

**Datasheet for #sbcw12470 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**WARNING:** Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

**WARNING:** Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.



Figure 1: Support mounting for #sbcw12470 DN

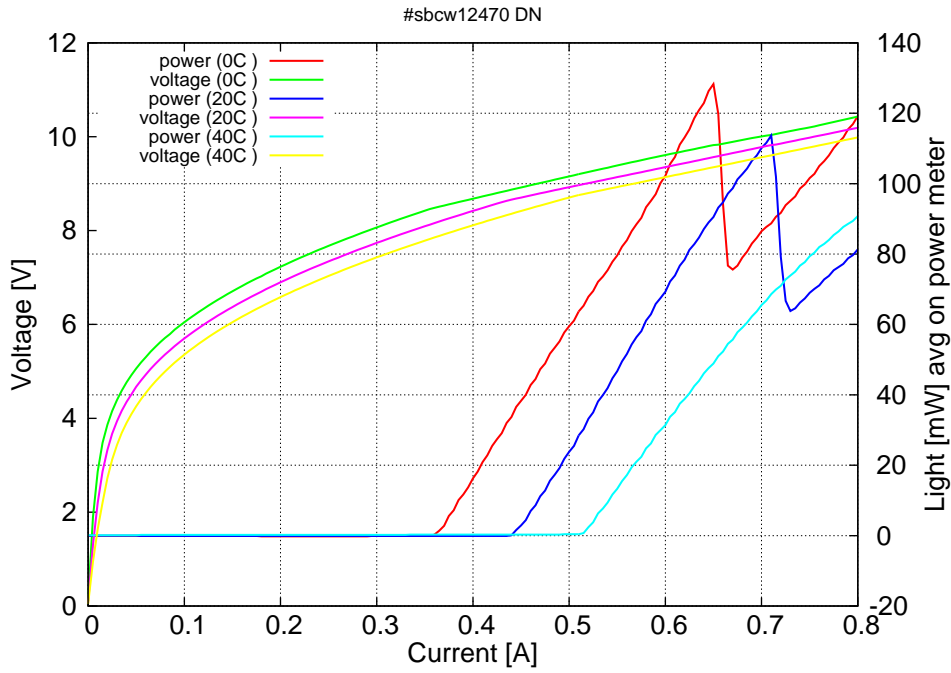


Figure 2: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.36A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.80A for all temperatures.

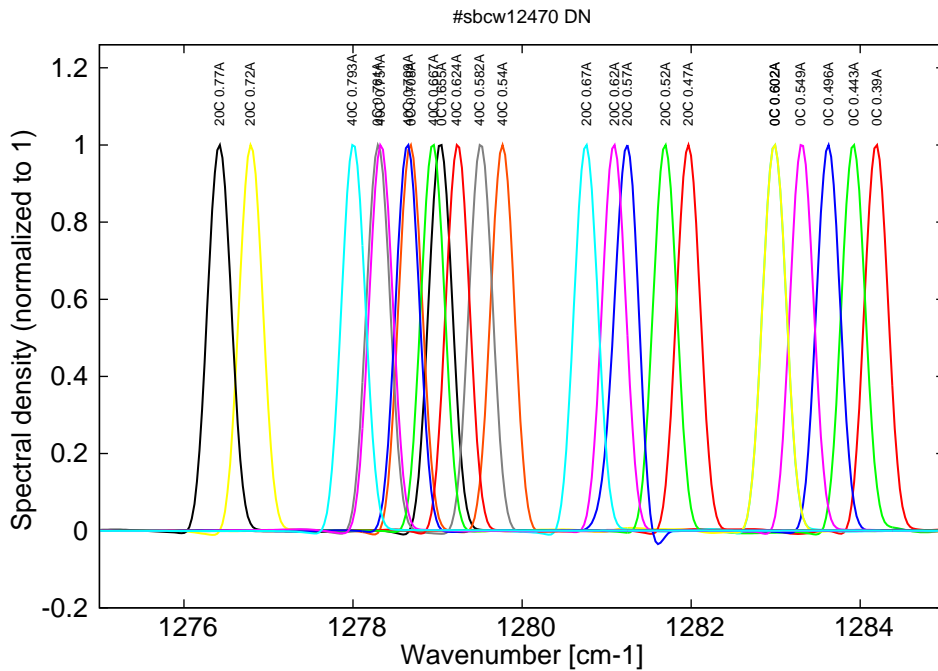


Figure 3: spectra at 0C, 20C and 40C in continuous-wave operation (front resistor current  $I_F = 0A$  and back resistor current  $I_B = 0A$ )

# Vernier characterization

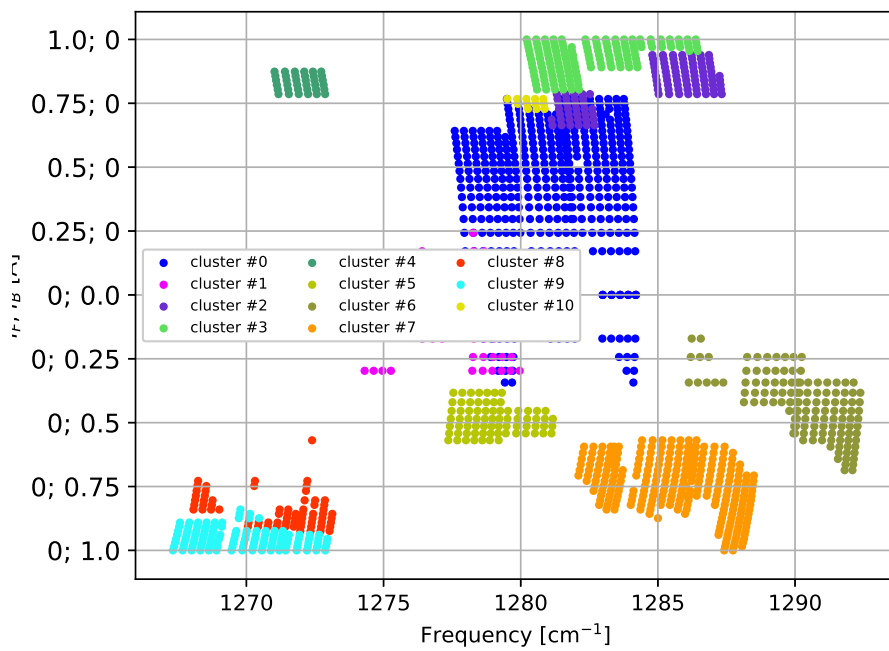


Figure 4: Emission frequency as a function of electrical current on the front resistor  $I_F$  or back resistor  $I_B$ . Either the back or the front resistors are heated, while no electrical current is flowing through the other resistor.

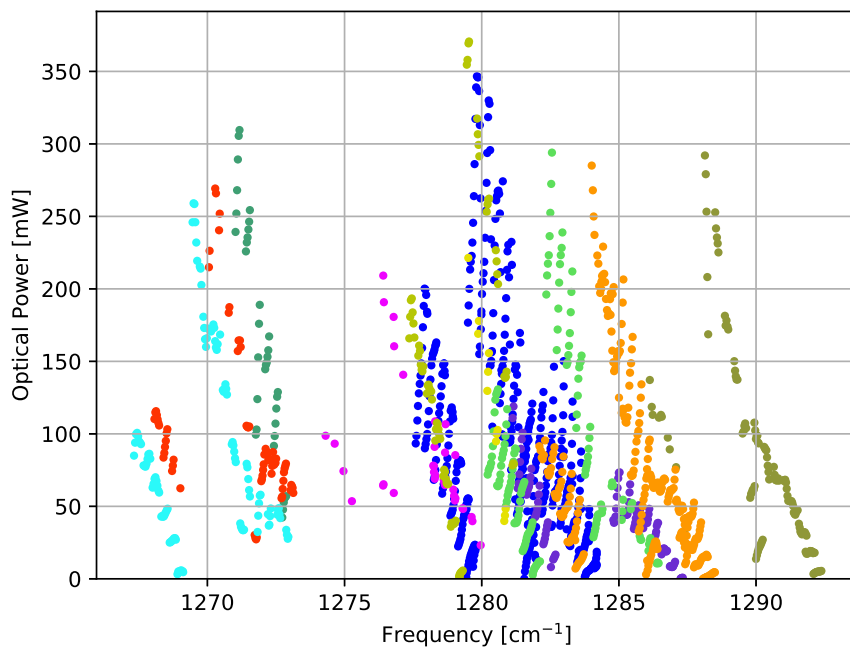


Figure 5: Optical power as a function of emission frequency.

Cluster	$I_B$ [A]	$V_B$ [V]	$I_F$ [A]	$V_F$ [V]	$I_L$ [A]	$V_L$ [V]	Freq [cm <sup>-1</sup> ]	T [C]	$P_{\text{opt}}$ [mW]
#0-Back	0.00 - 0.34	0.0 - 1.2	0	0	0.39 - 0.79	8.5 - 10.0	1278.0 - 1284.2	0 - 40	274
#0-Front	0	0	0.00 - 0.77	0.0 - 2.4	0.39 - 0.79	8.2 - 10.1	1277.6 - 1284.2	0 - 40	347
#1-Back	0.00 - 0.30	0.0 - 1.0	0	0	0.50 - 0.79	9.0 - 10.3	1274.3 - 1280.0	0 - 40	209
#1-Front	0	0	0.00 - 0.24	0.0 - 0.8	0.66 - 0.77	9.8 - 10.3	1276.4 - 1279.0	0 - 20	191
#2-Front	0	0	0.66 - 0.94	2.1 - 2.9	0.39 - 0.79	8.2 - 9.8	1281.1 - 1287.3	0 - 40	119
#3-Front	0	0	0.80 - 1.00	2.6 - 3.3	0.44 - 0.79	8.3 - 9.7	1280.2 - 1286.4	0 - 40	294
#4-Front	0	0	0.79 - 0.87	2.5 - 2.8	0.52 - 0.77	8.5 - 9.6	1271.0 - 1272.9	20	310
#5-Back	0.38 - 0.57	1.2 - 1.8	0	0	0.52 - 0.79	8.6 - 9.8	1277.4 - 1281.2	20 - 40	371
#6-Back	0.17 - 0.69	0.5 - 2.1	0	0	0.39 - 0.79	8.3 - 10.1	1286.1 - 1292.4	0 - 40	292
#7-Back	0.57 - 1.00	1.7 - 3.0	0	0	0.39 - 0.79	8.1 - 9.9	1282.1 - 1288.5	0 - 40	285
#8-Back	0.57 - 0.92	1.8 - 2.8	0	0	0.52 - 0.79	8.5 - 10.0	1268.1 - 1273.1	0 - 40	269
#9-Back	0.84 - 1.00	2.6 - 3.2	0	0	0.52 - 0.79	8.5 - 9.8	1267.3 - 1273.0	0 - 40	259
#10-Front	0	0	0.73 - 0.77	2.3 - 2.4	0.52 - 0.72	8.6 - 9.4	1279.5 - 1280.9	20	221

Table 1: Overview of the clusters.

Details of cluster #0-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	$T$	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $cm^{-1}$ ]
0.0	0.0	0.171	0.652	0.11	0.602	9.57	5.76	5.87	84	0	1282.97
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.80	5.80	133	0	1282.99
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.80	5.80	150	0	1282.99
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.81	5.81	88	0	1282.99
0.0	0.0	0.171	0.652	0.11	0.549	9.33	5.12	5.24	65	0	1283.30
0.0	0.0	0.0	0.0	0.00	0.549	9.40	5.16	5.16	122	0	1283.31
0.0	0.0	0.0	0.0	0.00	0.549	9.40	5.16	5.16	112	0	1283.31
0.0	0.0	0.0	0.0	0.00	0.549	9.41	5.16	5.16	71	0	1283.31
0.0	0.0	0.243	0.87	0.21	0.496	9.04	4.49	4.70	48	0	1283.58
0.0	0.0	0.171	0.652	0.11	0.496	9.08	4.50	4.62	48	0	1283.61
0.0	0.0	0.0	0.0	0.00	0.496	9.15	4.54	4.54	88	0	1283.62
0.0	0.0	0.0	0.0	0.00	0.496	9.15	4.54	4.54	80	0	1283.62
0.0	0.0	0.0	0.0	0.00	0.496	9.16	4.54	4.54	49	0	1283.63
0.0	0.0	0.297	1.036	0.31	0.443	8.76	3.88	4.19	27	0	1283.86
0.0	0.0	0.243	0.87	0.21	0.443	8.79	3.89	4.11	26	0	1283.88
0.0	0.0	0.171	0.652	0.11	0.443	8.83	3.91	4.02	26	0	1283.90
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	48	0	1283.92
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	27	0	1283.92
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	44	0	1283.92
0.0	0.0	0.343	1.165	0.40	0.39	8.48	3.31	3.71	7	0	1284.11
0.0	0.0	0.297	1.036	0.31	0.39	8.51	3.32	3.62	8	0	1284.13
0.0	0.0	0.243	0.87	0.21	0.39	8.53	3.33	3.54	8	0	1284.15
0.0	0.0	0.171	0.652	0.11	0.39	8.56	3.34	3.45	9	0	1284.18
0.0	0.0	0.0	0.0	0.00	0.39	8.64	3.37	3.37	19	0	1284.19
0.0	0.0	0.0	0.0	0.00	0.39	8.64	3.37	3.37	17	0	1284.19
0.0	0.0	0.0	0.0	0.00	0.39	8.65	3.37	3.37	10	0	1284.20
0.0	0.0	0.0	0.0	0.00	0.67	9.67	6.48	6.48	98	20	1280.76
0.0	0.0	0.0	0.0	0.00	0.67	9.65	6.46	6.46	274	20	1280.77
0.0	0.0	0.171	0.442	0.08	0.62	9.36	5.80	5.88	232	20	1281.08
0.0	0.0	0.0	0.0	0.00	0.62	9.45	5.86	5.86	75	20	1281.09
0.0	0.0	0.0	0.0	0.00	0.62	9.43	5.85	5.85	217	20	1281.10
0.0	0.0	0.0	0.0	0.00	0.57	9.22	5.25	5.25	55	20	1281.22
0.0	0.0	0.171	0.442	0.08	0.57	9.15	5.21	5.29	170	20	1281.39
0.0	0.0	0.0	0.0	0.00	0.57	9.22	5.26	5.26	163	20	1281.41
0.0	0.0	0.0	0.0	0.00	0.52	9.03	4.69	4.69	38	20	1281.69
0.0	0.0	0.171	0.442	0.08	0.52	8.93	4.65	4.72	101	20	1281.69
0.0	0.0	0.0	0.0	0.00	0.52	9.01	4.68	4.68	96	20	1281.71
0.0	0.0	0.0	0.0	0.00	0.47	8.81	4.14	4.14	14	20	1281.97
0.0	0.0	0.171	0.442	0.08	0.47	8.72	4.10	4.17	36	20	1281.97
0.0	0.0	0.0	0.0	0.00	0.47	8.79	4.13	4.13	36	20	1281.98
0.0	0.0	0.0	0.0	0.00	0.793	9.95	7.89	7.89	184	40	1278.01
0.0	0.0	0.0	0.0	0.00	0.793	9.96	7.90	7.90	183	40	1278.02
0.0	0.0	0.0	0.0	0.00	0.751	9.78	7.34	7.34	162	40	1278.33
0.0	0.0	0.0	0.0	0.00	0.751	9.78	7.35	7.35	163	40	1278.34
0.0	0.0	0.171	0.451	0.08	0.709	9.52	6.75	6.83	148	40	1278.64
0.0	0.0	0.0	0.0	0.00	0.709	9.60	6.81	6.81	143	40	1278.65

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.0	0.0	0.00	0.709	9.61	6.81	6.81	140	40	1278.66
0.0	0.0	0.243	0.699	0.17	0.667	9.31	6.21	6.38	118	40	1278.91
0.0	0.0	0.171	0.451	0.08	0.667	9.35	6.23	6.31	115	40	1278.94
0.0	0.0	0.0	0.0	0.00	0.667	9.42	6.29	6.29	112	40	1278.94
0.0	0.0	0.0	0.0	0.00	0.667	9.43	6.29	6.29	110	40	1278.96
0.0	0.0	0.297	0.882	0.26	0.624	9.11	5.68	5.94	81	40	1279.18
0.0	0.0	0.243	0.699	0.17	0.624	9.13	5.70	5.87	81	40	1279.20
0.0	0.0	0.171	0.451	0.08	0.624	9.16	5.72	5.80	81	40	1279.23
0.0	0.0	0.0	0.0	0.00	0.624	9.24	5.77	5.77	80	40	1279.24
0.0	0.0	0.0	0.0	0.00	0.624	9.24	5.77	5.77	79	40	1279.25
0.0	0.0	0.343	1.034	0.35	0.582	8.91	5.19	5.54	44	40	1279.42
0.0	0.0	0.297	0.882	0.26	0.582	8.93	5.20	5.46	48	40	1279.45
0.0	0.0	0.243	0.699	0.17	0.582	8.96	5.21	5.38	51	40	1279.47
0.0	0.0	0.171	0.451	0.08	0.582	8.99	5.23	5.31	54	40	1279.51
0.0	0.0	0.0	0.0	0.00	0.582	9.06	5.28	5.28	55	40	1279.51
0.0	0.0	0.0	0.0	0.00	0.582	9.07	5.28	5.28	55	40	1279.52
0.0	0.0	0.343	1.034	0.35	0.54	8.73	4.71	5.07	8	40	1279.68
0.0	0.0	0.297	0.882	0.26	0.54	8.75	4.73	4.99	13	40	1279.71
0.0	0.0	0.243	0.699	0.17	0.54	8.78	4.74	4.91	16	40	1279.73
0.0	0.0	0.171	0.451	0.08	0.54	8.81	4.76	4.84	19	40	1279.77
0.0	0.0	0.0	0.0	0.00	0.54	8.89	4.80	4.80	22	40	1279.77
0.0	0.0	0.0	0.0	0.00	0.54	8.89	4.80	4.80	21	40	1279.78

Table 2:

Details of cluster #0-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.767	2.341	0.0	0.0	1.80	0.761	9.83	7.48	9.27	53	0	1281.42
0.748	2.281	0.0	0.0	1.71	0.761	9.84	7.49	9.19	58	0	1281.45
0.728	2.215	0.0	0.0	1.61	0.761	9.85	7.50	9.11	69	0	1281.47
0.707	2.162	0.0	0.0	1.53	0.761	9.86	7.50	9.03	76	0	1281.50
0.686	2.117	0.0	0.0	1.45	0.761	9.87	7.51	8.97	81	0	1281.52
0.664	2.05	0.0	0.0	1.36	0.761	9.88	7.52	8.88	82	0	1281.55
0.642	1.985	0.0	0.0	1.27	0.761	9.90	7.53	8.81	81	0	1281.57
0.618	1.913	0.0	0.0	1.18	0.761	9.91	7.54	8.72	84	0	1281.60
0.594	1.844	0.0	0.0	1.10	0.761	9.93	7.56	8.65	90	0	1281.62
0.569	1.771	0.0	0.0	1.01	0.761	9.94	7.57	8.57	94	0	1281.64
0.542	1.696	0.0	0.0	0.92	0.761	9.96	7.58	8.50	98	0	1281.67
0.514	1.609	0.0	0.0	0.83	0.761	9.98	7.59	8.42	103	0	1281.69
0.485	1.524	0.0	0.0	0.74	0.761	10.00	7.61	8.35	105	0	1281.72
0.454	1.432	0.0	0.0	0.65	0.761	10.03	7.63	8.28	107	0	1281.74
0.42	1.325	0.0	0.0	0.56	0.761	10.06	7.65	8.21	108	0	1281.77
0.383	1.215	0.0	0.0	0.47	0.761	10.09	7.68	8.14	110	0	1281.79
0.343	1.09	0.0	0.0	0.37	0.761	10.12	7.70	8.07	115	0	1281.81
0.767	2.341	0.0	0.0	1.80	0.708	9.61	6.80	8.60	40	0	1281.81
0.748	2.281	0.0	0.0	1.71	0.708	9.62	6.81	8.52	41	0	1281.84
0.297	0.953	0.0	0.0	0.28	0.761	10.15	7.72	8.01	121	0	1281.84
0.728	2.215	0.0	0.0	1.61	0.708	9.63	6.82	8.43	46	0	1281.86
0.707	2.162	0.0	0.0	1.53	0.708	9.62	6.81	8.34	57	0	1281.88
0.686	2.117	0.0	0.0	1.45	0.708	9.66	6.84	8.29	68	0	1281.91
0.664	2.05	0.0	0.0	1.36	0.708	9.67	6.84	8.20	75	0	1281.93
0.642	1.985	0.0	0.0	1.27	0.708	9.68	6.85	8.13	77	0	1281.95
0.618	1.913	0.0	0.0	1.18	0.708	9.69	6.86	8.04	81	0	1281.98
0.594	1.844	0.0	0.0	1.10	0.708	9.70	6.87	7.97	82	0	1282.00
0.569	1.771	0.0	0.0	1.01	0.708	9.71	6.88	7.89	83	0	1282.03
0.542	1.696	0.0	0.0	0.92	0.708	9.74	6.89	7.81	85	0	1282.05
0.485	1.524	0.0	0.0	0.74	0.708	9.78	6.92	7.66	94	0	1282.10
0.454	1.432	0.0	0.0	0.65	0.708	9.80	6.94	7.59	98	0	1282.13
0.42	1.325	0.0	0.0	0.56	0.708	9.83	6.96	7.52	104	0	1282.15
0.383	1.215	0.0	0.0	0.47	0.708	9.86	6.98	7.44	111	0	1282.17
0.767	2.341	0.0	0.0	1.80	0.655	9.39	6.15	7.95	45	0	1282.17
0.748	2.281	0.0	0.0	1.71	0.655	9.40	6.16	7.86	46	0	1282.20
0.343	1.09	0.0	0.0	0.37	0.708	9.88	7.00	7.37	116	0	1282.20
0.728	2.215	0.0	0.0	1.61	0.655	9.41	6.17	7.78	48	0	1282.22
0.297	0.953	0.0	0.0	0.28	0.708	9.92	7.02	7.30	120	0	1282.23
0.707	2.162	0.0	0.0	1.53	0.655	9.40	6.16	7.69	53	0	1282.24
0.243	0.773	0.0	0.0	0.19	0.708	9.95	7.04	7.23	129	0	1282.25
0.686	2.117	0.0	0.0	1.45	0.655	9.44	6.18	7.63	56	0	1282.27
0.664	2.05	0.0	0.0	1.36	0.655	9.45	6.19	7.55	57	0	1282.29
0.642	1.985	0.0	0.0	1.27	0.655	9.46	6.19	7.47	60	0	1282.32
0.618	1.913	0.0	0.0	1.18	0.655	9.47	6.20	7.38	64	0	1282.34
0.594	1.844	0.0	0.0	1.10	0.655	9.48	6.21	7.31	69	0	1282.37
0.569	1.771	0.0	0.0	1.01	0.655	9.50	6.22	7.23	74	0	1282.39

