

Low Pass Filter (Waveguide & Coaxial)

FEATURES:

- ❖ Frequency up to 110GHz
- ❖ Low Cost
- ❖ Wide Bandwidths
- ❖ Low Insertions Loss
- ❖ Low VSWR in Band
- ❖ High Rejection



APPLICATIONS:

- ❖ Side Band Filters
- ❖ Frequency Diplexers
- ❖ Telecommunications Systems

CLF Series

DESCRIPTION:

Cernexwave's CLF series low pass filters are available from 0.1-110Ghz in seven waveguide bands. The filters have well matched, full waveguide passbands and thereafter a very wide stop band. The filters reject up to three times the highest passband frequency. Due the natural waveguide cut off, these filters can also function as full waveguide band-pass filters. Consult Cernex for dimensions due to the wide range of waveguide sizes and frequency ranges.

SPECIFICATIONS:

LC:

Model Number	Cutoff Frequency (MHz)	Insertion Loss (dB) Max.	Stopband (MHz)	Rejection (dB)	Size (mm)
CLFU10050B	120 (-1dB)	*	150	50@150MHz	*
CLFU10055B	120 (-2dB)	*	150	55@150MHz	*
CLFU10080B	150 (-1dB)	*	225	80@225MHz	40.4 x 12 x 10
CLFU10075B	155 (-3dB)	*	200	75@200MHz	*
CLFU10040B	180 (-1dB)	*	200	40@200MHz	40.4 x 12 x 10
CLFU20060B	205 (-1dB)	*	270	60@270MHz	40.4 x 12 x 10
CLFU20023B	250 (-1dB)	*	280	23@280MHz	30 x 12 x 10
CLFU40080B	400 (-1dB)	*	225	80@225MHz	*
CLFU40070B	450 (-3dB)	*	500	70@500MHz	40.4 x 12 x 10
CLFU41040	400	1.0	600	40@600MHz	*
CLFU50065B	560 (-3dB)	*	700	65@700MHz	*
CLFU50025B	570 (-1dB)	*	630	25@630MHz	40.4 x 12 x 10
CLFU60025B	600 (-1dB)	*	800	25@800MHz	*
CLFU61060-01	600	1.0	800	60@800MHz-1200MHz	39 x 25 x 12
CLFU60040B	650 (-1dB)	*	750	40@750MHz	40.4 x 12 x 10
CLFU60060B	650 (-1dB)	*	800	60@800MHz	*

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Model Number	Cutoff Frequency (MHz)	Insertion Loss (dB) Max.	Stopband (MHz)	Rejection (dB)	Size (mm)
CLFU71040	700	1.0	1050	40@1050MHz	*
CLFU70065B	745 (-1dB)	*	1460	65@1460MHz	30 x 12 x 10
CLFU70060B	790 (-1dB)	*	900	60@990MHz	50.9 x 9.5 x 9.5
CLFU80040B	800 (-1dB)	*	1000	40@1000MHz	40.4 x 12 x 10
CLFU80065B	870 (-1dB)	*	1650	65@1650MHz	40.4 x 12 x 10
CLFU90075B	902 (-1dB)	*	1020	75@1020MHz	40.4 x 12 x 10
CLFU90050B	950 (-3dB)	*	1000	50@1000MHz	50.9 x 9.5 x 9.5
CLF011040	1000	1.0	1500	40@1500MHz	39 x 25 x 12
CLF010045B	1190 (-1dB)	1.0	1300	45@1350MHz	88.5 x 63 x 12
CLF010075B	1400 (-1dB)	*	2800	75@2800MHz	40.4 x 12 x 10
CLF010035B	1400 (-1dB)	*	1600	35@1600MHz	40.4 x 12 x 10
CLF011525B	1450	1.5	1800	25@1800MHz	*
CLF010540A	1700	0.5	2000	30@2000MHz	*
CLF010840B	1700	0.8	2000	30@2000MHz	40.4 x 12 x 10
CLF010055B	1790 (-1dB)	*	2100	55@2100MHz	50.9 x 9.5 x 9.5
CLF020060B	2000 (-1dB)	*	2500	60@2500MHz	50.9 x 9.5 x 9.5
CLF020065B	2000 (-1dB)	*	2800	65@2800MHz	40.4 x 12 x 10
CLF022030	2000	1.0	3000	40@3000MHz	30 x 12 x 7
CLF020030B	2424 (-1dB)	*	3150	30@3150MHz	30 x 12 x 10
CLF021560-01	2500	1.5	2400	60@2400MHz-7700MHz	53 x 23 x 10
CLF022030	2600	1.0	3100	30@3100MHz	30 x 12 x 7
CLF020075B	2800 (-2dB)	*	3200	75@3200MHz	50.9 x 9.5 x 9.5
CLF031560-01	3000	1.5	3520	60@3520-10000MHz	44 x 24 x 10
CLF030075B	3200 (-1dB)	*	4000	75@4000MHz	50.9 x 9.5 x 9.5
CLF031560B	3250	1.5	3740	60@3740MHz-10500MHz	42 x 24 x 10
CLF050060B	5200 (-1dB)	*	10000	60@10000MHz	*
CLF051560B	5500	1.0	6070	60@6070MHz-15100	30 x 22 x 10
CLF060560B	6000	0.5	12000	60@12000GHz	28 x 13 x 8
CLF081050-01	8000	1.0	10000	50@10000MHz	30 x 22 x 11
CLF080560B	8000	0.5	16000	60@16000MHz	25 x 13 x 8
CLF181530B	18000	1.5	21200	30@21200MHz-21800MHz	28 x 16 x 11

