.290/ 1.145/ | 2.418/ 1.273/ | 0.64 | 3.30-4.90 | ----- | ----- | ----- | CMR-229 | UG-1350/U UG-1351/U | UG-1726/U UG-1727/U |
| WR-187 | RG-49/U RG-95/U | R 48 | WG 12 | Bronze Alum (6061) | 1.872/ .872/ | 2.000/ 1.000/ | 0.64 | 3.95-5.85 | ----- | UG-149A/U UG-407/U | UG-148C/U UG-406B/U | UG-1475/U UG-1480/U | UG-1352/U UG-1353/U | UG-1728/U UG-1729/U |
| WR-159 | RG-343/U RG-344/U | R 58 | WG 13 | Bronze Alum (6061) | 1.590/ .795/ | 1.718/ .923/ | 0.64 | 4.90-7.05 | ----- | ----- | ----- | CMR-159 | UG-1354/U UG-1355/U | UG-1730/U UG-1731/U |
| WR-137 | RG-50/U RG-106/U | R 70 | WG 14 | Bronze Alum (6061) | 1.372/ .622/ | 1.500/ .750/ | 0.64 | 5.85-8.20 | ----- | UG-344/U UG-441/U | UG-343B/U UG-440B/U | UG-1476/U UG-481B/U | UG-1356/U UG-1357/U | UG-1732/U UG-1733/U |
| WR-112 | RG-51/U RG-68/U | R 84 | WG 15 | Bronze Alum (6061) | 1.122/ .497/ | 1.250/ .625/ | 0.64 | 7.05-10.00 | ----- | UG-51/U UG-138/U | UG-52B/U UG-137B/U | UG-1477/U UG-1482/U | UG-1358/U UG-1359/U | UG-1734/U UG-1735/U |
| WR-102 | RG-320/U | ----- | ----- | Bronze Alum (6061) | 1.020/ .510/ | 1.148/ .638/ | 0.64 | 7.00-11.00 | ----- | UG-1493/U | UG-1494/U | ----- | ----- | ----- |
| WR-90 | RG-52/U RG-67/U | R 100 | WG 16 | Bronze Alum (6061) | .900/ .400/ | 1.000/ .500/ | 0.50 | 8.20-12.40 | 6.56 | UG-39/U UG-135/U | UG-40B/U UG-136B/U | UG-1478/U UG-1483/U | UG-1360/U UG-1361/U | UG-1736/U UG-1737/U |
| WR-75 | RG-346/U RG-347/U | R 120 | WG 17 | Bronze Alum (6061) | .750/ .375/ | .850/ .475/ | .050 | 10.00-15.00 | 7.87 | WR75 COVER | WR75 CHOKE | CONSULT WL ENG. | CONSULT WL ENG. | CONSULT WL ENG. |
| WR-62 | RG-91/U RG-349/U | R 140 | WG 18 | Bronze Alum (6061) | .622/ .311/ | .702/ .391/ | .040 | 12.40-18.00 | 9.48 | UG-419/U UG-1665/U | UG-541A/U UG-1666/U | CONSULT WL ENG. | CONSULT WL ENG. | CONSULT WL ENG. |
| WR-51 | RG-353/U RG-351/U | R 180 | WG 19 | Bronze Alum (6061) | .510/ .255/ | .590/ .335/ | .040 | 15.00-22.00 | 11.57 | WR51 COVER | WR51 CHOKE | ----- | ----- | ----- |
| WR-42 | RG-53/U RG-121/U | R 220 | WG 20 | Bronze Alum (6061) | .420/10.7 .170/4.3 | .500/ .250/ | .040 | 18.00-26.50 | 14.05 | UG-595/U UG-597/U | UG-596A/U UG-598A/U | ----- | ----- | ----- |
| WR-34 | RG-354/U RG-355/U | R 260 | WG 21 | Bronze Alum (6061) | .340/8.64 .170/4.32 | .420/ .250/ | .040 | 22.00-33.00 | 17.33 | UG-1530/U | ----- | ----- | ----- | ----- |