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.542	1.696	0.0	0.0	0.92	0.655	9.51	6.23	7.15	81	0	1282.41
0.514	1.609	0.0	0.0	0.83	0.655	9.53	6.24	7.07	84	0	1282.44
0.485	1.524	0.0	0.0	0.74	0.655	9.56	6.26	7.00	86	0	1282.46
0.454	1.432	0.0	0.0	0.65	0.655	9.57	6.27	6.92	87	0	1282.49
0.42	1.325	0.0	0.0	0.56	0.655	9.61	6.29	6.85	90	0	1282.51
0.767	2.341	0.0	0.0	1.80	0.602	9.18	5.53	7.32	36	0	1282.52
0.383	1.215	0.0	0.0	0.47	0.655	9.63	6.31	6.77	94	0	1282.54
0.748	2.281	0.0	0.0	1.71	0.602	9.19	5.53	7.24	36	0	1282.54
0.343	1.09	0.0	0.0	0.37	0.655	9.66	6.33	6.70	99	0	1282.56
0.728	2.215	0.0	0.0	1.61	0.602	9.20	5.54	7.15	37	0	1282.56
0.707	2.162	0.0	0.0	1.53	0.602	9.20	5.54	7.07	51	0	1282.58
0.297	0.953	0.0	0.0	0.28	0.655	9.69	6.35	6.63	111	0	1282.59
0.686	2.117	0.0	0.0	1.45	0.602	9.22	5.55	7.00	55	0	1282.61
0.243	0.773	0.0	0.0	0.19	0.655	9.72	6.37	6.55	123	0	1282.61
0.664	2.05	0.0	0.0	1.36	0.602	9.23	5.56	6.92	57	0	1282.63
0.171	0.516	0.0	0.0	0.09	0.655	9.77	6.40	6.48	146	0	1282.63
0.642	1.985	0.0	0.0	1.27	0.602	9.24	5.56	6.84	58	0	1282.65
0.618	1.913	0.0	0.0	1.18	0.602	9.25	5.57	6.75	60	0	1282.67
0.594	1.844	0.0	0.0	1.10	0.602	9.26	5.58	6.67	60	0	1282.70
0.569	1.771	0.0	0.0	1.01	0.602	9.28	5.58	6.59	61	0	1282.72
0.542	1.696	0.0	0.0	0.92	0.602	9.29	5.59	6.51	62	0	1282.75
0.514	1.609	0.0	0.0	0.83	0.602	9.31	5.61	6.43	63	0	1282.77
0.485	1.524	0.0	0.0	0.74	0.602	9.33	5.62	6.36	66	0	1282.80
0.454	1.432	0.0	0.0	0.65	0.602	9.35	5.63	6.28	72	0	1282.82
0.42	1.325	0.0	0.0	0.56	0.602	9.38	5.65	6.20	78	0	1282.84
0.767	2.341	0.0	0.0	1.80	0.549	8.96	4.92	6.71	37	0	1282.86
0.383	1.215	0.0	0.0	0.47	0.602	9.41	5.66	6.13	84	0	1282.87
0.748	2.281	0.0	0.0	1.71	0.549	8.97	4.92	6.63	39	0	1282.88
0.343	1.09	0.0	0.0	0.37	0.602	9.44	5.68	6.05	90	0	1282.89
0.728	2.215	0.0	0.0	1.61	0.549	8.98	4.93	6.54	42	0	1282.89
0.707	2.162	0.0	0.0	1.53	0.549	8.98	4.93	6.46	48	0	1282.91
0.297	0.953	0.0	0.0	0.28	0.602	9.47	5.70	5.98	95	0	1282.92
0.686	2.117	0.0	0.0	1.45	0.549	9.00	4.94	6.39	47	0	1282.93
0.243	0.773	0.0	0.0	0.19	0.602	9.50	5.72	5.90	101	0	1282.94
0.664	2.05	0.0	0.0	1.36	0.549	9.01	4.95	6.31	48	0	1282.95
0.171	0.516	0.0	0.0	0.09	0.602	9.54	5.74	5.83	113	0	1282.97
0.642	1.985	0.0	0.0	1.27	0.549	9.03	4.95	6.23	47	0	1282.97
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.80	5.80	133	0	1282.99
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.80	5.80	150	0	1282.99
0.0	0.0	0.0	0.0	0.00	0.602	9.64	5.81	5.81	88	0	1282.99
0.618	1.913	0.0	0.0	1.18	0.549	9.03	4.96	6.14	47	0	1283.00
0.594	1.844	0.0	0.0	1.10	0.549	9.05	4.97	6.06	49	0	1283.02
0.569	1.771	0.0	0.0	1.01	0.549	9.06	4.97	5.98	52	0	1283.04
0.542	1.696	0.0	0.0	0.92	0.549	9.08	4.98	5.90	54	0	1283.06
0.514	1.609	0.0	0.0	0.83	0.549	9.09	4.99	5.82	57	0	1283.09
0.707	2.162	0.0	0.0	1.53	0.496	8.73	4.33	5.86	34	0	1283.10
0.485	1.524	0.0	0.0	0.74	0.549	9.11	5.00	5.74	60	0	1283.11
0.454	1.432	0.0	0.0	0.65	0.549	9.13	5.01	5.66	62	0	1283.14

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.42	1.325	0.0	0.0	0.56	0.549	9.16	5.03	5.58	64	0	1283.16
0.767	2.341	0.0	0.0	1.80	0.496	8.71	4.32	6.12	24	0	1283.19
0.383	1.215	0.0	0.0	0.47	0.549	9.18	5.04	5.50	65	0	1283.19
0.748	2.281	0.0	0.0	1.71	0.496	8.73	4.33	6.03	23	0	1283.21
0.343	1.09	0.0	0.0	0.37	0.549	9.21	5.05	5.43	66	0	1283.21
0.728	2.215	0.0	0.0	1.61	0.496	8.74	4.33	5.95	23	0	1283.23
0.297	0.953	0.0	0.0	0.28	0.549	9.23	5.07	5.35	70	0	1283.24
0.686	2.117	0.0	0.0	1.45	0.496	8.77	4.35	5.80	29	0	1283.26
0.243	0.773	0.0	0.0	0.19	0.549	9.26	5.09	5.27	78	0	1283.26
0.664	2.05	0.0	0.0	1.36	0.496	8.78	4.35	5.71	31	0	1283.28
0.171	0.516	0.0	0.0	0.09	0.549	9.31	5.11	5.20	93	0	1283.29
0.642	1.985	0.0	0.0	1.27	0.496	8.79	4.36	5.63	32	0	1283.30
0.0	0.0	0.0	0.0	0.00	0.549	9.40	5.16	5.16	122	0	1283.31
0.0	0.0	0.0	0.0	0.00	0.549	9.40	5.16	5.16	112	0	1283.31
0.0	0.0	0.0	0.0	0.00	0.549	9.41	5.16	5.16	71	0	1283.31
0.618	1.913	0.0	0.0	1.18	0.496	8.80	4.36	5.55	34	0	1283.32
0.594	1.844	0.0	0.0	1.10	0.496	8.81	4.37	5.47	36	0	1283.34
0.569	1.771	0.0	0.0	1.01	0.496	8.82	4.38	5.38	38	0	1283.36
0.542	1.696	0.0	0.0	0.92	0.496	8.84	4.38	5.30	40	0	1283.38
0.514	1.609	0.0	0.0	0.83	0.496	8.86	4.39	5.22	40	0	1283.40
0.485	1.524	0.0	0.0	0.74	0.496	8.88	4.40	5.14	40	0	1283.43
0.454	1.432	0.0	0.0	0.65	0.496	8.89	4.41	5.06	40	0	1283.45
0.42	1.325	0.0	0.0	0.56	0.496	8.92	4.42	4.98	42	0	1283.48
0.767	2.341	0.0	0.0	1.80	0.443	8.48	3.76	5.55	12	0	1283.49
0.383	1.215	0.0	0.0	0.47	0.496	8.94	4.43	4.90	45	0	1283.50
0.748	2.281	0.0	0.0	1.71	0.443	8.49	3.76	5.47	13	0	1283.51
0.343	1.09	0.0	0.0	0.37	0.496	8.96	4.45	4.82	49	0	1283.52
0.728	2.215	0.0	0.0	1.61	0.443	8.49	3.76	5.38	15	0	1283.53
0.707	2.162	0.0	0.0	1.53	0.443	8.50	3.76	5.29	19	0	1283.54
0.297	0.953	0.0	0.0	0.28	0.496	8.99	4.46	4.74	54	0	1283.55
0.686	2.117	0.0	0.0	1.45	0.443	8.52	3.78	5.23	19	0	1283.56
0.243	0.773	0.0	0.0	0.19	0.496	9.02	4.47	4.66	61	0	1283.58
0.664	2.05	0.0	0.0	1.36	0.443	8.53	3.78	5.14	20	0	1283.58
0.642	1.985	0.0	0.0	1.27	0.443	8.54	3.78	5.06	19	0	1283.60
0.171	0.516	0.0	0.0	0.09	0.496	9.06	4.49	4.58	69	0	1283.60
0.0	0.0	0.0	0.0	0.00	0.496	9.15	4.54	4.54	88	0	1283.62
0.618	1.913	0.0	0.0	1.18	0.443	8.55	3.79	4.97	20	0	1283.62
0.0	0.0	0.0	0.0	0.00	0.496	9.15	4.54	4.54	80	0	1283.62
0.0	0.0	0.0	0.0	0.00	0.496	9.16	4.54	4.54	49	0	1283.63
0.594	1.844	0.0	0.0	1.10	0.443	8.56	3.79	4.89	20	0	1283.64
0.569	1.771	0.0	0.0	1.01	0.443	8.58	3.80	4.81	19	0	1283.66
0.542	1.696	0.0	0.0	0.92	0.443	8.59	3.81	4.73	19	0	1283.69
0.514	1.609	0.0	0.0	0.83	0.443	8.61	3.81	4.64	20	0	1283.71
0.485	1.524	0.0	0.0	0.74	0.443	8.63	3.82	4.56	21	0	1283.73
0.454	1.432	0.0	0.0	0.65	0.443	8.65	3.83	4.48	22	0	1283.75
0.767	2.341	0.0	0.0	1.80	0.39	8.24	3.21	5.01	1	0	1283.76
0.42	1.325	0.0	0.0	0.56	0.443	8.67	3.84	4.40	24	0	1283.78
0.748	2.281	0.0	0.0	1.71	0.39	8.25	3.22	4.92	2	0	1283.78

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.383	1.215	0.0	0.0	0.47	0.443	8.69	3.85	4.32	26	0	1283.80
0.728	2.215	0.0	0.0	1.61	0.39	8.26	3.22	4.83	3	0	1283.80
0.707	2.162	0.0	0.0	1.53	0.39	8.27	3.22	4.75	4	0	1283.81
0.343	1.09	0.0	0.0	0.37	0.443	8.72	3.86	4.24	29	0	1283.82
0.686	2.117	0.0	0.0	1.45	0.39	8.28	3.23	4.68	5	0	1283.84
0.297	0.953	0.0	0.0	0.28	0.443	8.74	3.87	4.16	30	0	1283.85
0.664	2.05	0.0	0.0	1.36	0.39	8.27	3.23	4.59	5	0	1283.87
0.243	0.773	0.0	0.0	0.19	0.443	8.77	3.89	4.07	33	0	1283.87
0.642	1.985	0.0	0.0	1.27	0.39	8.30	3.24	4.51	5	0	1283.89
0.171	0.516	0.0	0.0	0.09	0.443	8.81	3.90	3.99	37	0	1283.90
0.618	1.913	0.0	0.0	1.18	0.39	8.31	3.24	4.42	6	0	1283.91
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	48	0	1283.92
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	27	0	1283.92
0.0	0.0	0.0	0.0	0.00	0.443	8.90	3.94	3.94	44	0	1283.92
0.594	1.844	0.0	0.0	1.10	0.39	8.32	3.24	4.34	6	0	1283.93
0.569	1.771	0.0	0.0	1.01	0.39	8.33	3.25	4.26	6	0	1283.95
0.542	1.696	0.0	0.0	0.92	0.39	8.34	3.25	4.17	7	0	1283.97
0.514	1.609	0.0	0.0	0.83	0.39	8.36	3.26	4.09	7	0	1283.99
0.485	1.524	0.0	0.0	0.74	0.39	8.38	3.27	4.01	8	0	1284.01
0.454	1.432	0.0	0.0	0.65	0.39	8.40	3.27	3.92	8	0	1284.03
0.42	1.325	0.0	0.0	0.56	0.39	8.42	3.28	3.84	9	0	1284.05
0.383	1.215	0.0	0.0	0.47	0.39	8.44	3.29	3.76	9	0	1284.08
0.343	1.09	0.0	0.0	0.37	0.39	8.46	3.30	3.67	10	0	1284.10
0.297	0.953	0.0	0.0	0.28	0.39	8.49	3.31	3.59	11	0	1284.12
0.243	0.773	0.0	0.0	0.19	0.39	8.52	3.32	3.51	12	0	1284.15
0.171	0.516	0.0	0.0	0.09	0.39	8.55	3.34	3.42	14	0	1284.17
0.0	0.0	0.0	0.0	0.00	0.39	8.64	3.37	3.37	19	0	1284.19
0.0	0.0	0.0	0.0	0.00	0.39	8.64	3.37	3.37	17	0	1284.19
0.0	0.0	0.0	0.0	0.00	0.39	8.65	3.37	3.37	10	0	1284.20
0.767	2.391	0.0	0.0	1.83	0.77	9.60	7.39	9.23	177	20	1279.50
0.748	2.333	0.0	0.0	1.75	0.77	9.61	7.40	9.15	189	20	1279.52
0.728	2.258	0.0	0.0	1.64	0.77	9.62	7.41	9.05	200	20	1279.55
0.707	2.191	0.0	0.0	1.55	0.77	9.63	7.42	8.96	213	20	1279.58
0.686	2.123	0.0	0.0	1.46	0.77	9.64	7.42	8.88	219	20	1279.60
0.664	2.053	0.0	0.0	1.36	0.77	9.65	7.43	8.80	223	20	1279.63
0.642	1.981	0.0	0.0	1.27	0.77	9.66	7.44	8.71	232	20	1279.66
0.618	1.903	0.0	0.0	1.18	0.77	9.68	7.45	8.63	246	20	1279.69
0.594	1.82	0.0	0.0	1.08	0.77	9.69	7.46	8.54	264	20	1279.72
0.569	1.74	0.0	0.0	0.99	0.77	9.71	7.48	8.47	286	20	1279.74
0.542	1.655	0.0	0.0	0.90	0.77	9.73	7.49	8.39	317	20	1279.77
0.514	1.559	0.0	0.0	0.80	0.77	9.75	7.51	8.31	339	20	1279.80
0.485	1.468	0.0	0.0	0.71	0.77	9.77	7.52	8.23	347	20	1279.82
0.454	1.367	0.0	0.0	0.62	0.77	9.79	7.54	8.16	346	20	1279.86
0.42	1.256	0.0	0.0	0.53	0.77	9.82	7.56	8.09	346	20	1279.88
0.383	1.137	0.0	0.0	0.44	0.77	9.85	7.58	8.02	336	20	1279.91
0.748	2.333	0.0	0.0	1.75	0.72	9.41	6.77	8.52	155	20	1279.91
0.343	1.007	0.0	0.0	0.35	0.77	9.87	7.60	7.95	313	20	1279.93
0.728	2.258	0.0	0.0	1.64	0.72	9.42	6.78	8.42	160	20	1279.93

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.297	0.856	0.0	0.0	0.25	0.77	9.91	7.63	7.88	262	20	1279.96
0.707	2.191	0.0	0.0	1.55	0.72	9.43	6.79	8.34	172	20	1279.97
0.686	2.123	0.0	0.0	1.46	0.72	9.44	6.80	8.25	184	20	1279.99
0.243	0.68	0.0	0.0	0.17	0.77	9.95	7.66	7.82	182	20	1279.99
0.664	2.053	0.0	0.0	1.36	0.72	9.45	6.80	8.17	196	20	1280.01
0.642	1.981	0.0	0.0	1.27	0.72	9.46	6.81	8.08	205	20	1280.04
0.618	1.903	0.0	0.0	1.18	0.72	9.47	6.82	8.00	211	20	1280.07
0.594	1.82	0.0	0.0	1.08	0.72	9.49	6.83	7.91	219	20	1280.09
0.569	1.74	0.0	0.0	0.99	0.72	9.50	6.84	7.83	235	20	1280.12
0.542	1.655	0.0	0.0	0.90	0.72	9.52	6.86	7.75	254	20	1280.15
0.514	1.559	0.0	0.0	0.80	0.72	9.54	6.87	7.67	273	20	1280.18
0.485	1.468	0.0	0.0	0.71	0.72	9.56	6.88	7.60	294	20	1280.20
0.454	1.367	0.0	0.0	0.62	0.72	9.58	6.90	7.52	318	20	1280.23
0.42	1.256	0.0	0.0	0.53	0.72	9.61	6.92	7.45	330	20	1280.25
0.383	1.137	0.0	0.0	0.44	0.72	9.63	6.94	7.37	328	20	1280.28
0.728	2.258	0.0	0.0	1.64	0.67	9.22	6.17	7.82	147	20	1280.30
0.343	1.007	0.0	0.0	0.35	0.72	9.66	6.96	7.30	296	20	1280.31
0.707	2.191	0.0	0.0	1.55	0.67	9.23	6.18	7.73	147	20	1280.32
0.297	0.856	0.0	0.0	0.25	0.72	9.69	6.98	7.23	234	20	1280.34
0.686	2.123	0.0	0.0	1.46	0.67	9.23	6.19	7.64	150	20	1280.35
0.243	0.68	0.0	0.0	0.17	0.72	9.73	7.01	7.17	156	20	1280.36
0.664	2.053	0.0	0.0	1.36	0.67	9.25	6.20	7.56	157	20	1280.37
0.171	0.443	0.0	0.0	0.08	0.72	9.78	7.04	7.12	105	20	1280.39
0.642	1.981	0.0	0.0	1.27	0.67	9.26	6.20	7.47	168	20	1280.40
0.618	1.903	0.0	0.0	1.18	0.67	9.27	6.21	7.39	183	20	1280.42
0.594	1.82	0.0	0.0	1.08	0.67	9.28	6.22	7.30	206	20	1280.45
0.569	1.74	0.0	0.0	0.99	0.67	9.30	6.23	7.22	230	20	1280.47
0.542	1.655	0.0	0.0	0.90	0.67	9.31	6.24	7.14	248	20	1280.50
0.514	1.559	0.0	0.0	0.80	0.67	9.33	6.25	7.06	261	20	1280.53
0.485	1.468	0.0	0.0	0.71	0.67	9.35	6.27	6.98	264	20	1280.56
0.454	1.367	0.0	0.0	0.62	0.67	9.38	6.28	6.90	267	20	1280.58
0.42	1.256	0.0	0.0	0.53	0.67	9.40	6.30	6.82	268	20	1280.61
0.383	1.137	0.0	0.0	0.44	0.67	9.42	6.31	6.75	266	20	1280.64
0.707	2.191	0.0	0.0	1.55	0.62	9.03	5.60	7.15	121	20	1280.66
0.343	1.007	0.0	0.0	0.35	0.67	9.45	6.33	6.68	252	20	1280.66
0.686	2.123	0.0	0.0	1.46	0.62	9.03	5.60	7.06	128	20	1280.69
0.297	0.856	0.0	0.0	0.25	0.67	9.48	6.35	6.61	212	20	1280.69
0.664	2.053	0.0	0.0	1.36	0.62	9.05	5.61	6.97	134	20	1280.71
0.243	0.68	0.0	0.0	0.17	0.67	9.52	6.38	6.54	144	20	1280.72
0.642	1.981	0.0	0.0	1.27	0.62	9.06	5.61	6.89	141	20	1280.73
0.171	0.443	0.0	0.0	0.08	0.67	9.56	6.41	6.48	100	20	1280.74
0.0	0.0	0.0	0.0	0.00	0.67	9.67	6.48	6.48	98	20	1280.76
0.618	1.903	0.0	0.0	1.18	0.62	9.06	5.62	6.80	147	20	1280.76
0.0	0.0	0.0	0.0	0.00	0.67	9.65	6.46	6.46	274	20	1280.77
0.594	1.82	0.0	0.0	1.08	0.62	9.08	5.63	6.71	151	20	1280.79
0.569	1.74	0.0	0.0	0.99	0.62	9.09	5.64	6.63	157	20	1280.81
0.542	1.655	0.0	0.0	0.90	0.62	9.11	5.65	6.54	168	20	1280.84
0.514	1.559	0.0	0.0	0.80	0.62	9.13	5.66	6.46	179	20	1280.86