OTHER FREQUENCY BANDS AND ATTENUATION VALUES ARE ALSO AVAILABLE.

*CONSULT THE FACTORY

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Microstrip:

Model Number	Cutoff Frequency (MHz)	Insertion Loss (dB) Max.	Stopband (MHz)	Rejection (dB)	Case Type (mm)
CLF020060B	2900 (-1.5dB)	*	3900	60@3900MHz	107 x 26 x 10.5
CLF020070B	2900 (-4dB)	*	3900	70@3900MHz	133 x 26 x 10.5
CLF030060B	3700 (-1.5dB)	*	5000	60@5000MHz	94 x 26 x 10.5
CLF040060B	4000 (-1dB)	*	8000	60@8000MHz	46 x 26.5 x 12.5
CLF040065B	4000 (-3dB)	*	6000	65@6000MHz	94 x 26 x 10.5
CLF070060B	7000 (-1.5dB)	*	15500	60@15500MHz	45 x 24 x 11

OTHER FREQUENCY BANDS AND ATTENUATION VALUES ARE ALSO AVAILABLE.

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Waveguide:

Frequency Band	Ku	K	K	Ka	Q	U	V	E	w	
Waveguide	WR-62	WR-51	WR-42	WR-34	WR-28	WR-22	WR-19	WR-15	WR-12	WR-10
Passband (GHz)	12.4-18	15-22	18 to 26.5	22-33	26.5 to 40	33 to 50	40 to 60	50 to 75	60 to 90	75-110
Insertion Loss (dB)	0.4	0.4	1.0	0.5	1.0	1.0	1.0	1.2	1.5	1.8
Rejection Band (GHz)	-	-	< 14 & > 33	-	< 20 & > 47	< 25 & > 56	< 29 & > 66	< 38 & > 80	< 45 & > 98	< 56 & > 118
Rejection (dB, Min)	24.8-54	30-66	40	44-99	40	40	40	40	40	40

Model Number	Cutoff Frequency (GHz)	Insertion Loss (dB) Max	Stopband (GHz)	Rejection (dB)	Case Type (mm)
CLF650062085	18	2.0	19.15	70@19.15GHz	100 x 35 x 35
CLF650061275-02	18	1.4	19.17	70@19.17GHz	127 x 38 x 18.2
CLF51150430	22	0.4	25	30@25GHz	*
CLF28264040	40	1.0	47	47@47GHz	*
CLF28300360-01	31	0.3	60	60@60GHz	*
CLF22305040	50	1.0	56	40@56GHz	*
CLF19406040	60	1.0	66	40@66GHz	*
CLF15507540	75	1.2	80	40@80GHz	*
CLF12609040	90	1.5	98	40@98GHz	*
CLF107511040	110	1.8	118	30@118GHz	*

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HOW TO ORDER:

WAVEGUIDE:

Specify Model Number

CLF - WG CF IL RJ

Waveguide _____ ↑
Cutoff Frequency _____ ↑

Rejection _____ ↑
Insertion Loss _____ ↑

COAXIAL:

Specify Model Number

CLF - CF IL RJ

Cutoff Frequency _____ ↑

Rejection _____ ↑
Insertion Loss _____ ↑

Example: To order WR-28 Low Pass Filter with a Frequency Band of 22-40Ghz, an Insertion Loss of 1dB and a Rejection of 40dB, specify CLF22401040.

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