| E.I. A. | Type MIL-W-85G | 153-IEC | British Std. | Material Δ | Dimensions (Inches/mm) | | | Freq.GHz | Cut-Off Freq. (Ghz) | Cover Flange | Choke Flange | CMR Flange | CPR G Flange | CPR F Flange |
|---------|----------------|---------|--------------|-------------------|------------------------|----------------|------|-------------|---------------------|--------------|--------------|------------|--------------|--------------|
| | | | | | Inside | Outside | Wall | | | | | | | |
| WR-28 | RG-271/U | R 320 | WG 22 | Bronze | .280/7.11 .140/3.56 | .360/ .220/ | .040 | 26.50-40.00 | 21.08 | UG-599/U | UG-600A/U | ---- | ---- | ---- |
| WR-22 | RG-272/U | R 400 | WG 23 | Bronze | .224/5.7 .112/2.8 | .304/ .192/ | .040 | 33.00-50.00 | 26.34 | UG-383/U | ---- | ---- | ---- | ---- |
| WR-19 | ---- | R500 | WG 24 | Bronze | .188/4.8 .094/2.4 | ---- | ---- | 40.00-60.00 | 31.36 | UG-383/U-M | ---- | ---- | ---- | ---- |
| WR-15 | ---- | R620 | WG 25 | Bronze | .148/3.8 .074/1.9 | ---- | ---- | 50.00-75.00 | 39.86 | UG385/U | ---- | ---- | ---- | ---- |
| WR-12 | ---- | R740 | WG 26 | Bronze | .122/3.1 .061/1.5 | ---- | ---- | 60.00-90.00 | 48.35 | UG-387/U | ---- | ---- | ---- | ---- |
| WR-10 | ---- | R900 | WG 27 | Bronze | .100/2.54 .050/1.27 | ---- | ---- | 75.00-110.0 | 59.01 | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-8 | ---- | R1200 | WG 28 | Bronze | .080/2.32 .040/1.02 | ---- | ---- | 90.00-140.0 | 73.84 | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-6 | ---- | R1400 | WG 29 | Bronze | .065/1.7 .0325/83 | ---- | ---- | 110.0-170.0 | 90.84 | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-5 | ---- | ---- | ---- | Bronze | .051/1.30 .0255/65 | ---- | ---- | 140.0-220.0 | ---- | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-4 | ---- | ---- | ---- | Bronze | .043/1.1 .0215/55 | ---- | ---- | 170.0-260.0 | ---- | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-3 | ---- | ---- | ---- | Bronze | .034/.86 .017/.43 | ---- | ---- | 220.0-325.0 | ---- | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-2.8 | ---- | ---- | ---- | Bronze | .028/.71 .014/.355 | ---- | ---- | 325.0-400.0 | ---- | UG-387/U-M | ---- | ---- | ---- | ---- |
| WR-2.2 | ---- | ---- | ---- | Bronze | .022/.56 .011/.28 | ---- | ---- | 400.0-500.0 | ---- | UG-387/U-M | ---- | ---- | ---- | ---- |

Δ STANDARD SUPPLIED MATERIAL – OTHER MATERIALS AVAILABLE, i.e. COPPER, ALUM (1100).

| E.I.A. | Type MIL-W-23351/45G | Material | Dimensions (Inches) | | | Freq.GHz | Cover (Flat) | Cover (Groove) |
|--------|----------------------|-------------|---------------------|---------------|------|--------------|--|--|
| | | | Inside | Outside | Wall | | | |
| WRD650 | WRD650D28A | Alum (6061) | .720 .321 | .0820 .421 | 0.50 | 6.50 – 18.00 | WRD650 Flat with (4) .145 Dia. Thru Holes | WRD650 Grooved With (4) .145 Dia. Thru Holes |
| WRD750 | WRD750D24A | Alum (6061) | .691 .321 | .691 .321 | .050 | 7.50 – 18.00 | WRD750 Flat With (4) .145 Dia. Thru Holes M39000/3-076 | WRD650 Grooved With (4) .145 Dia. Thru Holes M39000/3-82 |