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.485	1.468	0.0	0.0	0.71	0.62	9.14	5.67	6.38	194	20	1280.89
0.454	1.367	0.0	0.0	0.62	0.62	9.17	5.68	6.30	213	20	1280.92
0.42	1.256	0.0	0.0	0.53	0.62	9.19	5.70	6.22	226	20	1280.94
0.383	1.137	0.0	0.0	0.44	0.62	9.21	5.71	6.15	230	20	1280.97
0.707	2.191	0.0	0.0	1.55	0.57	8.83	5.03	6.58	95	20	1280.98
0.343	1.007	0.0	0.0	0.35	0.62	9.24	5.73	6.07	208	20	1281.00
0.686	2.123	0.0	0.0	1.46	0.57	8.84	5.04	6.49	94	20	1281.00
0.297	0.856	0.0	0.0	0.25	0.62	9.27	5.75	6.00	162	20	1281.03
0.664	2.053	0.0	0.0	1.36	0.57	8.85	5.04	6.41	95	20	1281.04
0.243	0.68	0.0	0.0	0.17	0.62	9.31	5.77	5.94	105	20	1281.05
0.642	1.981	0.0	0.0	1.27	0.57	8.86	5.05	6.32	97	20	1281.05
0.171	0.443	0.0	0.0	0.08	0.62	9.35	5.80	5.87	75	20	1281.08
0.0	0.0	0.0	0.0	0.00	0.62	9.45	5.86	5.86	75	20	1281.09
0.618	1.903	0.0	0.0	1.18	0.57	8.87	5.05	6.23	102	20	1281.09
0.0	0.0	0.0	0.0	0.00	0.62	9.43	5.85	5.85	217	20	1281.10
0.594	1.82	0.0	0.0	1.08	0.57	8.88	5.06	6.14	108	20	1281.11
0.569	1.74	0.0	0.0	0.99	0.57	8.89	5.07	6.06	113	20	1281.13
0.542	1.655	0.0	0.0	0.90	0.57	8.91	5.08	5.97	124	20	1281.16
0.514	1.559	0.0	0.0	0.80	0.57	8.92	5.09	5.89	133	20	1281.18
0.485	1.468	0.0	0.0	0.71	0.57	8.94	5.10	5.81	144	20	1281.21
0.0	0.0	0.0	0.0	0.00	0.57	9.22	5.25	5.25	55	20	1281.22
0.454	1.367	0.0	0.0	0.62	0.57	8.96	5.11	5.73	148	20	1281.23
0.42	1.256	0.0	0.0	0.53	0.57	8.98	5.12	5.65	147	20	1281.26
0.707	2.191	0.0	0.0	1.55	0.52	8.63	4.49	6.04	44	20	1281.29
0.383	1.137	0.0	0.0	0.44	0.57	9.01	5.13	5.57	141	20	1281.29
0.343	1.007	0.0	0.0	0.35	0.57	9.03	5.15	5.49	129	20	1281.31
0.686	2.123	0.0	0.0	1.46	0.52	8.64	4.49	5.95	46	20	1281.31
0.297	0.856	0.0	0.0	0.25	0.57	9.06	5.16	5.42	105	20	1281.34
0.664	2.053	0.0	0.0	1.36	0.52	8.65	4.50	5.86	49	20	1281.34
0.642	1.981	0.0	0.0	1.27	0.52	8.66	4.50	5.77	52	20	1281.36
0.243	0.68	0.0	0.0	0.17	0.57	9.10	5.18	5.35	68	20	1281.36
0.618	1.903	0.0	0.0	1.18	0.52	8.67	4.51	5.68	57	20	1281.39
0.171	0.443	0.0	0.0	0.08	0.57	9.14	5.21	5.29	54	20	1281.39
0.594	1.82	0.0	0.0	1.08	0.52	8.68	4.51	5.59	63	20	1281.40
0.0	0.0	0.0	0.0	0.00	0.57	9.22	5.26	5.26	163	20	1281.41
0.569	1.74	0.0	0.0	0.99	0.52	8.69	4.52	5.51	69	20	1281.43
0.542	1.655	0.0	0.0	0.90	0.52	8.70	4.53	5.42	74	20	1281.46
0.514	1.559	0.0	0.0	0.80	0.52	8.72	4.54	5.34	78	20	1281.48
0.485	1.468	0.0	0.0	0.71	0.52	8.74	4.54	5.26	81	20	1281.50
0.454	1.367	0.0	0.0	0.62	0.52	8.76	4.55	5.17	85	20	1281.53
0.728	2.258	0.0	0.0	1.64	0.47	8.40	3.95	5.59	0	20	1281.55
0.42	1.256	0.0	0.0	0.53	0.52	8.78	4.56	5.09	88	20	1281.56
0.707	2.191	0.0	0.0	1.55	0.47	8.41	3.95	5.50	5	20	1281.58
0.383	1.137	0.0	0.0	0.44	0.52	8.80	4.58	5.01	89	20	1281.58
0.686	2.123	0.0	0.0	1.46	0.47	8.42	3.96	5.41	9	20	1281.61
0.343	1.007	0.0	0.0	0.35	0.52	8.82	4.59	4.93	85	20	1281.61
0.664	2.053	0.0	0.0	1.36	0.47	8.43	3.96	5.33	12	20	1281.63
0.297	0.856	0.0	0.0	0.25	0.52	8.85	4.60	4.86	69	20	1281.63

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.642	1.981	0.0	0.0	1.27	0.47	8.44	3.97	5.24	14	20	1281.65
0.243	0.68	0.0	0.0	0.17	0.52	8.89	4.62	4.79	47	20	1281.66
0.618	1.903	0.0	0.0	1.18	0.47	8.45	3.97	5.15	16	20	1281.68
0.171	0.443	0.0	0.0	0.08	0.52	8.93	4.64	4.72	37	20	1281.68
0.0	0.0	0.0	0.0	0.00	0.52	9.03	4.69	4.69	38	20	1281.69
0.594	1.82	0.0	0.0	1.08	0.47	8.46	3.98	5.06	18	20	1281.70
0.0	0.0	0.0	0.0	0.00	0.52	9.01	4.68	4.68	96	20	1281.71
0.569	1.74	0.0	0.0	0.99	0.47	8.48	3.98	4.97	19	20	1281.72
0.542	1.655	0.0	0.0	0.90	0.47	8.49	3.99	4.89	21	20	1281.74
0.514	1.559	0.0	0.0	0.80	0.47	8.51	4.00	4.80	23	20	1281.77
0.485	1.468	0.0	0.0	0.71	0.47	8.53	4.01	4.72	25	20	1281.79
0.454	1.367	0.0	0.0	0.62	0.47	8.55	4.02	4.64	27	20	1281.81
0.42	1.256	0.0	0.0	0.53	0.47	8.57	4.03	4.55	30	20	1281.84
0.383	1.137	0.0	0.0	0.44	0.47	8.59	4.03	4.47	31	20	1281.86
0.343	1.007	0.0	0.0	0.35	0.47	8.61	4.05	4.39	30	20	1281.89
0.297	0.856	0.0	0.0	0.25	0.47	8.64	4.06	4.31	25	20	1281.92
0.243	0.68	0.0	0.0	0.17	0.47	8.67	4.07	4.24	17	20	1281.94
0.171	0.443	0.0	0.0	0.08	0.47	8.71	4.10	4.17	14	20	1281.96
0.0	0.0	0.0	0.0	0.00	0.47	8.81	4.14	4.14	14	20	1281.97
0.0	0.0	0.0	0.0	0.00	0.47	8.79	4.13	4.13	36	20	1281.98
0.642	2.002	0.0	0.0	1.29	0.793	9.56	7.59	8.87	93	40	1277.59
0.618	1.92	0.0	0.0	1.19	0.793	9.57	7.59	8.78	99	40	1277.62
0.594	1.837	0.0	0.0	1.09	0.793	9.59	7.60	8.69	109	40	1277.65
0.569	1.755	0.0	0.0	1.00	0.793	9.60	7.61	8.61	119	40	1277.68
0.542	1.663	0.0	0.0	0.90	0.793	9.61	7.62	8.52	128	40	1277.71
0.514	1.57	0.0	0.0	0.81	0.793	9.63	7.63	8.44	134	40	1277.74
0.485	1.473	0.0	0.0	0.71	0.793	9.64	7.65	8.36	140	40	1277.77
0.454	1.369	0.0	0.0	0.62	0.793	9.66	7.66	8.28	149	40	1277.80
0.42	1.257	0.0	0.0	0.53	0.793	9.69	7.68	8.21	159	40	1277.83
0.383	1.132	0.0	0.0	0.43	0.793	9.71	7.70	8.14	174	40	1277.86
0.343	1.002	0.0	0.0	0.34	0.793	9.74	7.72	8.07	188	40	1277.89
0.297	0.848	0.0	0.0	0.25	0.793	9.77	7.75	8.00	200	40	1277.92
0.642	2.002	0.0	0.0	1.29	0.751	9.40	7.06	8.34	90	40	1277.93
0.243	0.668	0.0	0.0	0.16	0.793	9.81	7.78	7.94	200	40	1277.95
0.618	1.92	0.0	0.0	1.19	0.751	9.41	7.06	8.25	93	40	1277.96
0.171	0.428	0.0	0.0	0.07	0.793	9.86	7.82	7.89	196	40	1277.98
0.594	1.837	0.0	0.0	1.09	0.751	9.42	7.07	8.16	96	40	1277.98
0.0	0.0	0.0	0.0	0.00	0.793	9.95	7.89	7.89	184	40	1278.01
0.569	1.755	0.0	0.0	1.00	0.751	9.43	7.08	8.08	100	40	1278.01
0.0	0.0	0.0	0.0	0.00	0.793	9.96	7.90	7.90	183	40	1278.02
0.542	1.663	0.0	0.0	0.90	0.751	9.44	7.09	7.99	106	40	1278.04
0.514	1.57	0.0	0.0	0.81	0.751	9.46	7.10	7.91	116	40	1278.07
0.485	1.473	0.0	0.0	0.71	0.751	9.47	7.11	7.83	126	40	1278.10
0.454	1.369	0.0	0.0	0.62	0.751	9.49	7.13	7.75	137	40	1278.13
0.42	1.257	0.0	0.0	0.53	0.751	9.52	7.15	7.68	147	40	1278.16
0.383	1.132	0.0	0.0	0.43	0.751	9.54	7.16	7.60	152	40	1278.19
0.343	1.002	0.0	0.0	0.34	0.751	9.57	7.19	7.53	155	40	1278.22
0.297	0.848	0.0	0.0	0.25	0.751	9.60	7.21	7.46	156	40	1278.25

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.642	2.002	0.0	0.0	1.29	0.709	9.23	6.54	7.83	68	40	1278.25
0.243	0.668	0.0	0.0	0.16	0.751	9.63	7.23	7.40	158	40	1278.28
0.618	1.92	0.0	0.0	1.19	0.709	9.24	6.55	7.74	70	40	1278.28
0.171	0.428	0.0	0.0	0.07	0.751	9.68	7.27	7.35	161	40	1278.31
0.594	1.837	0.0	0.0	1.09	0.709	9.25	6.56	7.65	75	40	1278.31
0.0	0.0	0.0	0.0	0.00	0.751	9.78	7.34	7.34	162	40	1278.33
0.569	1.755	0.0	0.0	1.00	0.709	9.26	6.56	7.56	82	40	1278.33
0.0	0.0	0.0	0.0	0.00	0.751	9.78	7.35	7.35	163	40	1278.34
0.542	1.663	0.0	0.0	0.90	0.709	9.27	6.57	7.48	93	40	1278.36
0.514	1.57	0.0	0.0	0.81	0.709	9.29	6.58	7.39	102	40	1278.39
0.485	1.473	0.0	0.0	0.71	0.709	9.30	6.60	7.31	109	40	1278.42
0.454	1.369	0.0	0.0	0.62	0.709	9.32	6.61	7.23	114	40	1278.45
0.42	1.257	0.0	0.0	0.53	0.709	9.35	6.63	7.15	119	40	1278.48
0.383	1.132	0.0	0.0	0.43	0.709	9.37	6.64	7.08	126	40	1278.51
0.343	1.002	0.0	0.0	0.34	0.709	9.39	6.66	7.00	133	40	1278.53
0.642	2.002	0.0	0.0	1.29	0.667	9.06	6.04	7.33	59	40	1278.56
0.297	0.848	0.0	0.0	0.25	0.709	9.42	6.68	6.93	141	40	1278.57
0.618	1.92	0.0	0.0	1.19	0.667	9.07	6.05	7.24	62	40	1278.59
0.243	0.668	0.0	0.0	0.16	0.709	9.46	6.71	6.87	147	40	1278.59
0.594	1.837	0.0	0.0	1.09	0.667	9.08	6.06	7.15	65	40	1278.61
0.171	0.428	0.0	0.0	0.07	0.709	9.51	6.74	6.81	149	40	1278.62
0.569	1.755	0.0	0.0	1.00	0.667	9.09	6.06	7.06	68	40	1278.64
0.0	0.0	0.0	0.0	0.00	0.709	9.60	6.81	6.81	143	40	1278.65
0.0	0.0	0.0	0.0	0.00	0.709	9.61	6.81	6.81	140	40	1278.66
0.542	1.663	0.0	0.0	0.90	0.667	9.10	6.07	6.97	71	40	1278.67
0.514	1.57	0.0	0.0	0.81	0.667	9.12	6.08	6.89	74	40	1278.70
0.485	1.473	0.0	0.0	0.71	0.667	9.13	6.09	6.81	78	40	1278.73
0.454	1.369	0.0	0.0	0.62	0.667	9.15	6.10	6.73	83	40	1278.75
0.42	1.257	0.0	0.0	0.53	0.667	9.17	6.12	6.65	92	40	1278.79
0.383	1.132	0.0	0.0	0.43	0.667	9.20	6.13	6.57	100	40	1278.81
0.343	1.002	0.0	0.0	0.34	0.667	9.22	6.15	6.49	109	40	1278.84
0.642	2.002	0.0	0.0	1.29	0.624	8.89	5.55	6.83	43	40	1278.86
0.297	0.848	0.0	0.0	0.25	0.667	9.25	6.17	6.42	116	40	1278.87
0.618	1.92	0.0	0.0	1.19	0.624	8.90	5.55	6.74	45	40	1278.89
0.243	0.668	0.0	0.0	0.16	0.667	9.28	6.19	6.35	117	40	1278.90
0.594	1.837	0.0	0.0	1.09	0.624	8.91	5.56	6.65	46	40	1278.91
0.171	0.428	0.0	0.0	0.07	0.667	9.33	6.22	6.30	116	40	1278.92
0.569	1.755	0.0	0.0	1.00	0.624	8.92	5.56	6.56	48	40	1278.94
0.0	0.0	0.0	0.0	0.00	0.667	9.42	6.29	6.29	112	40	1278.94
0.0	0.0	0.0	0.0	0.00	0.667	9.43	6.29	6.29	110	40	1278.96
0.542	1.663	0.0	0.0	0.90	0.624	8.93	5.57	6.47	51	40	1278.97
0.514	1.57	0.0	0.0	0.81	0.624	8.94	5.58	6.39	55	40	1278.99
0.485	1.473	0.0	0.0	0.71	0.624	8.96	5.59	6.31	61	40	1279.03
0.454	1.369	0.0	0.0	0.62	0.624	8.98	5.60	6.22	68	40	1279.05
0.42	1.257	0.0	0.0	0.53	0.624	9.00	5.61	6.14	73	40	1279.08
0.383	1.132	0.0	0.0	0.43	0.624	9.02	5.63	6.06	78	40	1279.11
0.343	1.002	0.0	0.0	0.34	0.624	9.04	5.64	5.98	80	40	1279.13
0.642	2.002	0.0	0.0	1.29	0.582	8.72	5.08	6.36	22	40	1279.14

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.297	0.848	0.0	0.0	0.25	0.624	9.07	5.66	5.91	82	40	1279.16
0.618	1.92	0.0	0.0	1.19	0.582	8.73	5.08	6.27	24	40	1279.17
0.243	0.668	0.0	0.0	0.16	0.624	9.11	5.68	5.84	82	40	1279.19
0.594	1.837	0.0	0.0	1.09	0.582	8.74	5.09	6.18	25	40	1279.20
0.171	0.428	0.0	0.0	0.07	0.624	9.15	5.71	5.78	81	40	1279.22
0.569	1.755	0.0	0.0	1.00	0.582	8.75	5.09	6.09	27	40	1279.22
0.0	0.0	0.0	0.0	0.00	0.624	9.24	5.77	5.77	80	40	1279.24
0.0	0.0	0.0	0.0	0.00	0.624	9.24	5.77	5.77	79	40	1279.25
0.542	1.663	0.0	0.0	0.90	0.582	8.76	5.10	6.00	30	40	1279.25
0.514	1.57	0.0	0.0	0.81	0.582	8.78	5.11	5.91	34	40	1279.28
0.485	1.473	0.0	0.0	0.71	0.582	8.79	5.12	5.83	38	40	1279.30
0.454	1.369	0.0	0.0	0.62	0.582	8.80	5.12	5.75	41	40	1279.33
0.42	1.257	0.0	0.0	0.53	0.582	8.83	5.14	5.66	44	40	1279.36
0.383	1.132	0.0	0.0	0.43	0.582	8.85	5.15	5.58	47	40	1279.38
0.343	1.002	0.0	0.0	0.34	0.582	8.87	5.16	5.51	49	40	1279.41
0.618	1.92	0.0	0.0	1.19	0.54	8.56	4.62	5.81	1	40	1279.44
0.297	0.848	0.0	0.0	0.25	0.582	8.90	5.18	5.43	51	40	1279.44
0.594	1.837	0.0	0.0	1.09	0.54	8.57	4.63	5.72	4	40	1279.45
0.243	0.668	0.0	0.0	0.16	0.582	8.93	5.20	5.36	54	40	1279.47
0.569	1.755	0.0	0.0	1.00	0.54	8.58	4.63	5.63	7	40	1279.49
0.171	0.428	0.0	0.0	0.07	0.582	8.97	5.22	5.30	55	40	1279.49
0.0	0.0	0.0	0.0	0.00	0.582	9.06	5.28	5.28	55	40	1279.51
0.542	1.663	0.0	0.0	0.90	0.54	8.59	4.64	5.54	9	40	1279.52
0.0	0.0	0.0	0.0	0.00	0.582	9.07	5.28	5.28	55	40	1279.52
0.514	1.57	0.0	0.0	0.81	0.54	8.61	4.65	5.45	12	40	1279.54
0.485	1.473	0.0	0.0	0.71	0.54	8.62	4.65	5.37	14	40	1279.57
0.454	1.369	0.0	0.0	0.62	0.54	8.63	4.66	5.28	16	40	1279.59
0.42	1.257	0.0	0.0	0.53	0.54	8.65	4.67	5.20	18	40	1279.62
0.383	1.132	0.0	0.0	0.43	0.54	8.68	4.69	5.12	19	40	1279.65
0.343	1.002	0.0	0.0	0.34	0.54	8.70	4.70	5.04	20	40	1279.67
0.297	0.848	0.0	0.0	0.25	0.54	8.73	4.71	4.96	22	40	1279.70
0.243	0.668	0.0	0.0	0.16	0.54	8.76	4.73	4.89	23	40	1279.73
0.171	0.428	0.0	0.0	0.07	0.54	8.80	4.75	4.83	24	40	1279.76
0.0	0.0	0.0	0.0	0.00	0.54	8.89	4.80	4.80	22	40	1279.77
0.0	0.0	0.0	0.0	0.00	0.54	8.89	4.80	4.80	21	40	1279.78

Table 3:

