Rectangular Waveguide Sizes

Waveguide name			Recommended frequency	Cutoff frequency lowest order mode	Cutoff frequency next mode	Inner dimensions of waveguide opening	
EIA	RCSC *	IEC				A inch[mm]	B inch[mm]
WR2300	WG0.0	R3	0.32 to 0.45 GHz	0.257 GHz	0.513 GHz	23 [584.2]	11.5 [292.1]
WR2100	WG0	R4	0.35 to 0.50 GHz	0.281 GHz	0.562 GHz	21 [533.4]	10.5 [266.7]
WR1800	WG1	R5	0.45 to 0.63 GHz	0.328 GHz	0.656 GHz	18 [457.2]	9 [228.6]
WR1500	WG2	R6	0.50 to 0.75 GHz	0.393 GHz	0.787 GHz	15 [381]	7.5 [190.5]
WR1150	WG3	R8	0.63 to 0.97 GHz	0.513 GHz	1.026 GHz	11.5 [292.1]	5.75 [146.05]
WR975	WG4	R9	0.75 to 1.15 GHz	0.605 GHz	1.211 GHz	9.75 [247.65]	4.875 [123.825]
WR770	WG5	R12	0.97 to 1.45 GHz	0.766 GHz	1.533 GHz	7.7 [195.58]	3.85 [97.79]
WR650	WG6	R14	1.15 to 1.72 GHz	0.908 GHz	1.816 GHz	6.5 [165.1]	3.25 [82.55]
WR510	WG7	R18	1.45 to 2.20 GHz	1.157 GHz	2.314 GHz	5.1 [129.54]	2.55 [64.77]
WR430	WG8	R22	1.72 to 2.60 GHz	1.372 GHz	2.745 GHz	4.3 [109.22]	2.15 [54.61]
	WG9		2.20 to 3.30 GHz	1.686 GHz	3.372 GHz	3.5 [88.9]	1.75 [44.45]
WR340	WG9A	R26	2.20 to 3.30 GHz	1.736 GHz	3.471 GHz	3.4 [86.36]	1.7 [43.18]
WR284	WG10	R32	2.60 to 3.95 GHz	2.078 GHz	4.156 GHz	2.84 [72.136]	1.34 [34.036]
	WG11		3.30 to 4.90 GHz	2.488 GHz	4.976 GHz	2.372 [60.2488]	1.122 [28.4988]
WR229	WG11A	R40	3.30 to 4.90 GHz	2.577 GHz	5.154 GHz	2.29 [58.166]	1.145 [29.083]
WR187	WG12	R48	3.95 to 5.85 GHz	3.153 GHz	6.305 GHz	1.872 [47.5488]	0.872 [22.1488]
WR159	WG13	R58	4.90 to 7.05 GHz	3.712 GHz	7.423 GHz	1.59 [40.386]	0.795 [20.193]
WR137	WG14	R70	5.85 to 8.20 GHz	4.301 GHz	8.603 GHz	1.372 [34.8488]	0.622 [15.7988
WR112	WG15	R84	7.05 to 10 GHz	5.26 GHz	10.52 GHz	1.122 [28.4988]	0.497 [12.6238]
WR102			7.00 to 11 GHz	5.786 GHz	11.571 GHz	1.02 [25.908]	0.51 [12.954]
WR90	WG16	R100	8.20 to 12.40 GHz	6.557 GHz	13.114 GHz	0.9 [22.86]	0.4 [10.16]
WR75	WG17	R120	10.00 to 15 GHz	7.869 GHz	15.737 GHz	0.75 [19.05]	0.375 [9.525]
WR62	WG18	R140	12.40 to 18 GHz	9.488 GHz	18.976 GHz	0.622 [15.7988]	0.311 [7.8994]
WR51	WG19	R180	15.00 to 22 GHz	11.572 GHz	23.143 GHz	0.51 [12.954]	0.255 [6.477]
WR42	WG20	R220	18.00 to 26.50 GHz	14.051 GHz	28.102 GHz	0.42 [10.668]	0.17 [4.318]
WR34	WG21	R260	22.00 to 33 GHz	17.357 GHz	34.715 GHz	0.34 [8.636]	0.17 [4.318]
WR28	WG22	R320	26.50 to 40 GHz	21.077 GHz	42.154 GHz	0.28 [7.112]	0.14 [3.556]
WR22	WG23	R400	33.00 to 50 GHz	26.346 GHz	52.692 GHz	0.224 [5.6896]	0.112 [2.8448]
WR19	WG24	R500	40.00 to 60 GHz	31.391 GHz	62.782 GHz	0.188 [4.7752]	0.094 [2.3876]
WR15	WG25	R620	50.00 to 75 GHz	39.875 GHz	79.75 GHz	0.148 [3.7592]	0.074 [1.8796]
WR12	WG26	R740	60 to 90 GHz	48.373 GHz	96.746 GHz	0.122 [3.0988]	0.061 [1.5494]
WR10	WG27	R900	75 to 110 GHz	59.015 GHz	118.03 GHz	0.1 [2.54]	0.05 [1.27]
WR8	WG28	R1200	90 to 140 GHz	73.768 GHz	147.536 GHz	0.08 [2.032]	0.04 [1.016]
WR6	WG29	R1400	110 to 170 GHz	90.791 GHz	181.583 GHz	0.065 [1.651]	0.0325 [0.8255]
WR7	WG29	R1400	110 to 170 GHz	90.791 GHz	181.583 GHz	0.065 [1.651]	0.0325 [0.8255]

Note:

The "WR" designation stands for Rectangular Waveguides

The Number that follows "WR" is the width of the waveguide opening in mils, divided by 10. For Example WR-650 means a waveguide whose cross section width is 6500 mils.

The waveguide width determines the lower cut off frequency and is equal (ideally) to ½ wavelength of the lower cut off frequency.

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