Details of cluster #1-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.297	1.036	0.31	0.761	10.15	7.72	8.03	78	0	1278.23
0.0	0.0	0.243	0.87	0.21	0.761	10.18	7.75	7.96	74	0	1278.26
0.0	0.0	0.171	0.652	0.11	0.761	10.23	7.78	7.89	69	0	1278.29
0.0	0.0	0.0	0.0	0.00	0.761	10.29	7.83	7.83	109	0	1278.30
0.0	0.0	0.0	0.0	0.00	0.761	10.30	7.84	7.84	71	0	1278.31
0.0	0.0	0.297	1.036	0.31	0.708	9.92	7.03	7.33	68	0	1278.61
0.0	0.0	0.243	0.87	0.21	0.708	9.95	7.05	7.26	66	0	1278.64
0.0	0.0	0.171	0.652	0.11	0.708	10.00	7.08	7.19	65	0	1278.66
0.0	0.0	0.0	0.0	0.00	0.708	10.07	7.13	7.13	107	0	1278.68
0.0	0.0	0.0	0.0	0.00	0.708	10.08	7.13	7.13	68	0	1278.68
0.0	0.0	0.297	1.036	0.31	0.655	9.70	6.35	6.66	62	0	1278.96
0.0	0.0	0.243	0.87	0.21	0.655	9.73	6.37	6.59	57	0	1278.99
0.0	0.0	0.171	0.652	0.11	0.655	9.78	6.41	6.52	54	0	1279.02
0.0	0.0	0.0	0.0	0.00	0.655	9.85	6.45	6.45	85	0	1279.04
0.0	0.0	0.0	0.0	0.00	0.655	9.86	6.46	6.46	56	0	1279.04
0.0	0.0	0.297	1.036	0.31	0.602	9.48	5.71	6.02	49	0	1279.30
0.0	0.0	0.243	0.87	0.21	0.602	9.50	5.72	5.93	48	0	1279.32
0.0	0.0	0.297	1.036	0.31	0.549	9.26	5.08	5.39	43	0	1279.63
0.0	0.0	0.243	0.87	0.21	0.549	9.29	5.10	5.31	40	0	1279.66
0.0	0.0	0.297	1.036	0.31	0.496	9.01	4.47	4.78	23	0	1279.96
0.0	0.0	0.171	0.442	0.08	0.77	9.97	7.68	7.76	209	20	1276.41
0.0	0.0	0.0	0.0	0.00	0.77	10.10	7.78	7.78	65	20	1276.42
0.0	0.0	0.0	0.0	0.00	0.77	10.06	7.74	7.74	191	20	1276.43
0.0	0.0	0.171	0.442	0.08	0.72	9.77	7.04	7.11	181	20	1276.79
0.0	0.0	0.0	0.0	0.00	0.72	9.88	7.11	7.11	59	20	1276.79
0.0	0.0	0.0	0.0	0.00	0.72	9.85	7.09	7.09	160	20	1276.81
0.0	0.0	0.171	0.442	0.08	0.67	9.56	6.41	6.48	141	20	1277.14
0.0	0.0	0.297	0.882	0.26	0.793	9.79	7.77	8.03	99	40	1274.31
0.0	0.0	0.297	0.882	0.26	0.751	9.62	7.23	7.49	93	40	1274.64
0.0	0.0	0.297	0.882	0.26	0.709	9.45	6.70	6.96	74	40	1274.96
0.0	0.0	0.297	0.882	0.26	0.667	9.28	6.19	6.45	54	40	1275.27

Table 4:



Details of cluster #1-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.243	0.773	0.0	0.0	0.19	0.761	10.16	7.73	7.92	78	0	1278.26
0.171	0.516	0.0	0.0	0.09	0.761	10.20	7.76	7.85	91	0	1278.28
0.0	0.0	0.0	0.0	0.00	0.761	10.29	7.83	7.83	109	0	1278.30
0.0	0.0	0.0	0.0	0.00	0.761	10.30	7.84	7.84	71	0	1278.31
0.171	0.516	0.0	0.0	0.09	0.708	9.98	7.07	7.15	87	0	1278.66
0.0	0.0	0.0	0.0	0.00	0.708	10.07	7.13	7.13	107	0	1278.68
0.0	0.0	0.0	0.0	0.00	0.708	10.08	7.13	7.13	68	0	1278.68
0.0	0.0	0.0	0.0	0.00	0.655	9.85	6.45	6.45	85	0	1279.04
0.0	0.0	0.0	0.0	0.00	0.655	9.86	6.46	6.46	56	0	1279.04
0.171	0.443	0.0	0.0	0.08	0.77	9.98	7.69	7.76	64	20	1276.41
0.0	0.0	0.0	0.0	0.00	0.77	10.10	7.78	7.78	65	20	1276.42
0.0	0.0	0.0	0.0	0.00	0.77	10.06	7.74	7.74	191	20	1276.43
0.0	0.0	0.0	0.0	0.00	0.72	9.88	7.11	7.11	59	20	1276.79
0.0	0.0	0.0	0.0	0.00	0.72	9.85	7.09	7.09	160	20	1276.81

Table 5:

Details of cluster #2-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.939	2.874	0.0	0.0	2.70	0.761	9.75	7.42	10.12	41	0	1284.80
0.924	2.833	0.0	0.0	2.62	0.761	9.75	7.42	10.04	39	0	1284.82
0.907	2.777	0.0	0.0	2.52	0.761	9.77	7.43	9.95	39	0	1284.85
0.891	2.721	0.0	0.0	2.42	0.761	9.77	7.44	9.86	43	0	1284.88
0.874	2.667	0.0	0.0	2.33	0.761	9.78	7.44	9.77	48	0	1284.90
0.857	2.615	0.0	0.0	2.24	0.761	9.79	7.45	9.69	57	0	1284.92
0.84	2.569	0.0	0.0	2.16	0.761	9.80	7.46	9.62	63	0	1284.95
0.822	2.522	0.0	0.0	2.07	0.761	9.81	7.47	9.54	69	0	1284.98
0.804	2.464	0.0	0.0	1.98	0.761	9.83	7.48	9.46	73	0	1285.00
0.786	2.401	0.0	0.0	1.89	0.761	9.85	7.49	9.38	73	0	1285.03
0.939	2.874	0.0	0.0	2.70	0.708	9.53	6.75	9.44	44	0	1285.18
0.924	2.833	0.0	0.0	2.62	0.708	9.53	6.75	9.37	44	0	1285.21
0.907	2.777	0.0	0.0	2.52	0.708	9.54	6.76	9.28	46	0	1285.23
0.891	2.721	0.0	0.0	2.42	0.708	9.56	6.77	9.19	46	0	1285.26
0.874	2.667	0.0	0.0	2.33	0.708	9.56	6.77	9.10	44	0	1285.29
0.857	2.615	0.0	0.0	2.24	0.708	9.56	6.77	9.01	45	0	1285.31
0.84	2.569	0.0	0.0	2.16	0.708	9.58	6.78	8.94	48	0	1285.34
0.822	2.522	0.0	0.0	2.07	0.708	9.59	6.79	8.86	53	0	1285.37
0.804	2.464	0.0	0.0	1.98	0.708	9.61	6.81	8.79	60	0	1285.39
0.786	2.401	0.0	0.0	1.89	0.708	9.62	6.81	8.70	65	0	1285.41
0.939	2.874	0.0	0.0	2.70	0.655	9.31	6.10	8.80	34	0	1285.55
0.924	2.833	0.0	0.0	2.62	0.655	9.32	6.10	8.72	36	0	1285.57
0.907	2.777	0.0	0.0	2.52	0.655	9.33	6.11	8.63	39	0	1285.60
0.891	2.721	0.0	0.0	2.42	0.655	9.34	6.12	8.54	42	0	1285.62
0.874	2.667	0.0	0.0	2.33	0.655	9.34	6.12	8.45	46	0	1285.65
0.857	2.615	0.0	0.0	2.24	0.655	9.35	6.12	8.37	49	0	1285.67
0.84	2.569	0.0	0.0	2.16	0.655	9.36	6.13	8.29	50	0	1285.70
0.822	2.522	0.0	0.0	2.07	0.655	9.37	6.14	8.21	51	0	1285.72
0.804	2.464	0.0	0.0	1.98	0.655	9.39	6.15	8.13	50	0	1285.75
0.786	2.401	0.0	0.0	1.89	0.655	9.40	6.16	8.04	48	0	1285.78
0.939	2.874	0.0	0.0	2.70	0.602	9.10	5.48	8.18	35	0	1285.89
0.924	2.833	0.0	0.0	2.62	0.602	9.11	5.48	8.10	38	0	1285.91
0.907	2.777	0.0	0.0	2.52	0.602	9.12	5.49	8.01	39	0	1285.94
0.891	2.721	0.0	0.0	2.42	0.602	9.12	5.49	7.92	40	0	1285.96
0.874	2.667	0.0	0.0	2.33	0.602	9.13	5.50	7.83	40	0	1285.98
0.857	2.615	0.0	0.0	2.24	0.602	9.14	5.50	7.74	39	0	1286.01
0.84	2.569	0.0	0.0	2.16	0.602	9.15	5.51	7.67	39	0	1286.04
0.822	2.522	0.0	0.0	2.07	0.602	9.16	5.51	7.59	41	0	1286.06
0.804	2.464	0.0	0.0	1.98	0.602	9.17	5.52	7.50	45	0	1286.08
0.786	2.401	0.0	0.0	1.89	0.602	9.19	5.53	7.42	48	0	1286.11
0.939	2.874	0.0	0.0	2.70	0.549	8.87	4.87	7.57	25	0	1286.23
0.924	2.833	0.0	0.0	2.62	0.549	8.88	4.87	7.49	23	0	1286.25
0.907	2.777	0.0	0.0	2.52	0.549	8.89	4.88	7.40	23	0	1286.27
0.891	2.721	0.0	0.0	2.42	0.549	8.90	4.89	7.31	25	0	1286.29
0.874	2.667	0.0	0.0	2.33	0.549	8.90	4.89	7.22	26	0	1286.31
0.857	2.615	0.0	0.0	2.24	0.549	8.91	4.89	7.13	30	0	1286.34

*continued on next page*

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.84	2.569	0.0	0.0	2.16	0.549	8.93	4.90	7.06	32	0	1286.36
0.822	2.522	0.0	0.0	2.07	0.549	8.93	4.90	6.98	37	0	1286.38
0.804	2.464	0.0	0.0	1.98	0.549	8.95	4.91	6.89	38	0	1286.41
0.786	2.401	0.0	0.0	1.89	0.549	8.96	4.92	6.81	39	0	1286.43
0.939	2.874	0.0	0.0	2.70	0.496	8.63	4.28	6.98	17	0	1286.56
0.924	2.833	0.0	0.0	2.62	0.496	8.64	4.28	6.90	19	0	1286.57
0.907	2.777	0.0	0.0	2.52	0.496	8.65	4.29	6.81	20	0	1286.59
0.891	2.721	0.0	0.0	2.42	0.496	8.66	4.29	6.72	21	0	1286.62
0.874	2.667	0.0	0.0	2.33	0.496	8.66	4.30	6.63	21	0	1286.64
0.857	2.615	0.0	0.0	2.24	0.496	8.67	4.30	6.54	21	0	1286.66
0.84	2.569	0.0	0.0	2.16	0.496	8.69	4.31	6.47	20	0	1286.69
0.822	2.522	0.0	0.0	2.07	0.496	8.70	4.31	6.39	19	0	1286.71
0.804	2.464	0.0	0.0	1.98	0.496	8.71	4.32	6.30	19	0	1286.73
0.786	2.401	0.0	0.0	1.89	0.496	8.72	4.33	6.21	19	0	1286.75
0.939	2.874	0.0	0.0	2.70	0.443	8.39	3.72	6.42	8	0	1286.86
0.924	2.833	0.0	0.0	2.62	0.443	8.40	3.72	6.34	9	0	1286.88
0.907	2.777	0.0	0.0	2.52	0.443	8.41	3.72	6.24	9	0	1286.90
0.891	2.721	0.0	0.0	2.42	0.443	8.41	3.73	6.15	8	0	1286.93
0.874	2.667	0.0	0.0	2.33	0.443	8.42	3.73	6.06	8	0	1286.95
0.857	2.615	0.0	0.0	2.24	0.443	8.43	3.73	5.98	8	0	1286.97
0.84	2.569	0.0	0.0	2.16	0.443	8.44	3.74	5.90	9	0	1286.99
0.822	2.522	0.0	0.0	2.07	0.443	8.45	3.75	5.82	10	0	1287.01
0.804	2.464	0.0	0.0	1.98	0.443	8.47	3.75	5.73	11	0	1287.03
0.786	2.401	0.0	0.0	1.89	0.443	8.48	3.76	5.64	12	0	1287.05
0.857	2.615	0.0	0.0	2.24	0.39	8.19	3.19	5.43	0	0	1287.25
0.84	2.569	0.0	0.0	2.16	0.39	8.20	3.20	5.36	0	0	1287.27
0.822	2.522	0.0	0.0	2.07	0.39	8.21	3.20	5.27	1	0	1287.28
0.804	2.464	0.0	0.0	1.98	0.39	8.22	3.21	5.19	1	0	1287.30
0.786	2.401	0.0	0.0	1.89	0.39	8.23	3.21	5.10	1	0	1287.33
0.686	2.148	0.0	0.0	1.47	0.793	9.55	7.58	9.05	111	40	1281.13
0.664	2.074	0.0	0.0	1.38	0.793	9.57	7.59	8.97	119	40	1281.16
0.786	2.499	0.0	0.0	1.96	0.751	9.32	7.00	8.97	62	40	1281.31
0.767	2.423	0.0	0.0	1.86	0.751	9.33	7.01	8.87	66	40	1281.34
0.748	2.366	0.0	0.0	1.77	0.751	9.35	7.02	8.79	72	40	1281.37
0.728	2.291	0.0	0.0	1.67	0.751	9.36	7.03	8.70	81	40	1281.40
0.707	2.217	0.0	0.0	1.57	0.751	9.37	7.04	8.61	90	40	1281.43
0.686	2.148	0.0	0.0	1.47	0.751	9.39	7.05	8.52	96	40	1281.46
0.664	2.074	0.0	0.0	1.38	0.751	9.40	7.06	8.44	101	40	1281.49
0.786	2.499	0.0	0.0	1.96	0.709	9.15	6.49	8.45	58	40	1281.64
0.767	2.423	0.0	0.0	1.86	0.709	9.16	6.50	8.36	61	40	1281.67
0.748	2.366	0.0	0.0	1.77	0.709	9.18	6.51	8.28	62	40	1281.69
0.728	2.291	0.0	0.0	1.67	0.709	9.19	6.52	8.18	64	40	1281.72
0.707	2.217	0.0	0.0	1.57	0.709	9.20	6.53	8.09	66	40	1281.75
0.686	2.148	0.0	0.0	1.47	0.709	9.22	6.53	8.01	70	40	1281.78
0.664	2.074	0.0	0.0	1.38	0.709	9.23	6.54	7.92	76	40	1281.81
0.786	2.499	0.0	0.0	1.96	0.667	8.99	5.99	7.96	42	40	1281.94
0.767	2.423	0.0	0.0	1.86	0.667	9.00	6.00	7.86	43	40	1281.97
0.748	2.366	0.0	0.0	1.77	0.667	9.01	6.01	7.78	45	40	1282.00

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $\text{cm}^{-1}$ ]
0.728	2.291	0.0	0.0	1.67	0.667	9.02	6.02	7.68	49	40	1282.03
0.707	2.217	0.0	0.0	1.57	0.667	9.04	6.03	7.59	53	40	1282.06
0.686	2.148	0.0	0.0	1.47	0.667	9.05	6.03	7.51	58	40	1282.08
0.664	2.074	0.0	0.0	1.38	0.667	9.06	6.04	7.42	64	40	1282.11
0.786	2.499	0.0	0.0	1.96	0.624	8.81	5.50	7.46	24	40	1282.25
0.767	2.423	0.0	0.0	1.86	0.624	8.83	5.51	7.37	25	40	1282.27
0.748	2.366	0.0	0.0	1.77	0.624	8.84	5.51	7.28	28	40	1282.30
0.728	2.291	0.0	0.0	1.67	0.624	8.85	5.52	7.19	31	40	1282.33
0.707	2.217	0.0	0.0	1.57	0.624	8.86	5.53	7.10	34	40	1282.36
0.686	2.148	0.0	0.0	1.47	0.624	8.87	5.54	7.01	37	40	1282.38
0.664	2.074	0.0	0.0	1.38	0.624	8.89	5.55	6.92	39	40	1282.41
0.786	2.499	0.0	0.0	1.96	0.582	8.65	5.03	7.00	8	40	1282.52
0.728	2.291	0.0	0.0	1.67	0.582	8.68	5.05	6.72	13	40	1282.61
0.707	2.217	0.0	0.0	1.57	0.582	8.69	5.06	6.62	14	40	1282.64
0.686	2.148	0.0	0.0	1.47	0.582	8.70	5.07	6.54	16	40	1282.66
0.664	2.074	0.0	0.0	1.38	0.582	8.72	5.07	6.45	17	40	1282.69

Table 6:

Details of cluster #3-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
1.0	3.073	0.0	0.0	3.07	0.761	9.69	7.37	10.45	51	0	1284.35
0.985	3.013	0.0	0.0	2.97	0.761	9.71	7.39	10.36	45	0	1284.38
0.97	2.976	0.0	0.0	2.89	0.761	9.72	7.40	10.28	48	0	1284.40
1.0	3.073	0.0	0.0	3.07	0.708	9.47	6.70	9.78	64	0	1284.74
0.985	3.013	0.0	0.0	2.97	0.708	9.49	6.72	9.69	67	0	1284.76
0.97	2.976	0.0	0.0	2.89	0.708	9.50	6.72	9.61	64	0	1284.79
1.0	3.073	0.0	0.0	3.07	0.655	9.25	6.06	9.13	41	0	1285.10
0.985	3.013	0.0	0.0	2.97	0.655	9.27	6.07	9.04	47	0	1285.13
0.97	2.976	0.0	0.0	2.89	0.655	9.28	6.08	8.97	55	0	1285.15
1.0	3.073	0.0	0.0	3.07	0.602	9.04	5.44	8.51	48	0	1285.43
0.985	3.013	0.0	0.0	2.97	0.602	9.05	5.45	8.42	51	0	1285.46
0.97	2.976	0.0	0.0	2.89	0.602	9.06	5.46	8.34	52	0	1285.48
1.0	3.073	0.0	0.0	3.07	0.549	8.81	4.84	7.91	30	0	1285.76
0.985	3.013	0.0	0.0	2.97	0.549	8.83	4.85	7.82	27	0	1285.79
0.97	2.976	0.0	0.0	2.89	0.549	8.84	4.85	7.74	27	0	1285.81
1.0	3.073	0.0	0.0	3.07	0.496	8.58	4.26	7.33	19	0	1286.08
0.985	3.013	0.0	0.0	2.97	0.496	8.60	4.26	7.23	24	0	1286.10
0.97	2.976	0.0	0.0	2.89	0.496	8.61	4.27	7.16	26	0	1286.13
0.955	2.928	0.0	0.0	2.80	0.496	8.62	4.28	7.07	28	0	1286.15
1.0	3.073	0.0	0.0	3.07	0.443	8.34	3.69	6.77	11	0	1286.38
0.985	3.013	0.0	0.0	2.97	0.443	8.35	3.70	6.67	11	0	1286.40
0.97	2.976	0.0	0.0	2.89	0.443	8.37	3.71	6.59	11	0	1286.43
0.955	2.928	0.0	0.0	2.80	0.443	8.38	3.71	6.51	11	0	1286.45
1.0	3.173	0.0	0.0	3.17	0.77	9.43	7.26	10.44	196	20	1282.35
0.985	3.125	0.0	0.0	3.08	0.77	9.45	7.27	10.35	209	20	1282.38
0.97	3.077	0.0	0.0	2.98	0.77	9.46	7.28	10.27	217	20	1282.41
0.955	3.024	0.0	0.0	2.89	0.77	9.47	7.29	10.18	223	20	1282.45
0.939	2.975	0.0	0.0	2.79	0.77	9.48	7.30	10.09	236	20	1282.48
0.924	2.921	0.0	0.0	2.70	0.77	9.50	7.31	10.01	252	20	1282.50
0.907	2.86	0.0	0.0	2.59	0.77	9.51	7.32	9.92	272	20	1282.53
0.891	2.812	0.0	0.0	2.51	0.77	9.53	7.34	9.84	294	20	1282.56
1.0	3.173	0.0	0.0	3.17	0.72	9.23	6.65	9.82	158	20	1282.74
0.985	3.125	0.0	0.0	3.08	0.72	9.24	6.65	9.73	172	20	1282.77
0.97	3.077	0.0	0.0	2.98	0.72	9.26	6.66	9.65	186	20	1282.79
0.955	3.024	0.0	0.0	2.89	0.72	9.27	6.67	9.56	204	20	1282.82
0.939	2.975	0.0	0.0	2.79	0.72	9.28	6.68	9.48	217	20	1282.85
0.924	2.921	0.0	0.0	2.70	0.72	9.29	6.69	9.39	223	20	1282.88
0.907	2.86	0.0	0.0	2.59	0.72	9.31	6.70	9.30	228	20	1282.91
0.891	2.812	0.0	0.0	2.51	0.72	9.33	6.72	9.22	239	20	1282.94
1.0	3.173	0.0	0.0	3.17	0.67	9.03	6.05	9.22	148	20	1283.10
0.985	3.125	0.0	0.0	3.08	0.67	9.04	6.06	9.14	149	20	1283.13
0.97	3.077	0.0	0.0	2.98	0.67	9.05	6.07	9.05	154	20	1283.16
0.955	3.024	0.0	0.0	2.89	0.67	9.06	6.07	8.96	161	20	1283.18
0.939	2.975	0.0	0.0	2.79	0.67	9.08	6.08	8.88	169	20	1283.21
0.924	2.921	0.0	0.0	2.70	0.67	9.09	6.09	8.79	184	20	1283.24
0.907	2.86	0.0	0.0	2.59	0.67	9.11	6.10	8.70	198	20	1283.27

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.891	2.812	0.0	0.0	2.51	0.67	9.12	6.11	8.62	212	20	1283.30
1.0	3.173	0.0	0.0	3.17	0.62	8.83	5.47	8.65	104	20	1283.45
0.985	3.125	0.0	0.0	3.08	0.62	8.84	5.48	8.56	113	20	1283.47
0.97	3.077	0.0	0.0	2.98	0.62	8.85	5.49	8.47	126	20	1283.50
0.955	3.024	0.0	0.0	2.89	0.62	8.87	5.50	8.38	138	20	1283.52
0.939	2.975	0.0	0.0	2.79	0.62	8.88	5.50	8.30	146	20	1283.56
0.924	2.921	0.0	0.0	2.70	0.62	8.89	5.51	8.21	149	20	1283.58
0.907	2.86	0.0	0.0	2.59	0.62	8.90	5.52	8.11	150	20	1283.61
0.891	2.812	0.0	0.0	2.51	0.62	8.92	5.53	8.03	154	20	1283.64
1.0	3.173	0.0	0.0	3.17	0.57	8.63	4.92	8.09	72	20	1283.77
0.985	3.125	0.0	0.0	3.08	0.57	8.64	4.93	8.00	75	20	1283.79
0.97	3.077	0.0	0.0	2.98	0.57	8.65	4.93	7.92	78	20	1283.82
0.955	3.024	0.0	0.0	2.89	0.57	8.66	4.94	7.83	80	20	1283.85
0.939	2.975	0.0	0.0	2.79	0.57	8.68	4.95	7.74	84	20	1283.87
0.924	2.921	0.0	0.0	2.70	0.57	8.69	4.95	7.65	90	20	1283.90
0.907	2.86	0.0	0.0	2.59	0.57	8.70	4.96	7.55	97	20	1283.93
0.891	2.812	0.0	0.0	2.51	0.57	8.71	4.97	7.47	105	20	1283.96
1.0	3.173	0.0	0.0	3.17	0.52	8.43	4.38	7.56	29	20	1284.07
0.985	3.125	0.0	0.0	3.08	0.52	8.44	4.39	7.47	31	20	1284.09
0.97	3.077	0.0	0.0	2.98	0.52	8.45	4.40	7.38	33	20	1284.12
0.955	3.024	0.0	0.0	2.89	0.52	8.46	4.40	7.29	35	20	1284.15
0.939	2.975	0.0	0.0	2.79	0.52	8.47	4.41	7.20	38	20	1284.17
0.924	2.921	0.0	0.0	2.70	0.52	8.48	4.41	7.11	41	20	1284.20
0.907	2.86	0.0	0.0	2.59	0.52	8.50	4.42	7.01	44	20	1284.23
0.891	2.812	0.0	0.0	2.51	0.52	8.51	4.43	6.93	45	20	1284.26
1.0	3.262	0.0	0.0	3.26	0.793	9.34	7.41	10.67	72	40	1280.22
0.985	3.215	0.0	0.0	3.17	0.793	9.35	7.41	10.58	75	40	1280.25
0.97	3.15	0.0	0.0	3.06	0.793	9.36	7.42	10.47	76	40	1280.28
0.955	3.088	0.0	0.0	2.95	0.793	9.37	7.43	10.38	77	40	1280.31
0.939	3.027	0.0	0.0	2.84	0.793	9.38	7.44	10.28	80	40	1280.34
0.924	2.984	0.0	0.0	2.76	0.793	9.39	7.44	10.20	84	40	1280.37
0.907	2.919	0.0	0.0	2.65	0.793	9.40	7.45	10.10	92	40	1280.41
0.891	2.861	0.0	0.0	2.55	0.793	9.41	7.46	10.01	102	40	1280.43
0.874	2.797	0.0	0.0	2.44	0.793	9.43	7.47	9.92	115	40	1280.47
0.857	2.747	0.0	0.0	2.35	0.793	9.44	7.48	9.84	124	40	1280.50
0.84	2.682	0.0	0.0	2.25	0.793	9.45	7.50	9.75	127	40	1280.53
1.0	3.262	0.0	0.0	3.26	0.751	9.17	6.89	10.15	64	40	1280.56
0.822	2.62	0.0	0.0	2.15	0.793	9.47	7.51	9.66	129	40	1280.56
0.985	3.215	0.0	0.0	3.17	0.751	9.18	6.89	10.06	64	40	1280.59
0.804	2.558	0.0	0.0	2.06	0.793	9.48	7.52	9.58	131	40	1280.59
0.97	3.15	0.0	0.0	3.06	0.751	9.19	6.90	9.96	65	40	1280.62
0.955	3.088	0.0	0.0	2.95	0.751	9.20	6.91	9.86	68	40	1280.65
0.939	3.027	0.0	0.0	2.84	0.751	9.21	6.92	9.76	72	40	1280.68
0.924	2.984	0.0	0.0	2.76	0.751	9.22	6.93	9.68	78	40	1280.71
0.907	2.919	0.0	0.0	2.65	0.751	9.23	6.93	9.58	83	40	1280.74
0.891	2.861	0.0	0.0	2.55	0.751	9.24	6.94	9.49	86	40	1280.77
0.874	2.797	0.0	0.0	2.44	0.751	9.26	6.95	9.40	89	40	1280.80
0.857	2.747	0.0	0.0	2.35	0.751	9.27	6.96	9.32	93	40	1280.84

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.84	2.682	0.0	0.0	2.25	0.751	9.28	6.97	9.23	98	40	1280.87
1.0	3.262	0.0	0.0	3.26	0.709	9.01	6.39	9.65	50	40	1280.88
0.822	2.62	0.0	0.0	2.15	0.751	9.30	6.98	9.14	106	40	1280.90
0.985	3.215	0.0	0.0	3.17	0.709	9.01	6.39	9.56	53	40	1280.92
0.804	2.558	0.0	0.0	2.06	0.751	9.31	7.00	9.05	117	40	1280.93
0.97	3.15	0.0	0.0	3.06	0.709	9.02	6.40	9.45	57	40	1280.94
0.955	3.088	0.0	0.0	2.95	0.709	9.03	6.40	9.35	60	40	1280.98
0.939	3.027	0.0	0.0	2.84	0.709	9.04	6.41	9.25	62	40	1281.00
0.924	2.984	0.0	0.0	2.76	0.709	9.05	6.42	9.18	64	40	1281.03
0.907	2.919	0.0	0.0	2.65	0.709	9.06	6.43	9.07	67	40	1281.07
0.891	2.861	0.0	0.0	2.55	0.709	9.08	6.44	8.99	71	40	1281.09
0.874	2.797	0.0	0.0	2.44	0.709	9.09	6.44	8.89	76	40	1281.12
0.857	2.747	0.0	0.0	2.35	0.709	9.10	6.45	8.81	81	40	1281.16
0.84	2.682	0.0	0.0	2.25	0.709	9.12	6.46	8.72	87	40	1281.19
1.0	3.262	0.0	0.0	3.26	0.667	8.84	5.90	9.16	38	40	1281.19
0.822	2.62	0.0	0.0	2.15	0.709	9.13	6.47	8.63	90	40	1281.22
0.985	3.215	0.0	0.0	3.17	0.667	8.85	5.90	9.07	39	40	1281.22
0.804	2.558	0.0	0.0	2.06	0.709	9.15	6.48	8.54	89	40	1281.25
0.97	3.15	0.0	0.0	3.06	0.667	8.86	5.91	8.96	39	40	1281.25
0.955	3.088	0.0	0.0	2.95	0.667	8.86	5.91	8.86	39	40	1281.28
0.939	3.027	0.0	0.0	2.84	0.667	8.88	5.92	8.76	41	40	1281.31
0.924	2.984	0.0	0.0	2.76	0.667	8.89	5.93	8.68	44	40	1281.34
0.907	2.919	0.0	0.0	2.65	0.667	8.90	5.94	8.58	48	40	1281.37
0.891	2.861	0.0	0.0	2.55	0.667	8.91	5.94	8.49	54	40	1281.40
0.874	2.797	0.0	0.0	2.44	0.667	8.92	5.95	8.40	59	40	1281.43
0.857	2.747	0.0	0.0	2.35	0.667	8.94	5.96	8.31	62	40	1281.46
0.84	2.682	0.0	0.0	2.25	0.667	8.95	5.97	8.22	63	40	1281.49
1.0	3.262	0.0	0.0	3.26	0.624	8.67	5.41	8.67	19	40	1281.49
0.822	2.62	0.0	0.0	2.15	0.667	8.96	5.98	8.13	65	40	1281.52
0.985	3.215	0.0	0.0	3.17	0.624	8.68	5.41	8.58	20	40	1281.53
0.804	2.558	0.0	0.0	2.06	0.667	8.98	5.99	8.04	67	40	1281.55
0.97	3.15	0.0	0.0	3.06	0.624	8.68	5.42	8.47	22	40	1281.56
0.955	3.088	0.0	0.0	2.95	0.624	8.69	5.42	8.37	24	40	1281.59
0.939	3.027	0.0	0.0	2.84	0.624	8.70	5.43	8.27	26	40	1281.62
0.924	2.984	0.0	0.0	2.76	0.624	8.71	5.44	8.19	28	40	1281.64
0.907	2.919	0.0	0.0	2.65	0.624	8.73	5.45	8.09	30	40	1281.68
0.891	2.861	0.0	0.0	2.55	0.624	8.74	5.45	8.00	31	40	1281.70
0.874	2.797	0.0	0.0	2.44	0.624	8.75	5.46	7.90	32	40	1281.73
0.857	2.747	0.0	0.0	2.35	0.624	8.76	5.47	7.82	33	40	1281.76
0.84	2.682	0.0	0.0	2.25	0.624	8.78	5.48	7.73	35	40	1281.79
0.822	2.62	0.0	0.0	2.15	0.624	8.79	5.49	7.64	36	40	1281.82
0.804	2.558	0.0	0.0	2.06	0.624	8.80	5.49	7.55	39	40	1281.85
0.97	3.15	0.0	0.0	3.06	0.582	8.52	4.96	8.01	3	40	1281.86
0.955	3.088	0.0	0.0	2.95	0.582	8.52	4.96	7.91	4	40	1281.86
0.939	3.027	0.0	0.0	2.84	0.582	8.53	4.97	7.81	6	40	1281.90
0.924	2.984	0.0	0.0	2.76	0.582	8.54	4.97	7.73	7	40	1281.92
0.907	2.919	0.0	0.0	2.65	0.582	8.56	4.98	7.63	8	40	1281.96
0.891	2.861	0.0	0.0	2.55	0.582	8.57	4.99	7.54	9	40	1281.99

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.874	2.797	0.0	0.0	2.44	0.582	8.58	4.99	7.44	10	40	1282.01
0.857	2.747	0.0	0.0	2.35	0.582	8.59	5.00	7.35	11	40	1282.05
0.84	2.682	0.0	0.0	2.25	0.582	8.61	5.01	7.26	12	40	1282.08
0.822	2.62	0.0	0.0	2.15	0.582	8.62	5.02	7.17	12	40	1282.10
0.804	2.558	0.0	0.0	2.06	0.582	8.63	5.03	7.08	12	40	1282.12

Table 7:



Details of cluster #4-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $cm^{-1}$ ]
0.874	2.754	0.0	0.0	2.41	0.77	9.55	7.36	9.76	239	20	1271.03
0.857	2.7	0.0	0.0	2.31	0.77	9.56	7.36	9.68	252	20	1271.06
0.84	2.641	0.0	0.0	2.22	0.77	9.58	7.38	9.59	268	20	1271.08
0.822	2.573	0.0	0.0	2.12	0.77	9.59	7.39	9.50	289	20	1271.11
0.804	2.516	0.0	0.0	2.02	0.77	9.61	7.40	9.42	306	20	1271.14
0.786	2.455	0.0	0.0	1.93	0.77	9.62	7.41	9.34	310	20	1271.17
0.874	2.754	0.0	0.0	2.41	0.72	9.35	6.73	9.14	226	20	1271.40
0.857	2.7	0.0	0.0	2.31	0.72	9.36	6.74	9.05	232	20	1271.44
0.84	2.641	0.0	0.0	2.22	0.72	9.37	6.75	8.97	236	20	1271.46
0.822	2.573	0.0	0.0	2.12	0.72	9.39	6.76	8.87	241	20	1271.49
0.804	2.516	0.0	0.0	2.02	0.72	9.40	6.77	8.79	246	20	1271.52
0.786	2.455	0.0	0.0	1.93	0.72	9.42	6.78	8.71	254	20	1271.55
0.874	2.754	0.0	0.0	2.41	0.67	9.14	6.12	8.53	99	20	1271.77
0.857	2.7	0.0	0.0	2.31	0.67	9.15	6.13	8.45	103	20	1271.79
0.84	2.641	0.0	0.0	2.22	0.67	9.17	6.14	8.36	124	20	1271.82
0.822	2.573	0.0	0.0	2.12	0.67	9.18	6.15	8.27	153	20	1271.85
0.804	2.516	0.0	0.0	2.02	0.67	9.20	6.16	8.19	176	20	1271.88
0.786	2.455	0.0	0.0	1.93	0.67	9.21	6.17	8.10	189	20	1271.91
0.874	2.754	0.0	0.0	2.41	0.62	8.94	5.54	7.95	145	20	1272.11
0.857	2.7	0.0	0.0	2.31	0.62	8.95	5.55	7.86	148	20	1272.13
0.84	2.641	0.0	0.0	2.22	0.62	8.96	5.56	7.77	149	20	1272.16
0.822	2.573	0.0	0.0	2.12	0.62	8.97	5.56	7.68	153	20	1272.19
0.804	2.516	0.0	0.0	2.02	0.62	8.99	5.57	7.60	158	20	1272.22
0.786	2.455	0.0	0.0	1.93	0.62	9.00	5.58	7.51	167	20	1272.25
0.874	2.754	0.0	0.0	2.41	0.57	8.73	4.98	7.38	92	20	1272.43
0.857	2.7	0.0	0.0	2.31	0.57	8.74	4.98	7.30	99	20	1272.45
0.84	2.641	0.0	0.0	2.22	0.57	8.75	4.99	7.21	107	20	1272.48
0.822	2.573	0.0	0.0	2.12	0.57	8.77	5.00	7.11	117	20	1272.51
0.804	2.516	0.0	0.0	2.02	0.57	8.78	5.01	7.03	126	20	1272.54
0.786	2.455	0.0	0.0	1.93	0.57	8.80	5.01	6.94	129	20	1272.57
0.874	2.754	0.0	0.0	2.41	0.52	8.53	4.43	6.84	42	20	1272.73
0.857	2.7	0.0	0.0	2.31	0.52	8.53	4.44	6.75	48	20	1272.76
0.84	2.641	0.0	0.0	2.22	0.52	8.55	4.44	6.66	53	20	1272.78
0.822	2.573	0.0	0.0	2.12	0.52	8.56	4.45	6.57	56	20	1272.82
0.804	2.516	0.0	0.0	2.02	0.52	8.57	4.46	6.48	57	20	1272.84
0.786	2.455	0.0	0.0	1.93	0.52	8.59	4.46	6.39	57	20	1272.87

Table 8:

Details of cluster #5-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	$T$	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.542	1.635	0.89	0.77	9.77	7.52	8.41	355	20	1279.46
0.0	0.0	0.514	1.545	0.79	0.77	9.78	7.53	8.32	358	20	1279.48
0.0	0.0	0.485	1.456	0.71	0.77	9.79	7.54	8.25	369	20	1279.52
0.0	0.0	0.454	1.357	0.62	0.77	9.81	7.55	8.17	371	20	1279.54
0.0	0.0	0.542	1.635	0.89	0.72	9.56	6.88	7.77	317	20	1279.83
0.0	0.0	0.514	1.545	0.79	0.72	9.57	6.89	7.69	307	20	1279.86
0.0	0.0	0.485	1.456	0.71	0.72	9.59	6.90	7.61	299	20	1279.88
0.0	0.0	0.454	1.357	0.62	0.72	9.60	6.91	7.53	291	20	1279.91
0.0	0.0	0.542	1.635	0.89	0.67	9.35	6.27	7.15	253	20	1280.18
0.0	0.0	0.514	1.545	0.79	0.67	9.37	6.28	7.07	258	20	1280.21
0.0	0.0	0.485	1.456	0.71	0.67	9.38	6.29	6.99	261	20	1280.23
0.0	0.0	0.454	1.357	0.62	0.67	9.40	6.30	6.91	262	20	1280.27
0.0	0.0	0.542	1.635	0.89	0.62	9.14	5.67	6.56	227	20	1280.51
0.0	0.0	0.514	1.545	0.79	0.62	9.16	5.68	6.47	219	20	1280.54
0.0	0.0	0.485	1.456	0.71	0.62	9.18	5.69	6.39	210	20	1280.57
0.0	0.0	0.454	1.357	0.62	0.62	9.19	5.70	6.32	203	20	1280.60
0.0	0.0	0.542	1.635	0.89	0.57	8.94	5.10	5.98	140	20	1280.82
0.0	0.0	0.514	1.545	0.79	0.57	8.96	5.11	5.90	139	20	1280.85
0.0	0.0	0.485	1.456	0.71	0.57	8.97	5.11	5.82	139	20	1280.88
0.0	0.0	0.454	1.357	0.62	0.57	8.99	5.12	5.74	143	20	1280.90
0.0	0.0	0.542	1.635	0.89	0.52	8.74	4.54	5.43	78	20	1281.12
0.0	0.0	0.514	1.545	0.79	0.52	8.75	4.55	5.35	80	20	1281.15
0.0	0.0	0.485	1.456	0.71	0.52	8.77	4.56	5.27	79	20	1281.17
0.0	0.0	0.569	1.773	1.01	0.793	9.64	7.64	8.65	166	40	1277.36
0.0	0.0	0.542	1.697	0.92	0.793	9.65	7.66	8.58	181	40	1277.39
0.0	0.0	0.514	1.604	0.82	0.793	9.66	7.66	8.49	192	40	1277.42
0.0	0.0	0.485	1.511	0.73	0.793	9.68	7.67	8.41	193	40	1277.45
0.0	0.0	0.454	1.403	0.64	0.793	9.69	7.69	8.32	184	40	1277.48
0.0	0.0	0.42	1.29	0.54	0.793	9.71	7.70	8.24	176	40	1277.51
0.0	0.0	0.383	1.168	0.45	0.793	9.73	7.72	8.16	166	40	1277.54
0.0	0.0	0.569	1.773	1.01	0.751	9.47	7.11	8.12	154	40	1277.69
0.0	0.0	0.542	1.697	0.92	0.751	9.48	7.12	8.04	161	40	1277.72
0.0	0.0	0.514	1.604	0.82	0.751	9.49	7.13	7.96	157	40	1277.75
0.0	0.0	0.485	1.511	0.73	0.751	9.51	7.14	7.87	148	40	1277.78
0.0	0.0	0.454	1.403	0.64	0.751	9.53	7.15	7.79	144	40	1277.81
0.0	0.0	0.42	1.29	0.54	0.751	9.54	7.17	7.71	143	40	1277.84
0.0	0.0	0.383	1.168	0.45	0.751	9.56	7.18	7.63	146	40	1277.87
0.0	0.0	0.569	1.773	1.01	0.709	9.30	6.59	7.60	128	40	1278.00
0.0	0.0	0.542	1.697	0.92	0.709	9.31	6.60	7.52	134	40	1278.03
0.0	0.0	0.514	1.604	0.82	0.709	9.32	6.61	7.44	134	40	1278.06
0.0	0.0	0.485	1.511	0.73	0.709	9.34	6.62	7.35	131	40	1278.09
0.0	0.0	0.454	1.403	0.64	0.709	9.36	6.63	7.27	130	40	1278.12
0.0	0.0	0.42	1.29	0.54	0.709	9.37	6.65	7.19	129	40	1278.16
0.0	0.0	0.383	1.168	0.45	0.709	9.39	6.66	7.11	124	40	1278.18
0.0	0.0	0.569	1.773	1.01	0.667	9.13	6.09	7.10	95	40	1278.31
0.0	0.0	0.542	1.697	0.92	0.667	9.14	6.10	7.02	103	40	1278.33

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.514	1.604	0.82	0.667	9.15	6.11	6.93	108	40	1278.36
0.0	0.0	0.485	1.511	0.73	0.667	9.17	6.12	6.85	107	40	1278.40
0.0	0.0	0.454	1.403	0.64	0.667	9.19	6.13	6.76	103	40	1278.42
0.0	0.0	0.42	1.29	0.54	0.667	9.20	6.14	6.68	99	40	1278.45
0.0	0.0	0.383	1.168	0.45	0.667	9.22	6.15	6.60	97	40	1278.49
0.0	0.0	0.569	1.773	1.01	0.624	8.95	5.59	6.59	71	40	1278.60
0.0	0.0	0.542	1.697	0.92	0.624	8.97	5.60	6.52	75	40	1278.63
0.0	0.0	0.514	1.604	0.82	0.624	8.98	5.60	6.43	74	40	1278.66
0.0	0.0	0.485	1.511	0.73	0.624	8.99	5.61	6.35	69	40	1278.69
0.0	0.0	0.454	1.403	0.64	0.624	9.01	5.62	6.26	66	40	1278.72
0.0	0.0	0.42	1.29	0.54	0.624	9.03	5.63	6.18	65	40	1278.75
0.0	0.0	0.383	1.168	0.45	0.624	9.05	5.65	6.09	66	40	1278.78
0.0	0.0	0.569	1.773	1.01	0.582	8.78	5.11	6.12	36	40	1278.87
0.0	0.0	0.542	1.697	0.92	0.582	8.79	5.12	6.04	39	40	1278.91
0.0	0.0	0.514	1.604	0.82	0.582	8.81	5.13	5.95	38	40	1278.94
0.0	0.0	0.485	1.511	0.73	0.582	8.83	5.14	5.87	38	40	1278.96
0.0	0.0	0.454	1.403	0.64	0.582	8.84	5.15	5.78	38	40	1278.99
0.0	0.0	0.42	1.29	0.54	0.582	8.86	5.16	5.70	39	40	1279.02
0.0	0.0	0.383	1.168	0.45	0.582	8.88	5.17	5.62	40	40	1279.05
0.0	0.0	0.542	1.697	0.92	0.54	8.63	4.66	5.58	2	40	1279.18
0.0	0.0	0.569	1.773	1.01	0.54	8.61	4.65	5.66	1	40	1279.20
0.0	0.0	0.514	1.604	0.82	0.54	8.64	4.66	5.49	3	40	1279.20
0.0	0.0	0.485	1.511	0.73	0.54	8.65	4.67	5.41	4	40	1279.22
0.0	0.0	0.454	1.403	0.64	0.54	8.67	4.68	5.32	5	40	1279.25
0.0	0.0	0.42	1.29	0.54	0.54	8.69	4.69	5.23	5	40	1279.27
0.0	0.0	0.383	1.168	0.45	0.54	8.71	4.70	5.15	6	40	1279.31

Table 9:

Details of cluster #6-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.542	1.708	0.93	0.761	9.99	7.60	8.53	108	0	1289.94
0.0	0.0	0.514	1.649	0.85	0.761	10.01	7.61	8.46	102	0	1289.97
0.0	0.0	0.485	1.574	0.76	0.761	10.02	7.62	8.39	96	0	1290.00
0.0	0.0	0.454	1.472	0.67	0.761	10.04	7.64	8.31	98	0	1290.02
0.0	0.0	0.42	1.383	0.58	0.761	10.06	7.65	8.23	99	0	1290.05
0.0	0.0	0.383	1.276	0.49	0.761	10.08	7.67	8.16	94	0	1290.07
0.0	0.0	0.343	1.165	0.40	0.761	10.10	7.68	8.08	93	0	1290.10
0.0	0.0	0.569	1.794	1.02	0.708	9.76	6.91	7.93	91	0	1290.30
0.0	0.0	0.542	1.708	0.93	0.708	9.77	6.92	7.84	90	0	1290.32
0.0	0.0	0.514	1.649	0.85	0.708	9.78	6.93	7.77	89	0	1290.35
0.0	0.0	0.485	1.574	0.76	0.708	9.79	6.93	7.70	89	0	1290.37
0.0	0.0	0.454	1.472	0.67	0.708	9.82	6.95	7.62	84	0	1290.40
0.0	0.0	0.42	1.383	0.58	0.708	9.84	6.96	7.54	78	0	1290.43
0.0	0.0	0.383	1.276	0.49	0.708	9.86	6.98	7.47	74	0	1290.45
0.0	0.0	0.343	1.165	0.40	0.708	9.88	7.00	7.39	69	0	1290.48
0.0	0.0	0.569	1.794	1.02	0.655	9.53	6.24	7.27	77	0	1290.65
0.0	0.0	0.542	1.708	0.93	0.655	9.55	6.26	7.18	72	0	1290.68
0.0	0.0	0.514	1.649	0.85	0.655	9.56	6.26	7.11	68	0	1290.70
0.0	0.0	0.485	1.574	0.76	0.655	9.57	6.27	7.04	68	0	1290.73
0.0	0.0	0.454	1.472	0.67	0.655	9.60	6.29	6.96	68	0	1290.75
0.0	0.0	0.42	1.383	0.58	0.655	9.62	6.30	6.88	69	0	1290.78
0.0	0.0	0.383	1.276	0.49	0.655	9.64	6.32	6.81	69	0	1290.81
0.0	0.0	0.343	1.165	0.40	0.655	9.66	6.33	6.73	68	0	1290.83
0.0	0.0	0.569	1.794	1.02	0.602	9.32	5.61	6.63	68	0	1290.99
0.0	0.0	0.542	1.708	0.93	0.602	9.33	5.62	6.54	68	0	1291.01
0.0	0.0	0.514	1.649	0.85	0.602	9.35	5.63	6.47	68	0	1291.04
0.0	0.0	0.485	1.574	0.76	0.602	9.36	5.63	6.40	68	0	1291.06
0.0	0.0	0.454	1.472	0.67	0.602	9.38	5.65	6.32	66	0	1291.09
0.0	0.0	0.42	1.383	0.58	0.602	9.40	5.66	6.24	62	0	1291.12
0.0	0.0	0.383	1.276	0.49	0.602	9.42	5.67	6.16	57	0	1291.15
0.0	0.0	0.343	1.165	0.40	0.602	9.44	5.68	6.08	54	0	1291.17
0.0	0.0	0.594	1.895	1.13	0.549	9.07	4.98	6.11	54	0	1291.29
0.0	0.0	0.569	1.794	1.02	0.549	9.08	4.99	6.01	52	0	1291.32
0.0	0.0	0.542	1.708	0.93	0.549	9.10	4.99	5.92	50	0	1291.35
0.0	0.0	0.514	1.649	0.85	0.549	9.11	5.00	5.85	46	0	1291.38
0.0	0.0	0.485	1.574	0.76	0.549	9.12	5.01	5.77	45	0	1291.40
0.0	0.0	0.454	1.472	0.67	0.549	9.15	5.02	5.69	44	0	1291.43
0.0	0.0	0.42	1.383	0.58	0.549	9.16	5.03	5.61	46	0	1291.46
0.0	0.0	0.383	1.276	0.49	0.549	9.18	5.04	5.53	47	0	1291.49
0.0	0.0	0.343	1.165	0.40	0.549	9.20	5.05	5.45	47	0	1291.52
0.0	0.0	0.642	2.029	1.30	0.496	8.80	4.37	5.67	38	0	1291.56
0.0	0.0	0.618	1.95	1.21	0.496	8.82	4.37	5.58	35	0	1291.59
0.0	0.0	0.594	1.895	1.13	0.496	8.83	4.38	5.50	33	0	1291.62
0.0	0.0	0.569	1.794	1.02	0.496	8.84	4.39	5.41	32	0	1291.65
0.0	0.0	0.542	1.708	0.93	0.496	8.85	4.39	5.32	31	0	1291.67
0.0	0.0	0.514	1.649	0.85	0.496	8.87	4.40	5.25	32	0	1291.70

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.485	1.574	0.76	0.496	8.88	4.41	5.17	32	0	1291.73
0.0	0.0	0.454	1.472	0.67	0.496	8.90	4.42	5.08	32	0	1291.75
0.0	0.0	0.42	1.383	0.58	0.496	8.92	4.43	5.01	32	0	1291.78
0.0	0.0	0.686	2.147	1.47	0.443	8.54	3.78	5.26	19	0	1291.81
0.0	0.0	0.383	1.276	0.49	0.496	8.94	4.44	4.92	31	0	1291.81
0.0	0.0	0.664	2.084	1.38	0.443	8.55	3.79	5.17	17	0	1291.84
0.0	0.0	0.343	1.165	0.40	0.496	8.96	4.45	4.84	30	0	1291.84
0.0	0.0	0.642	2.029	1.30	0.443	8.56	3.79	5.09	17	0	1291.87
0.0	0.0	0.618	1.95	1.21	0.443	8.57	3.80	5.00	18	0	1291.89
0.0	0.0	0.594	1.895	1.13	0.443	8.59	3.80	4.93	18	0	1291.92
0.0	0.0	0.569	1.794	1.02	0.443	8.60	3.81	4.83	19	0	1291.94
0.0	0.0	0.542	1.708	0.93	0.443	8.61	3.81	4.74	19	0	1291.97
0.0	0.0	0.514	1.649	0.85	0.443	8.63	3.82	4.67	19	0	1292.00
0.0	0.0	0.485	1.574	0.76	0.443	8.64	3.83	4.59	19	0	1292.02
0.0	0.0	0.454	1.472	0.67	0.443	8.66	3.84	4.51	19	0	1292.05
0.0	0.0	0.42	1.383	0.58	0.443	8.68	3.85	4.43	18	0	1292.08
0.0	0.0	0.686	2.147	1.47	0.39	8.29	3.23	4.71	3	0	1292.09
0.0	0.0	0.383	1.276	0.49	0.443	8.70	3.86	4.34	18	0	1292.11
0.0	0.0	0.664	2.084	1.38	0.39	8.30	3.24	4.62	4	0	1292.12
0.0	0.0	0.343	1.165	0.40	0.443	8.74	3.87	4.27	18	0	1292.14
0.0	0.0	0.642	2.029	1.30	0.39	8.31	3.24	4.54	4	0	1292.14
0.0	0.0	0.618	1.95	1.21	0.39	8.32	3.25	4.45	4	0	1292.17
0.0	0.0	0.594	1.895	1.13	0.39	8.34	3.25	4.38	5	0	1292.20
0.0	0.0	0.569	1.794	1.02	0.39	8.35	3.26	4.28	5	0	1292.22
0.0	0.0	0.542	1.708	0.93	0.39	8.36	3.26	4.19	5	0	1292.25
0.0	0.0	0.514	1.649	0.85	0.39	8.38	3.27	4.11	5	0	1292.28
0.0	0.0	0.485	1.574	0.76	0.39	8.39	3.27	4.04	5	0	1292.30
0.0	0.0	0.454	1.472	0.67	0.39	8.41	3.28	3.95	5	0	1292.33
0.0	0.0	0.42	1.383	0.58	0.39	8.43	3.29	3.87	5	0	1292.36
0.0	0.0	0.383	1.276	0.49	0.39	8.46	3.30	3.79	5	0	1292.38
0.0	0.0	0.42	1.248	0.52	0.77	9.82	7.56	8.09	292	20	1288.14
0.0	0.0	0.383	1.129	0.43	0.77	9.85	7.58	8.01	279	20	1288.17
0.0	0.0	0.343	1.0	0.34	0.77	9.87	7.60	7.94	253	20	1288.19
0.0	0.0	0.297	0.852	0.25	0.77	9.89	7.62	7.87	208	20	1288.22
0.0	0.0	0.243	0.675	0.16	0.77	9.92	7.64	7.80	169	20	1288.26
0.0	0.0	0.42	1.248	0.52	0.72	9.62	6.93	7.45	253	20	1288.51
0.0	0.0	0.383	1.129	0.43	0.72	9.64	6.94	7.37	242	20	1288.54
0.0	0.0	0.343	1.0	0.34	0.72	9.66	6.96	7.30	235	20	1288.57
0.0	0.0	0.297	0.852	0.25	0.72	9.69	6.97	7.23	231	20	1288.60
0.0	0.0	0.243	0.675	0.16	0.72	9.71	6.99	7.16	225	20	1288.63
0.0	0.0	0.42	1.248	0.52	0.67	9.42	6.31	6.83	181	20	1288.86
0.0	0.0	0.383	1.129	0.43	0.67	9.43	6.32	6.75	175	20	1288.89
0.0	0.0	0.343	1.0	0.34	0.67	9.46	6.34	6.68	178	20	1288.92
0.0	0.0	0.297	0.852	0.25	0.67	9.48	6.35	6.61	174	20	1288.96
0.0	0.0	0.243	0.675	0.16	0.67	9.51	6.37	6.54	172	20	1288.99
0.0	0.0	0.42	1.248	0.52	0.62	9.21	5.71	6.24	150	20	1289.21
0.0	0.0	0.383	1.129	0.43	0.62	9.23	5.73	6.16	144	20	1289.24
0.0	0.0	0.343	1.0	0.34	0.62	9.26	5.74	6.08	140	20	1289.26

*continued on next page*

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.297	0.852	0.25	0.62	9.28	5.76	6.01	138	20	1289.29
0.0	0.0	0.243	0.675	0.16	0.62	9.31	5.77	5.94	137	20	1289.32
0.0	0.0	0.42	1.248	0.52	0.57	9.01	5.14	5.66	100	20	1289.51
0.0	0.0	0.383	1.129	0.43	0.57	9.04	5.15	5.58	102	20	1289.54
0.0	0.0	0.343	1.0	0.34	0.57	9.06	5.16	5.50	106	20	1289.58
0.0	0.0	0.297	0.852	0.25	0.57	9.08	5.18	5.43	107	20	1289.60
0.0	0.0	0.243	0.675	0.16	0.57	9.11	5.19	5.36	104	20	1289.64
0.0	0.0	0.454	1.357	0.62	0.52	8.79	4.57	5.19	56	20	1289.79
0.0	0.0	0.42	1.248	0.52	0.52	8.81	4.58	5.10	59	20	1289.82
0.0	0.0	0.383	1.129	0.43	0.52	8.83	4.59	5.02	60	20	1289.86
0.0	0.0	0.343	1.0	0.34	0.52	8.85	4.60	4.95	62	20	1289.88
0.0	0.0	0.297	0.852	0.25	0.52	8.87	4.61	4.87	62	20	1289.92
0.0	0.0	0.243	0.675	0.16	0.52	8.90	4.63	4.79	64	20	1289.95
0.0	0.0	0.542	1.635	0.89	0.47	8.52	4.01	4.89	14	20	1290.00
0.0	0.0	0.514	1.545	0.79	0.47	8.54	4.01	4.81	16	20	1290.03
0.0	0.0	0.485	1.456	0.71	0.47	8.55	4.02	4.73	19	20	1290.07
0.0	0.0	0.454	1.357	0.62	0.47	8.57	4.03	4.64	21	20	1290.10
0.0	0.0	0.42	1.248	0.52	0.47	8.58	4.03	4.56	22	20	1290.13
0.0	0.0	0.383	1.129	0.43	0.47	8.60	4.04	4.48	23	20	1290.16
0.0	0.0	0.343	1.0	0.34	0.47	8.62	4.05	4.40	24	20	1290.19
0.0	0.0	0.297	0.852	0.25	0.47	8.65	4.07	4.32	26	20	1290.21
0.0	0.0	0.243	0.675	0.16	0.47	8.68	4.08	4.24	27	20	1290.24
0.0	0.0	0.343	1.034	0.35	0.793	9.75	7.73	8.09	137	40	1286.13
0.0	0.0	0.243	0.699	0.17	0.793	9.81	7.78	7.95	119	40	1286.20
0.0	0.0	0.171	0.451	0.08	0.793	9.85	7.81	7.89	113	40	1286.23
0.0	0.0	0.343	1.034	0.35	0.751	9.58	7.20	7.55	111	40	1286.46
0.0	0.0	0.243	0.699	0.17	0.751	9.64	7.24	7.41	113	40	1286.53
0.0	0.0	0.171	0.451	0.08	0.751	9.68	7.27	7.34	112	40	1286.56
0.0	0.0	0.343	1.034	0.35	0.709	9.41	6.67	7.03	97	40	1286.78
0.0	0.0	0.243	0.699	0.17	0.709	9.47	6.71	6.88	89	40	1286.85
0.0	0.0	0.343	1.034	0.35	0.667	9.24	6.17	6.52	77	40	1287.09
0.0	0.0	0.343	1.034	0.35	0.624	9.07	5.66	6.02	33	40	1287.38

Table 10:

Details of cluster #7-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.786	2.413	1.90	0.761	9.86	7.50	9.40	71	0	1286.03
0.0	0.0	0.707	2.188	1.55	0.761	9.89	7.53	9.07	72	0	1286.14
0.0	0.0	0.686	2.147	1.47	0.761	9.90	7.54	9.01	70	0	1286.18
0.0	0.0	0.664	2.084	1.38	0.761	9.91	7.54	8.93	67	0	1286.21
0.0	0.0	0.642	2.029	1.30	0.761	9.92	7.55	8.85	64	0	1286.24
0.0	0.0	0.618	1.95	1.21	0.761	9.93	7.56	8.76	63	0	1286.27
0.0	0.0	0.594	1.895	1.13	0.761	9.95	7.57	8.70	66	0	1286.30
0.0	0.0	0.786	2.413	1.90	0.708	9.63	6.82	8.72	66	0	1286.42
0.0	0.0	0.767	2.369	1.82	0.708	9.65	6.83	8.65	64	0	1286.45
0.0	0.0	0.748	2.309	1.73	0.708	9.66	6.84	8.56	61	0	1286.48
0.0	0.0	0.728	2.244	1.63	0.708	9.67	6.84	8.48	60	0	1286.50
0.0	0.0	0.707	2.188	1.55	0.708	9.67	6.85	8.39	61	0	1286.53
0.0	0.0	0.686	2.147	1.47	0.708	9.68	6.86	8.33	63	0	1286.57
0.0	0.0	0.664	2.084	1.38	0.708	9.69	6.86	8.25	67	0	1286.59
0.0	0.0	0.642	2.029	1.30	0.708	9.70	6.87	8.17	68	0	1286.62
0.0	0.0	0.618	1.95	1.21	0.708	9.71	6.88	8.08	69	0	1286.65
0.0	0.0	0.594	1.895	1.13	0.708	9.73	6.89	8.01	68	0	1286.68
0.0	0.0	0.786	2.413	1.90	0.655	9.41	6.17	8.06	53	0	1286.78
0.0	0.0	0.767	2.369	1.82	0.655	9.43	6.18	7.99	56	0	1286.81
0.0	0.0	0.748	2.309	1.73	0.655	9.44	6.18	7.91	59	0	1286.84
0.0	0.0	0.728	2.244	1.63	0.655	9.45	6.19	7.82	61	0	1286.87
0.0	0.0	0.707	2.188	1.55	0.655	9.46	6.19	7.74	61	0	1286.90
0.0	0.0	0.686	2.147	1.47	0.655	9.47	6.20	7.67	61	0	1286.93
0.0	0.0	0.664	2.084	1.38	0.655	9.47	6.21	7.59	62	0	1286.97
0.0	0.0	0.642	2.029	1.30	0.655	9.48	6.21	7.51	63	0	1287.00
0.0	0.0	0.618	1.95	1.21	0.655	9.49	6.22	7.42	68	0	1287.03
0.0	0.0	0.594	1.895	1.13	0.655	9.51	6.23	7.35	75	0	1287.06
0.0	0.0	0.822	2.52	2.07	0.602	9.17	5.52	7.59	54	0	1287.08
0.0	0.0	0.804	2.464	1.98	0.602	9.17	5.52	7.50	55	0	1287.11
0.0	0.0	0.786	2.413	1.90	0.602	9.19	5.53	7.43	52	0	1287.14
0.0	0.0	0.767	2.369	1.82	0.602	9.20	5.54	7.36	48	0	1287.18
0.0	0.0	0.748	2.309	1.73	0.602	9.21	5.54	7.27	46	0	1287.21
0.0	0.0	0.939	2.852	2.68	0.549	8.88	4.88	7.55	28	0	1287.21
0.0	0.0	0.924	2.823	2.61	0.549	8.88	4.88	7.49	30	0	1287.24
0.0	0.0	0.728	2.244	1.63	0.602	9.21	5.55	7.18	47	0	1287.24
0.0	0.0	0.907	2.764	2.51	0.549	8.89	4.88	7.39	32	0	1287.27
0.0	0.0	0.707	2.188	1.55	0.602	9.21	5.55	7.09	50	0	1287.28
0.0	0.0	0.891	2.713	2.42	0.549	8.89	4.88	7.30	32	0	1287.30
0.0	0.0	0.686	2.147	1.47	0.602	9.23	5.55	7.03	50	0	1287.31
0.0	0.0	0.874	2.653	2.32	0.549	8.90	4.89	7.21	30	0	1287.34
0.0	0.0	0.664	2.084	1.38	0.602	9.23	5.56	6.94	48	0	1287.34
0.0	0.0	0.642	2.029	1.30	0.602	9.24	5.56	6.87	41	0	1287.37
0.0	0.0	0.857	2.614	2.24	0.549	8.91	4.89	7.13	25	0	1287.37
0.0	0.0	0.618	1.95	1.21	0.602	9.25	5.57	6.77	37	0	1287.40
0.0	0.0	0.84	2.553	2.14	0.549	8.92	4.90	7.04	22	0	1287.41
0.0	0.0	1.0	3.04	3.04	0.496	8.60	4.26	7.30	10	0	1287.42

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $cm^{-1}$ ]
0.0	0.0	0.594	1.895	1.13	0.602	9.27	5.58	6.70	42	0	1287.43
0.0	0.0	0.822	2.52	2.07	0.549	8.93	4.90	6.97	25	0	1287.44
0.0	0.0	0.985	2.98	2.94	0.496	8.60	4.27	7.20	12	0	1287.45
0.0	0.0	0.804	2.464	1.98	0.549	8.93	4.90	6.88	30	0	1287.47
0.0	0.0	0.97	2.939	2.85	0.496	8.62	4.27	7.12	16	0	1287.48
0.0	0.0	0.786	2.413	1.90	0.549	8.94	4.91	6.81	35	0	1287.50
0.0	0.0	0.955	2.896	2.77	0.496	8.62	4.28	7.04	20	0	1287.51
0.0	0.0	0.767	2.369	1.82	0.549	8.95	4.92	6.73	39	0	1287.54
0.0	0.0	0.939	2.852	2.68	0.496	8.63	4.28	6.96	23	0	1287.55
0.0	0.0	0.748	2.309	1.73	0.549	8.96	4.92	6.65	43	0	1287.57
0.0	0.0	0.924	2.823	2.61	0.496	8.63	4.28	6.89	23	0	1287.58
0.0	0.0	0.728	2.244	1.63	0.549	8.97	4.92	6.56	43	0	1287.60
0.0	0.0	0.907	2.764	2.51	0.496	8.64	4.28	6.79	22	0	1287.61
0.0	0.0	0.707	2.188	1.55	0.549	8.97	4.93	6.47	43	0	1287.63
0.0	0.0	0.891	2.713	2.42	0.496	8.65	4.29	6.71	20	0	1287.65
0.0	0.0	0.686	2.147	1.47	0.549	8.98	4.93	6.41	43	0	1287.66
0.0	0.0	0.874	2.653	2.32	0.496	8.65	4.29	6.61	20	0	1287.68
0.0	0.0	0.664	2.084	1.38	0.549	9.00	4.94	6.32	45	0	1287.69
0.0	0.0	0.642	2.029	1.30	0.549	9.01	4.95	6.25	48	0	1287.71
0.0	0.0	0.857	2.614	2.24	0.496	8.66	4.30	6.54	22	0	1287.71
0.0	0.0	1.0	3.04	3.04	0.443	8.35	3.70	6.74	8	0	1287.74
0.0	0.0	0.618	1.95	1.21	0.549	9.02	4.95	6.16	53	0	1287.74
0.0	0.0	0.84	2.553	2.14	0.496	8.67	4.30	6.44	24	0	1287.74
0.0	0.0	0.985	2.98	2.94	0.443	8.36	3.70	6.64	9	0	1287.77
0.0	0.0	0.822	2.52	2.07	0.496	8.68	4.31	6.38	26	0	1287.77
0.0	0.0	0.97	2.939	2.85	0.443	8.37	3.71	6.56	10	0	1287.80
0.0	0.0	0.804	2.464	1.98	0.496	8.68	4.31	6.29	28	0	1287.81
0.0	0.0	0.786	2.413	1.90	0.496	8.70	4.31	6.21	28	0	1287.84
0.0	0.0	0.955	2.896	2.77	0.443	8.37	3.71	6.47	10	0	1287.84
0.0	0.0	0.767	2.369	1.82	0.496	8.71	4.32	6.14	27	0	1287.87
0.0	0.0	0.939	2.852	2.68	0.443	8.38	3.71	6.39	9	0	1287.87
0.0	0.0	0.748	2.309	1.73	0.496	8.72	4.33	6.05	29	0	1287.90
0.0	0.0	0.924	2.823	2.61	0.443	8.38	3.71	6.32	9	0	1287.90
0.0	0.0	0.728	2.244	1.63	0.496	8.73	4.33	5.96	30	0	1287.92
0.0	0.0	0.907	2.764	2.51	0.443	8.39	3.72	6.22	11	0	1287.93
0.0	0.0	0.707	2.188	1.55	0.496	8.74	4.34	5.88	33	0	1287.95
0.0	0.0	0.891	2.713	2.42	0.443	8.40	3.72	6.14	12	0	1287.96
0.0	0.0	0.686	2.147	1.47	0.496	8.75	4.34	5.81	36	0	1287.97
0.0	0.0	0.874	2.653	2.32	0.443	8.41	3.73	6.04	13	0	1287.99
0.0	0.0	0.664	2.084	1.38	0.496	8.80	4.36	5.75	39	0	1288.00
0.0	0.0	0.857	2.614	2.24	0.443	8.42	3.73	5.97	14	0	1288.02
0.0	0.0	0.84	2.553	2.14	0.443	8.43	3.73	5.88	15	0	1288.05
0.0	0.0	0.985	2.98	2.94	0.39	8.11	3.16	6.10	0	0	1288.07
0.0	0.0	0.822	2.52	2.07	0.443	8.44	3.74	5.81	15	0	1288.08
0.0	0.0	0.97	2.939	2.85	0.39	8.12	3.17	6.02	0	0	1288.10
0.0	0.0	0.804	2.464	1.98	0.443	8.44	3.74	5.72	16	0	1288.11
0.0	0.0	0.955	2.896	2.77	0.39	8.13	3.17	5.94	1	0	1288.14
0.0	0.0	0.786	2.413	1.90	0.443	8.46	3.75	5.64	15	0	1288.14

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.939	2.852	2.68	0.39	8.14	3.17	5.85	1	0	1288.16
0.0	0.0	0.767	2.369	1.82	0.443	8.47	3.75	5.57	16	0	1288.17
0.0	0.0	0.748	2.309	1.73	0.443	8.49	3.76	5.49	17	0	1288.19
0.0	0.0	0.924	2.823	2.61	0.39	8.14	3.18	5.78	1	0	1288.19
0.0	0.0	0.728	2.244	1.63	0.443	8.50	3.77	5.40	16	0	1288.21
0.0	0.0	0.907	2.764	2.51	0.39	8.15	3.18	5.68	1	0	1288.22
0.0	0.0	0.707	2.188	1.55	0.443	8.51	3.77	5.32	15	0	1288.24
0.0	0.0	0.891	2.713	2.42	0.39	8.16	3.18	5.60	2	0	1288.25
0.0	0.0	0.874	2.653	2.32	0.39	8.17	3.19	5.50	2	0	1288.28
0.0	0.0	0.857	2.614	2.24	0.39	8.18	3.19	5.43	2	0	1288.31
0.0	0.0	0.84	2.553	2.14	0.39	8.19	3.19	5.34	3	0	1288.34
0.0	0.0	0.822	2.52	2.07	0.39	8.20	3.20	5.27	3	0	1288.37
0.0	0.0	0.804	2.464	1.98	0.39	8.21	3.20	5.18	3	0	1288.39
0.0	0.0	0.786	2.413	1.90	0.39	8.22	3.21	5.10	4	0	1288.41
0.0	0.0	0.767	2.369	1.82	0.39	8.24	3.21	5.03	4	0	1288.44
0.0	0.0	0.748	2.309	1.73	0.39	8.25	3.22	4.95	4	0	1288.46
0.0	0.0	0.728	2.244	1.63	0.39	8.27	3.22	4.86	5	0	1288.48
0.0	0.0	0.707	2.188	1.55	0.39	8.28	3.23	4.78	4	0	1288.50
0.0	0.0	0.822	2.53	2.08	0.77	9.61	7.40	9.48	285	20	1284.01
0.0	0.0	0.804	2.469	1.99	0.77	9.62	7.41	9.39	268	20	1284.05
0.0	0.0	0.786	2.403	1.89	0.77	9.63	7.41	9.30	250	20	1284.08
0.0	0.0	0.767	2.343	1.80	0.77	9.63	7.42	9.21	237	20	1284.11
0.0	0.0	0.707	2.151	1.52	0.77	9.66	7.44	8.96	223	20	1284.21
0.0	0.0	0.686	2.08	1.43	0.77	9.67	7.45	8.87	217	20	1284.25
0.0	0.0	0.664	2.013	1.34	0.77	9.68	7.45	8.79	202	20	1284.28
0.0	0.0	0.642	1.945	1.25	0.77	9.69	7.46	8.71	197	20	1284.32
0.0	0.0	0.618	1.87	1.16	0.77	9.70	7.47	8.63	200	20	1284.36
0.0	0.0	0.84	2.592	2.18	0.72	9.39	6.76	8.94	205	20	1284.36
0.0	0.0	0.594	1.793	1.07	0.77	9.71	7.48	8.54	209	20	1284.39
0.0	0.0	0.822	2.53	2.08	0.72	9.40	6.77	8.85	206	20	1284.39
0.0	0.0	0.569	1.719	0.98	0.77	9.72	7.49	8.47	229	20	1284.42
0.0	0.0	0.804	2.469	1.99	0.72	9.41	6.78	8.76	210	20	1284.43
0.0	0.0	0.786	2.403	1.89	0.72	9.42	6.78	8.67	210	20	1284.47
0.0	0.0	0.767	2.343	1.80	0.72	9.43	6.79	8.58	205	20	1284.50
0.0	0.0	0.748	2.281	1.71	0.72	9.43	6.79	8.50	193	20	1284.53
0.0	0.0	0.728	2.213	1.61	0.72	9.45	6.80	8.41	185	20	1284.57
0.0	0.0	0.707	2.151	1.52	0.72	9.46	6.81	8.33	181	20	1284.60
0.0	0.0	0.686	2.08	1.43	0.72	9.46	6.81	8.24	183	20	1284.63
0.0	0.0	0.664	2.013	1.34	0.72	9.48	6.82	8.16	193	20	1284.68
0.0	0.0	0.857	2.636	2.26	0.67	9.18	6.15	8.41	182	20	1284.70
0.0	0.0	0.642	1.945	1.25	0.72	9.49	6.83	8.08	197	20	1284.70
0.0	0.0	0.84	2.592	2.18	0.67	9.19	6.15	8.33	171	20	1284.73
0.0	0.0	0.618	1.87	1.16	0.72	9.49	6.84	7.99	197	20	1284.74
0.0	0.0	0.822	2.53	2.08	0.67	9.20	6.16	8.24	157	20	1284.76
0.0	0.0	0.594	1.793	1.07	0.72	9.51	6.84	7.91	196	20	1284.77
0.0	0.0	0.804	2.469	1.99	0.67	9.20	6.17	8.15	149	20	1284.80
0.0	0.0	0.569	1.719	0.98	0.72	9.52	6.85	7.83	201	20	1284.81
0.0	0.0	0.786	2.403	1.89	0.67	9.21	6.17	8.06	143	20	1284.83

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $cm^{-1}$ ]
0.0	0.0	0.767	2.343	1.80	0.67	9.22	6.18	7.97	145	20	1284.87
0.0	0.0	0.748	2.281	1.71	0.67	9.23	6.18	7.89	149	20	1284.90
0.0	0.0	0.728	2.213	1.61	0.67	9.24	6.19	7.80	153	20	1284.93
0.0	0.0	0.707	2.151	1.52	0.67	9.25	6.20	7.72	157	20	1284.97
0.0	0.0	0.686	2.08	1.43	0.67	9.26	6.20	7.63	156	20	1285.00
0.0	0.0	0.874	2.696	2.36	0.62	8.96	5.55	7.91	125	20	1285.00
0.0	0.0	0.664	2.013	1.34	0.67	9.27	6.21	7.55	157	20	1285.04
0.0	0.0	0.642	1.945	1.25	0.67	9.28	6.22	7.47	163	20	1285.07
0.0	0.0	0.618	1.87	1.16	0.67	9.29	6.23	7.38	176	20	1285.10
0.0	0.0	0.822	2.53	2.08	0.62	8.99	5.58	7.65	114	20	1285.10
0.0	0.0	0.594	1.793	1.07	0.67	9.31	6.24	7.30	191	20	1285.14
0.0	0.0	0.804	2.469	1.99	0.62	9.00	5.58	7.57	117	20	1285.14
0.0	0.0	0.569	1.719	0.98	0.67	9.32	6.25	7.22	206	20	1285.16
0.0	0.0	0.786	2.403	1.89	0.62	9.01	5.58	7.47	117	20	1285.17
0.0	0.0	0.767	2.343	1.80	0.62	9.02	5.59	7.39	111	20	1285.21
0.0	0.0	0.748	2.281	1.71	0.62	9.03	5.60	7.30	108	20	1285.25
0.0	0.0	0.728	2.213	1.61	0.62	9.04	5.60	7.21	108	20	1285.28
0.0	0.0	0.707	2.151	1.52	0.62	9.05	5.61	7.13	112	20	1285.31
0.0	0.0	0.686	2.08	1.43	0.62	9.06	5.62	7.04	118	20	1285.34
0.0	0.0	0.664	2.013	1.34	0.62	9.07	5.62	6.96	133	20	1285.38
0.0	0.0	0.642	1.945	1.25	0.62	9.08	5.63	6.88	142	20	1285.41
0.0	0.0	0.822	2.53	2.08	0.57	8.79	5.01	7.09	72	20	1285.44
0.0	0.0	0.618	1.87	1.16	0.62	9.10	5.64	6.80	149	20	1285.44
0.0	0.0	0.804	2.469	1.99	0.57	8.80	5.01	7.00	71	20	1285.47
0.0	0.0	0.594	1.793	1.07	0.62	9.11	5.65	6.71	158	20	1285.47
0.0	0.0	0.569	1.719	0.98	0.62	9.13	5.66	6.64	167	20	1285.50
0.0	0.0	0.786	2.403	1.89	0.57	8.81	5.02	6.91	72	20	1285.50
0.0	0.0	0.767	2.343	1.80	0.57	8.82	5.03	6.82	75	20	1285.54
0.0	0.0	0.748	2.281	1.71	0.57	8.82	5.03	6.74	81	20	1285.58
0.0	0.0	0.728	2.213	1.61	0.57	8.83	5.03	6.65	88	20	1285.61
0.0	0.0	0.707	2.151	1.52	0.57	8.84	5.04	6.56	95	20	1285.64
0.0	0.0	0.686	2.08	1.43	0.57	8.85	5.05	6.47	99	20	1285.68
0.0	0.0	0.664	2.013	1.34	0.57	8.87	5.05	6.39	102	20	1285.71
0.0	0.0	0.84	2.592	2.18	0.52	8.57	4.46	6.63	33	20	1285.72
0.0	0.0	0.642	1.945	1.25	0.57	8.88	5.06	6.31	107	20	1285.74
0.0	0.0	0.822	2.53	2.08	0.52	8.58	4.46	6.54	35	20	1285.76
0.0	0.0	0.618	1.87	1.16	0.57	8.89	5.07	6.22	114	20	1285.77
0.0	0.0	0.804	2.469	1.99	0.52	8.58	4.46	6.45	39	20	1285.80
0.0	0.0	0.594	1.793	1.07	0.57	8.91	5.08	6.14	125	20	1285.80
0.0	0.0	0.569	1.719	0.98	0.57	8.93	5.09	6.07	134	20	1285.82
0.0	0.0	0.786	2.403	1.89	0.52	8.59	4.47	6.36	44	20	1285.83
0.0	0.0	0.767	2.343	1.80	0.52	8.60	4.47	6.27	50	20	1285.87
0.0	0.0	0.748	2.281	1.71	0.52	8.60	4.47	6.18	55	20	1285.90
0.0	0.0	0.728	2.213	1.61	0.52	8.61	4.48	6.09	58	20	1285.94
0.0	0.0	0.707	2.151	1.52	0.52	8.63	4.49	6.01	63	20	1285.97
0.0	0.0	0.857	2.636	2.26	0.47	8.33	3.92	6.18	3	20	1285.99
0.0	0.0	0.686	2.08	1.43	0.52	8.64	4.49	5.92	69	20	1286.00
0.0	0.0	0.664	2.013	1.34	0.52	8.65	4.50	5.83	76	20	1286.03

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.748	2.281	1.71	0.47	8.38	3.94	5.65	13	20	1286.03
0.0	0.0	0.84	2.592	2.18	0.47	8.34	3.92	6.10	6	20	1286.05
0.0	0.0	0.642	1.945	1.25	0.52	8.66	4.51	5.75	83	20	1286.05
0.0	0.0	0.822	2.53	2.08	0.47	8.35	3.92	6.00	9	20	1286.08
0.0	0.0	0.618	1.87	1.16	0.52	8.68	4.51	5.67	90	20	1286.08
0.0	0.0	0.594	1.793	1.07	0.52	8.70	4.52	5.59	95	20	1286.10
0.0	0.0	0.804	2.469	1.99	0.47	8.36	3.93	5.91	12	20	1286.12
0.0	0.0	0.569	1.719	0.98	0.52	8.72	4.53	5.51	96	20	1286.13
0.0	0.0	0.786	2.403	1.89	0.47	8.36	3.93	5.82	15	20	1286.15
0.0	0.0	0.767	2.343	1.80	0.47	8.37	3.93	5.73	17	20	1286.18
0.0	0.0	0.728	2.213	1.61	0.47	8.39	3.94	5.56	20	20	1286.24
0.0	0.0	0.707	2.151	1.52	0.47	8.41	3.95	5.47	22	20	1286.26
0.0	0.0	0.686	2.08	1.43	0.47	8.42	3.96	5.38	24	20	1286.29
0.0	0.0	0.664	2.013	1.34	0.47	8.44	3.96	5.30	25	20	1286.32
0.0	0.0	0.642	1.945	1.25	0.47	8.45	3.97	5.22	26	20	1286.35
0.0	0.0	0.618	1.87	1.16	0.47	8.47	3.98	5.14	25	20	1286.37
0.0	0.0	0.594	1.793	1.07	0.47	8.49	3.99	5.05	23	20	1286.38
0.0	0.0	0.569	1.719	0.98	0.47	8.51	4.00	4.98	21	20	1286.41
0.0	0.0	0.707	2.225	1.57	0.793	9.55	7.58	9.15	91	40	1282.10
0.0	0.0	0.686	2.159	1.48	0.793	9.56	7.58	9.07	88	40	1282.15
0.0	0.0	0.664	2.093	1.39	0.793	9.57	7.59	8.98	84	40	1282.19
0.0	0.0	0.642	2.013	1.29	0.793	9.58	7.60	8.89	82	40	1282.22
0.0	0.0	0.618	1.932	1.19	0.793	9.59	7.61	8.80	85	40	1282.27
0.0	0.0	0.594	1.855	1.10	0.793	9.61	7.62	8.72	95	40	1282.31
0.0	0.0	0.728	2.297	1.67	0.751	9.37	7.04	8.71	74	40	1282.40
0.0	0.0	0.707	2.225	1.57	0.751	9.38	7.05	8.62	71	40	1282.45
0.0	0.0	0.686	2.159	1.48	0.751	9.39	7.05	8.53	73	40	1282.49
0.0	0.0	0.664	2.093	1.39	0.751	9.40	7.06	8.45	76	40	1282.53
0.0	0.0	0.642	2.013	1.29	0.751	9.41	7.07	8.36	83	40	1282.57
0.0	0.0	0.618	1.932	1.19	0.751	9.42	7.08	8.27	87	40	1282.61
0.0	0.0	0.594	1.855	1.10	0.751	9.43	7.08	8.19	91	40	1282.65
0.0	0.0	0.767	2.424	1.86	0.709	9.18	6.51	8.37	59	40	1282.66
0.0	0.0	0.748	2.359	1.76	0.709	9.19	6.52	8.28	56	40	1282.70
0.0	0.0	0.728	2.297	1.67	0.709	9.20	6.52	8.20	56	40	1282.73
0.0	0.0	0.707	2.225	1.57	0.709	9.21	6.53	8.10	58	40	1282.77
0.0	0.0	0.686	2.159	1.48	0.709	9.22	6.54	8.02	62	40	1282.82
0.0	0.0	0.664	2.093	1.39	0.709	9.23	6.54	7.93	64	40	1282.86
0.0	0.0	0.822	2.621	2.15	0.667	8.99	5.99	8.15	45	40	1282.86
0.0	0.0	0.804	2.552	2.05	0.667	8.99	6.00	8.05	43	40	1282.90
0.0	0.0	0.642	2.013	1.29	0.709	9.24	6.55	7.84	67	40	1282.90
0.0	0.0	0.786	2.498	1.96	0.667	9.00	6.00	7.97	43	40	1282.93
0.0	0.0	0.618	1.932	1.19	0.709	9.25	6.56	7.75	74	40	1282.94
0.0	0.0	0.767	2.424	1.86	0.667	9.01	6.01	7.87	44	40	1282.97
0.0	0.0	0.594	1.855	1.10	0.709	9.26	6.57	7.67	84	40	1282.98
0.0	0.0	0.748	2.359	1.76	0.667	9.02	6.02	7.78	47	40	1283.02
0.0	0.0	0.728	2.297	1.67	0.667	9.03	6.02	7.69	48	40	1283.06
0.0	0.0	0.707	2.225	1.57	0.667	9.04	6.03	7.60	49	40	1283.10
0.0	0.0	0.84	2.679	2.25	0.624	8.80	5.49	7.74	25	40	1283.13

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.686	2.159	1.48	0.667	9.05	6.04	7.52	50	40	1283.14
0.0	0.0	0.822	2.621	2.15	0.624	8.81	5.50	7.65	25	40	1283.17
0.0	0.0	0.664	2.093	1.39	0.667	9.06	6.04	7.43	52	40	1283.17
0.0	0.0	0.804	2.552	2.05	0.624	8.82	5.50	7.55	25	40	1283.21
0.0	0.0	0.642	2.013	1.29	0.667	9.07	6.05	7.34	57	40	1283.21
0.0	0.0	0.786	2.498	1.96	0.624	8.83	5.51	7.47	26	40	1283.24
0.0	0.0	0.618	1.932	1.19	0.667	9.08	6.06	7.25	62	40	1283.25
0.0	0.0	0.594	1.855	1.10	0.667	9.10	6.07	7.17	72	40	1283.28
0.0	0.0	0.767	2.424	1.86	0.624	8.84	5.51	7.37	28	40	1283.29
0.0	0.0	0.664	2.093	1.39	0.582	8.72	5.08	6.47	28	40	1283.32
0.0	0.0	0.748	2.359	1.76	0.624	8.85	5.52	7.28	29	40	1283.32
0.0	0.0	0.642	2.013	1.29	0.582	8.74	5.09	6.38	28	40	1283.35
0.0	0.0	0.728	2.297	1.67	0.624	8.86	5.53	7.20	30	40	1283.36
0.0	0.0	0.618	1.932	1.19	0.582	8.75	5.09	6.29	27	40	1283.38
0.0	0.0	0.707	2.225	1.57	0.624	8.87	5.53	7.11	32	40	1283.40
0.0	0.0	0.594	1.855	1.10	0.582	8.77	5.10	6.20	27	40	1283.41
0.0	0.0	0.84	2.679	2.25	0.582	8.63	5.02	7.27	7	40	1283.42
0.0	0.0	0.686	2.159	1.48	0.624	8.88	5.54	7.02	35	40	1283.44
0.0	0.0	0.822	2.621	2.15	0.582	8.64	5.03	7.18	8	40	1283.46
0.0	0.0	0.664	2.093	1.39	0.624	8.89	5.55	6.94	40	40	1283.47
0.0	0.0	0.804	2.552	2.05	0.582	8.65	5.03	7.08	10	40	1283.50
0.0	0.0	0.642	2.013	1.29	0.624	8.90	5.55	6.85	45	40	1283.51
0.0	0.0	0.786	2.498	1.96	0.582	8.66	5.04	7.00	11	40	1283.54
0.0	0.0	0.618	1.932	1.19	0.624	8.92	5.56	6.76	51	40	1283.54
0.0	0.0	0.767	2.424	1.86	0.582	8.67	5.04	6.90	12	40	1283.57
0.0	0.0	0.594	1.855	1.10	0.624	8.93	5.57	6.67	55	40	1283.58
0.0	0.0	0.748	2.359	1.76	0.582	8.68	5.05	6.81	13	40	1283.61
0.0	0.0	0.728	2.297	1.67	0.582	8.69	5.06	6.73	14	40	1283.65
0.0	0.0	0.707	2.225	1.57	0.582	8.70	5.06	6.64	15	40	1283.68
0.0	0.0	0.686	2.159	1.48	0.582	8.71	5.07	6.55	17	40	1283.72

Table 11:

Details of cluster #8-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $cm^{-1}$ ]
0.0	0.0	0.924	2.823	2.61	0.761	9.79	7.45	10.06	67	0	1271.96
0.0	0.0	0.907	2.764	2.51	0.761	9.80	7.46	9.96	69	0	1271.99
0.0	0.0	0.891	2.713	2.42	0.761	9.81	7.46	9.88	71	0	1272.01
0.0	0.0	0.874	2.653	2.32	0.761	9.82	7.47	9.79	75	0	1272.03
0.0	0.0	0.857	2.614	2.24	0.761	9.83	7.48	9.72	79	0	1272.05
0.0	0.0	0.84	2.553	2.14	0.761	9.84	7.49	9.63	86	0	1272.08
0.0	0.0	0.804	2.464	1.98	0.761	9.86	7.50	9.48	90	0	1272.12
0.0	0.0	0.767	2.369	1.82	0.761	9.89	7.53	9.34	88	0	1272.17
0.0	0.0	0.748	2.309	1.73	0.761	9.90	7.53	9.26	86	0	1272.20
0.0	0.0	0.728	2.244	1.63	0.761	9.91	7.54	9.17	82	0	1272.22
0.0	0.0	0.924	2.823	2.61	0.708	9.57	6.77	9.38	72	0	1272.34
0.0	0.0	0.907	2.764	2.51	0.708	9.58	6.78	9.29	78	0	1272.36
0.0	0.0	0.891	2.713	2.42	0.708	9.59	6.79	9.21	82	0	1272.38
0.0	0.0	0.569	1.794	1.02	0.761	9.99	7.60	8.62	87	0	1272.39
0.0	0.0	0.874	2.653	2.32	0.708	9.60	6.80	9.11	82	0	1272.41
0.0	0.0	0.857	2.614	2.24	0.708	9.60	6.80	9.04	79	0	1272.43
0.0	0.0	0.822	2.52	2.07	0.708	9.63	6.82	8.89	80	0	1272.48
0.0	0.0	0.804	2.464	1.98	0.708	9.63	6.82	8.80	83	0	1272.51
0.0	0.0	0.924	2.823	2.61	0.655	9.35	6.12	8.73	56	0	1272.70
0.0	0.0	0.907	2.764	2.51	0.655	9.36	6.13	8.64	57	0	1272.73
0.0	0.0	0.891	2.713	2.42	0.655	9.37	6.13	8.55	62	0	1272.74
0.0	0.0	0.874	2.653	2.32	0.655	9.38	6.14	8.46	68	0	1272.77
0.0	0.0	0.857	2.614	2.24	0.655	9.38	6.15	8.39	73	0	1272.79
0.0	0.0	0.84	2.553	2.14	0.655	9.39	6.15	8.30	76	0	1272.81
0.0	0.0	0.822	2.52	2.07	0.655	9.41	6.16	8.23	78	0	1272.84
0.0	0.0	0.804	2.464	1.98	0.655	9.41	6.16	8.14	79	0	1272.86
0.0	0.0	0.924	2.823	2.61	0.602	9.13	5.49	8.10	61	0	1273.03
0.0	0.0	0.907	2.764	2.51	0.602	9.13	5.50	8.00	65	0	1273.06
0.0	0.0	0.891	2.713	2.42	0.602	9.14	5.50	7.92	64	0	1273.08
0.0	0.0	0.874	2.653	2.32	0.602	9.15	5.51	7.83	63	0	1273.11
0.0	0.0	0.857	2.614	2.24	0.602	9.15	5.51	7.75	59	0	1273.13
0.0	0.0	0.907	2.811	2.55	0.77	9.56	7.36	9.91	215	20	1270.06
0.0	0.0	0.891	2.76	2.46	0.77	9.57	7.37	9.83	226	20	1270.08
0.0	0.0	0.748	2.281	1.71	0.77	9.66	7.44	9.14	269	20	1270.28
0.0	0.0	0.728	2.213	1.61	0.77	9.67	7.44	9.05	266	20	1270.31
0.0	0.0	0.907	2.811	2.55	0.72	9.36	6.74	9.29	240	20	1270.43
0.0	0.0	0.891	2.76	2.46	0.72	9.37	6.74	9.20	252	20	1270.45
0.0	0.0	0.907	2.811	2.55	0.67	9.15	6.13	8.68	184	20	1270.78
0.0	0.0	0.891	2.76	2.46	0.67	9.16	6.14	8.60	187	20	1270.80
0.0	0.0	0.907	2.811	2.55	0.62	8.95	5.55	8.10	157	20	1271.11
0.0	0.0	0.891	2.76	2.46	0.62	8.96	5.55	8.01	164	20	1271.14
0.0	0.0	0.857	2.636	2.26	0.62	8.98	5.57	7.83	164	20	1271.19
0.0	0.0	0.84	2.592	2.18	0.62	8.99	5.57	7.75	160	20	1271.21
0.0	0.0	0.907	2.811	2.55	0.57	8.74	4.98	7.53	106	20	1271.43
0.0	0.0	0.891	2.76	2.46	0.57	8.75	4.99	7.45	105	20	1271.45
0.0	0.0	0.874	2.696	2.36	0.57	8.76	4.99	7.35	104	20	1271.48

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $\text{cm}^{-1}$ ]
0.0	0.0	0.857	2.636	2.26	0.57	8.77	5.00	7.26	105	20	1271.50
0.0	0.0	0.84	2.592	2.18	0.57	8.78	5.01	7.18	105	20	1271.53
0.0	0.0	0.907	2.811	2.55	0.52	8.53	4.44	6.99	30	20	1271.72
0.0	0.0	0.891	2.76	2.46	0.52	8.54	4.44	6.90	28	20	1271.75
0.0	0.0	0.874	2.696	2.36	0.52	8.55	4.45	6.80	27	20	1271.78
0.0	0.0	0.857	2.636	2.26	0.52	8.56	4.45	6.71	29	20	1271.80
0.0	0.0	0.84	2.679	2.25	0.793	9.48	7.52	9.77	110	40	1268.07
0.0	0.0	0.822	2.621	2.15	0.793	9.50	7.53	9.69	115	40	1268.10
0.0	0.0	0.804	2.552	2.05	0.793	9.51	7.54	9.59	116	40	1268.13
0.0	0.0	0.786	2.498	1.96	0.793	9.52	7.55	9.51	113	40	1268.16
0.0	0.0	0.767	2.424	1.86	0.793	9.53	7.56	9.42	110	40	1268.19
0.0	0.0	0.748	2.359	1.76	0.793	9.54	7.57	9.33	108	40	1268.21
0.0	0.0	0.728	2.297	1.67	0.793	9.55	7.58	9.25	106	40	1268.24
0.0	0.0	0.84	2.679	2.25	0.751	9.32	7.00	9.25	84	40	1268.40
0.0	0.0	0.822	2.621	2.15	0.751	9.33	7.01	9.16	87	40	1268.43
0.0	0.0	0.804	2.552	2.05	0.751	9.34	7.01	9.06	91	40	1268.45
0.0	0.0	0.786	2.498	1.96	0.751	9.35	7.02	8.98	95	40	1268.48
0.0	0.0	0.767	2.424	1.86	0.751	9.36	7.03	8.89	100	40	1268.51
0.0	0.0	0.748	2.359	1.76	0.751	9.37	7.04	8.80	103	40	1268.54
0.0	0.0	0.84	2.679	2.25	0.709	9.15	6.49	8.74	74	40	1268.71
0.0	0.0	0.822	2.621	2.15	0.709	9.16	6.49	8.65	78	40	1268.74
0.0	0.0	0.804	2.552	2.05	0.709	9.17	6.50	8.55	82	40	1268.77
0.0	0.0	0.84	2.679	2.25	0.667	8.98	5.99	8.24	62	40	1269.01

Table 12:

Details of cluster #9-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	1.0	3.04	3.04	0.761	9.73	7.41	10.45	79	0	1271.43
0.0	0.0	0.985	2.98	2.94	0.761	9.75	7.42	10.35	77	0	1271.46
0.0	0.0	0.97	2.939	2.85	0.761	9.76	7.43	10.28	69	0	1271.49
0.0	0.0	0.955	2.896	2.77	0.761	9.77	7.43	10.20	61	0	1271.52
0.0	0.0	0.939	2.852	2.68	0.761	9.78	7.44	10.12	57	0	1271.55
0.0	0.0	1.0	3.04	3.04	0.708	9.50	6.73	9.77	32	0	1271.83
0.0	0.0	0.985	2.98	2.94	0.708	9.51	6.74	9.67	44	0	1271.85
0.0	0.0	0.97	2.939	2.85	0.708	9.53	6.74	9.60	52	0	1271.88
0.0	0.0	0.955	2.896	2.77	0.708	9.54	6.75	9.52	57	0	1271.91
0.0	0.0	0.939	2.852	2.68	0.708	9.55	6.76	9.44	58	0	1271.94
0.0	0.0	1.0	3.04	3.04	0.655	9.28	6.08	9.12	45	0	1272.21
0.0	0.0	0.985	2.98	2.94	0.655	9.29	6.08	9.02	37	0	1272.24
0.0	0.0	0.97	2.939	2.85	0.655	9.30	6.09	8.94	37	0	1272.26
0.0	0.0	0.955	2.896	2.77	0.655	9.31	6.10	8.87	43	0	1272.28
0.0	0.0	0.939	2.852	2.68	0.655	9.32	6.11	8.79	49	0	1272.31
0.0	0.0	1.0	3.04	3.04	0.602	9.05	5.45	8.49	44	0	1272.55
0.0	0.0	0.985	2.98	2.94	0.602	9.06	5.46	8.39	47	0	1272.58
0.0	0.0	0.97	2.939	2.85	0.602	9.08	5.46	8.32	49	0	1272.60
0.0	0.0	0.955	2.896	2.77	0.602	9.09	5.47	8.24	45	0	1272.63
0.0	0.0	0.939	2.852	2.68	0.602	9.10	5.48	8.16	42	0	1272.65
0.0	0.0	1.0	3.04	3.04	0.549	8.82	4.84	7.88	34	0	1272.87
0.0	0.0	0.985	2.98	2.94	0.549	8.84	4.85	7.79	30	0	1272.90
0.0	0.0	0.97	2.939	2.85	0.549	8.86	4.86	7.71	28	0	1272.93
0.0	0.0	0.955	2.896	2.77	0.549	8.87	4.87	7.63	29	0	1272.95
0.0	0.0	1.0	3.129	3.13	0.77	9.51	7.33	10.45	246	20	1269.46
0.0	0.0	0.985	3.081	3.03	0.77	9.52	7.33	10.37	259	20	1269.50
0.0	0.0	0.97	3.019	2.93	0.77	9.53	7.34	10.27	259	20	1269.53
0.0	0.0	0.955	2.974	2.84	0.77	9.54	7.34	10.18	246	20	1269.56
0.0	0.0	0.939	2.932	2.75	0.77	9.54	7.35	10.10	232	20	1269.59
0.0	0.0	0.924	2.862	2.64	0.77	9.54	7.35	9.99	219	20	1269.63
0.0	0.0	0.874	2.696	2.36	0.77	9.57	7.37	9.73	215	20	1269.72
0.0	0.0	0.857	2.636	2.26	0.77	9.59	7.38	9.64	214	20	1269.75
0.0	0.0	0.84	2.592	2.18	0.77	9.60	7.39	9.57	203	20	1269.78
0.0	0.0	1.0	3.129	3.13	0.72	9.30	6.69	9.82	181	20	1269.85
0.0	0.0	0.985	3.081	3.03	0.72	9.31	6.70	9.74	173	20	1269.88
0.0	0.0	0.97	3.019	2.93	0.72	9.32	6.71	9.64	165	20	1269.91
0.0	0.0	0.955	2.974	2.84	0.72	9.33	6.72	9.56	160	20	1269.95
0.0	0.0	0.939	2.932	2.75	0.72	9.33	6.72	9.47	166	20	1269.98
0.0	0.0	0.924	2.862	2.64	0.72	9.34	6.72	9.37	173	20	1270.01
0.0	0.0	0.874	2.696	2.36	0.72	9.37	6.74	9.10	172	20	1270.10
0.0	0.0	0.857	2.636	2.26	0.72	9.38	6.76	9.01	171	20	1270.13
0.0	0.0	1.0	3.129	3.13	0.67	9.09	6.09	9.22	175	20	1270.22
0.0	0.0	0.985	3.081	3.03	0.67	9.10	6.09	9.13	173	20	1270.25
0.0	0.0	0.97	3.019	2.93	0.67	9.11	6.10	9.03	164	20	1270.28
0.0	0.0	0.955	2.974	2.84	0.67	9.12	6.11	8.95	160	20	1270.31
0.0	0.0	0.939	2.932	2.75	0.67	9.12	6.11	8.87	158	20	1270.34

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.924	2.862	2.64	0.67	9.13	6.12	8.76	162	20	1270.37
0.0	0.0	0.874	2.696	2.36	0.67	9.17	6.14	8.50	168	20	1270.46
0.0	0.0	1.0	3.129	3.13	0.62	8.88	5.50	8.63	130	20	1270.56
0.0	0.0	0.985	3.081	3.03	0.62	8.89	5.51	8.55	129	20	1270.60
0.0	0.0	0.97	3.019	2.93	0.62	8.90	5.52	8.45	131	20	1270.63
0.0	0.0	0.955	2.974	2.84	0.62	8.91	5.52	8.36	134	20	1270.66
0.0	0.0	0.939	2.932	2.75	0.62	8.92	5.53	8.28	131	20	1270.69
0.0	0.0	0.924	2.862	2.64	0.62	8.93	5.53	8.18	127	20	1270.71
0.0	0.0	1.0	3.129	3.13	0.57	8.67	4.94	8.07	93	20	1270.89
0.0	0.0	0.985	3.081	3.03	0.57	8.68	4.95	7.98	94	20	1270.92
0.0	0.0	0.97	3.019	2.93	0.57	8.70	4.96	7.88	92	20	1270.95
0.0	0.0	0.955	2.974	2.84	0.57	8.71	4.96	7.80	88	20	1270.98
0.0	0.0	0.939	2.932	2.75	0.57	8.71	4.97	7.72	83	20	1271.01
0.0	0.0	0.924	2.862	2.64	0.57	8.72	4.97	7.61	81	20	1271.04
0.0	0.0	1.0	3.129	3.13	0.52	8.46	4.40	7.53	38	20	1271.20
0.0	0.0	0.985	3.081	3.03	0.52	8.47	4.41	7.44	36	20	1271.23
0.0	0.0	0.97	3.019	2.93	0.52	8.49	4.41	7.34	35	20	1271.25
0.0	0.0	0.955	2.974	2.84	0.52	8.50	4.42	7.26	34	20	1271.28
0.0	0.0	0.939	2.932	2.75	0.52	8.51	4.42	7.18	34	20	1271.31
0.0	0.0	0.924	2.862	2.64	0.52	8.52	4.43	7.07	34	20	1271.34
0.0	0.0	1.0	3.231	3.23	0.793	9.40	7.45	10.68	85	40	1267.33
0.0	0.0	0.985	3.183	3.14	0.793	9.40	7.46	10.59	94	40	1267.36
0.0	0.0	0.97	3.144	3.05	0.793	9.41	7.46	10.51	100	40	1267.40
0.0	0.0	0.955	3.087	2.95	0.793	9.41	7.47	10.41	101	40	1267.44
0.0	0.0	0.939	3.038	2.85	0.793	9.42	7.47	10.32	98	40	1267.47
0.0	0.0	0.924	2.98	2.75	0.793	9.43	7.48	10.23	95	40	1267.51
0.0	0.0	0.907	2.928	2.66	0.793	9.44	7.48	10.14	94	40	1267.55
0.0	0.0	0.891	2.867	2.55	0.793	9.44	7.49	10.04	93	40	1267.58
0.0	0.0	1.0	3.231	3.23	0.751	9.22	6.92	10.15	78	40	1267.67
0.0	0.0	0.985	3.183	3.14	0.751	9.23	6.93	10.07	78	40	1267.71
0.0	0.0	0.97	3.144	3.05	0.751	9.23	6.93	9.98	77	40	1267.75
0.0	0.0	0.955	3.087	2.95	0.751	9.24	6.94	9.89	79	40	1267.78
0.0	0.0	0.939	3.038	2.85	0.751	9.25	6.94	9.80	83	40	1267.82
0.0	0.0	0.924	2.98	2.75	0.751	9.26	6.95	9.71	86	40	1267.85
0.0	0.0	0.907	2.928	2.66	0.751	9.27	6.96	9.61	86	40	1267.88
0.0	0.0	0.891	2.867	2.55	0.751	9.28	6.97	9.52	83	40	1267.92
0.0	0.0	1.0	3.231	3.23	0.709	9.04	6.41	9.64	63	40	1268.00
0.0	0.0	0.985	3.183	3.14	0.709	9.05	6.42	9.55	65	40	1268.04
0.0	0.0	0.97	3.144	3.05	0.709	9.06	6.42	9.47	69	40	1268.07
0.0	0.0	0.955	3.087	2.95	0.709	9.06	6.43	9.38	70	40	1268.11
0.0	0.0	0.939	3.038	2.85	0.709	9.07	6.43	9.29	68	40	1268.14
0.0	0.0	0.924	2.98	2.75	0.709	9.09	6.44	9.19	64	40	1268.18
0.0	0.0	0.907	2.928	2.66	0.709	9.09	6.45	9.10	61	40	1268.21
0.0	0.0	0.891	2.867	2.55	0.709	9.10	6.45	9.01	60	40	1268.24
0.0	0.0	1.0	3.231	3.23	0.667	8.87	5.91	9.14	43	40	1268.32
0.0	0.0	0.985	3.183	3.14	0.667	8.88	5.92	9.06	43	40	1268.35
0.0	0.0	0.97	3.144	3.05	0.667	8.88	5.93	8.98	43	40	1268.39
0.0	0.0	0.955	3.087	2.95	0.667	8.89	5.93	8.88	43	40	1268.42

*continued on next page*



$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[ $\text{cm}^{-1}$ ]
0.0	0.0	0.939	3.038	2.85	0.667	8.90	5.94	8.79	45	40	1268.45
0.0	0.0	0.924	2.98	2.75	0.667	8.91	5.95	8.70	46	40	1268.48
0.0	0.0	0.907	2.928	2.66	0.667	8.92	5.95	8.61	47	40	1268.52
0.0	0.0	0.891	2.867	2.55	0.667	8.94	5.96	8.51	48	40	1268.55
0.0	0.0	1.0	3.231	3.23	0.624	8.69	5.42	8.65	25	40	1268.63
0.0	0.0	0.985	3.183	3.14	0.624	8.70	5.43	8.56	25	40	1268.66
0.0	0.0	0.97	3.144	3.05	0.624	8.71	5.43	8.48	26	40	1268.69
0.0	0.0	0.955	3.087	2.95	0.624	8.72	5.44	8.39	27	40	1268.72
0.0	0.0	0.939	3.038	2.85	0.624	8.73	5.45	8.30	27	40	1268.75
0.0	0.0	0.924	2.98	2.75	0.624	8.74	5.45	8.21	28	40	1268.79
0.0	0.0	0.907	2.928	2.66	0.624	8.75	5.46	8.12	28	40	1268.82
0.0	0.0	0.891	2.867	2.55	0.624	8.76	5.47	8.02	27	40	1268.85
0.0	0.0	1.0	3.231	3.23	0.582	8.51	4.96	8.19	3	40	1268.91
0.0	0.0	0.97	3.144	3.05	0.582	8.54	4.97	8.02	5	40	1268.94
0.0	0.0	0.985	3.183	3.14	0.582	8.53	4.96	8.10	4	40	1268.95
0.0	0.0	0.955	3.087	2.95	0.582	8.55	4.98	7.92	5	40	1269.00
0.0	0.0	0.939	3.038	2.85	0.582	8.56	4.98	7.84	6	40	1269.05
0.0	0.0	0.907	2.928	2.66	0.582	8.59	5.00	7.65	5	40	1269.11
0.0	0.0	0.891	2.867	2.55	0.582	8.60	5.00	7.56	5	40	1269.12

Table 13:

Details of cluster #10-Front

$I_F$	$V_F$	$I_B$	$V_B$	$P_{elR}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.767	2.391	0.0	0.0	1.83	0.72	9.41	6.78	8.61	221	20	1279.51
0.767	2.391	0.0	0.0	1.83	0.67	9.21	6.17	8.00	169	20	1279.87
0.748	2.333	0.0	0.0	1.75	0.67	9.22	6.18	7.92	178	20	1279.90
0.767	2.391	0.0	0.0	1.83	0.62	9.01	5.58	7.42	130	20	1280.20
0.748	2.333	0.0	0.0	1.75	0.62	9.02	5.59	7.34	143	20	1280.23
0.728	2.258	0.0	0.0	1.64	0.62	9.03	5.60	7.24	156	20	1280.26
0.767	2.391	0.0	0.0	1.83	0.57	8.80	5.02	6.85	95	20	1280.52
0.748	2.333	0.0	0.0	1.75	0.57	8.81	5.02	6.77	100	20	1280.55
0.728	2.258	0.0	0.0	1.64	0.57	8.82	5.03	6.67	103	20	1280.58
0.767	2.391	0.0	0.0	1.83	0.52	8.60	4.47	6.30	40	20	1280.82
0.748	2.333	0.0	0.0	1.75	0.52	8.61	4.48	6.22	44	20	1280.85
0.728	2.258	0.0	0.0	1.64	0.52	8.62	4.48	6.13	48	20	1280.87

Table 14: