

**Datasheet for #sbcw12185 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.

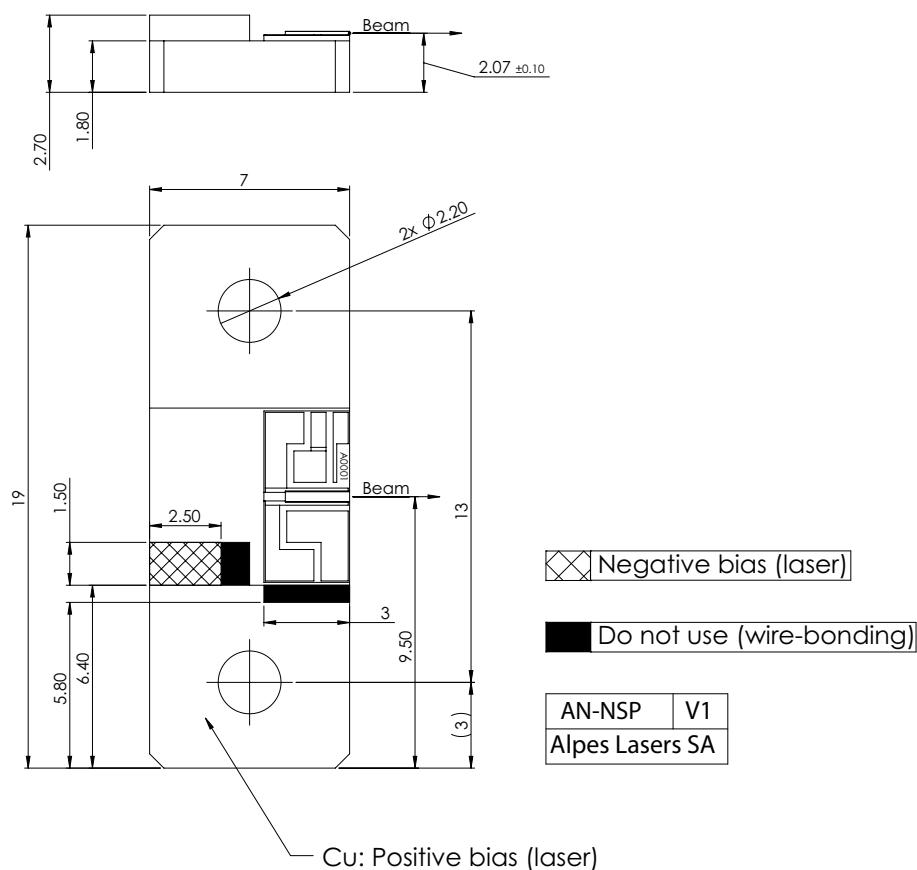


Figure 1: Support mounting for #sbcw12185 DN

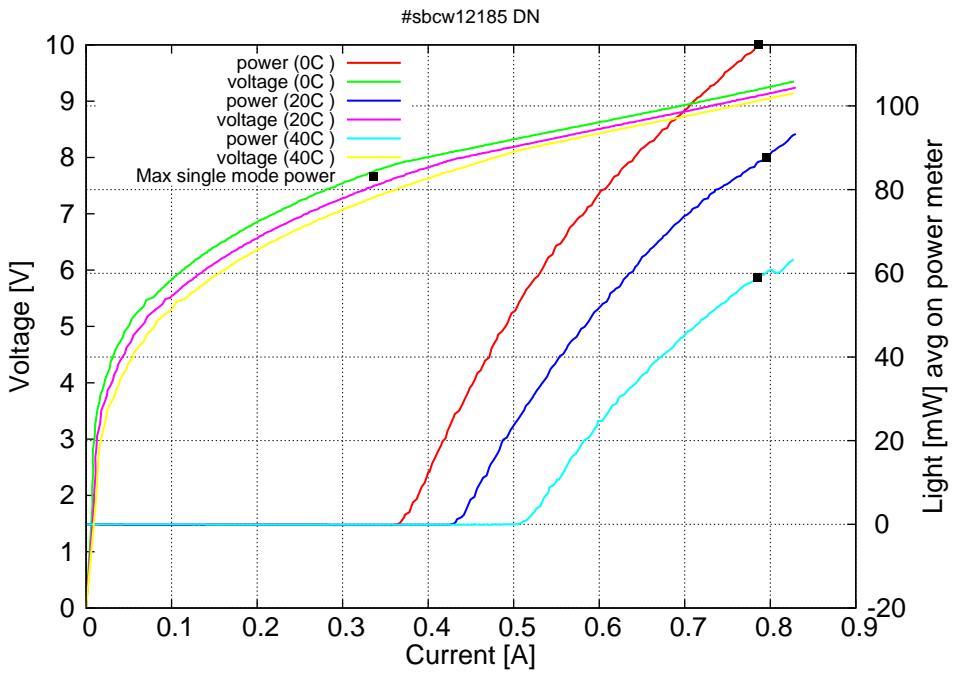


Figure 2: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.37A$  /  $V_{th}=7.9V$  (2-wires measurements). Maximum operation current: 0.83A for all temperatures.

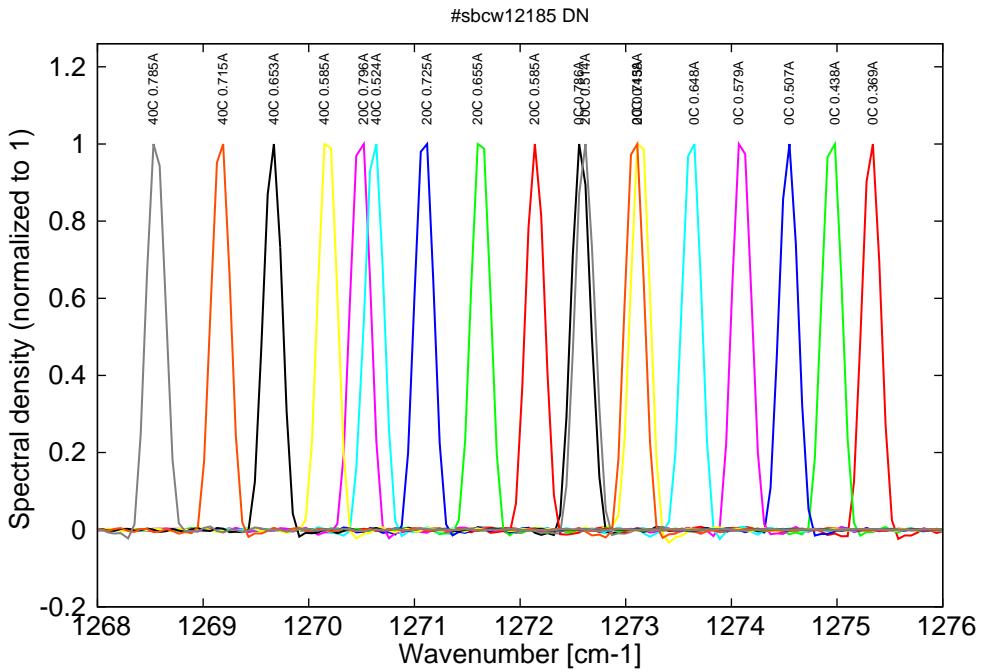


Figure 3: spectra at 0C, 20C and 40C in continuous-wave operation (front resistor current  $I_F = 0A$  and back resistor current  $I_B = 0A$ )

## Vernier characterization

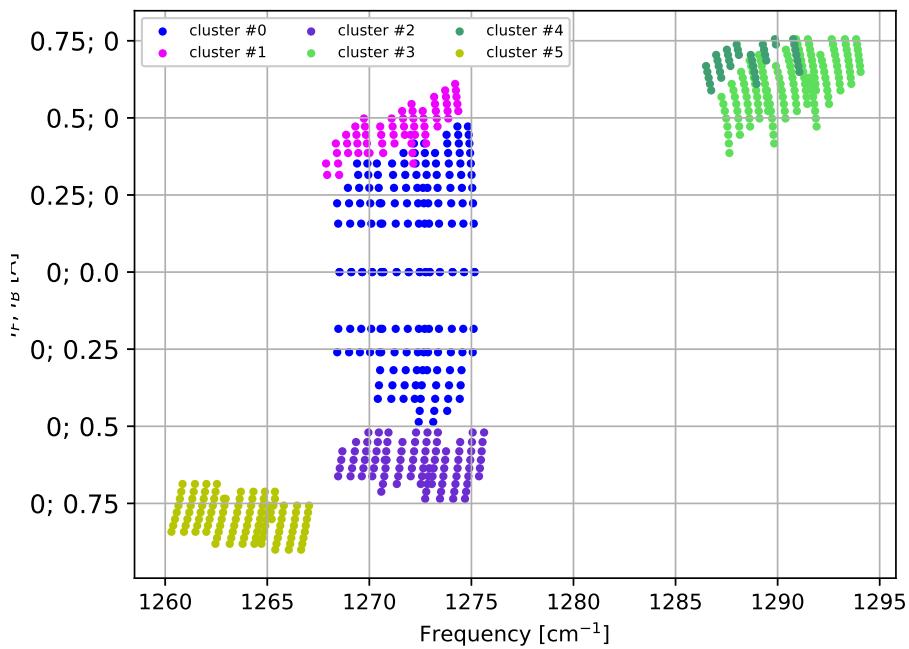


Figure 4: Emission frequency as a function of electrical current on the front resistor  $I_F$  or back resistor  $I_B$ . Either the back or the front resistors are heated, while no electrical current is flowing through the other resistor.

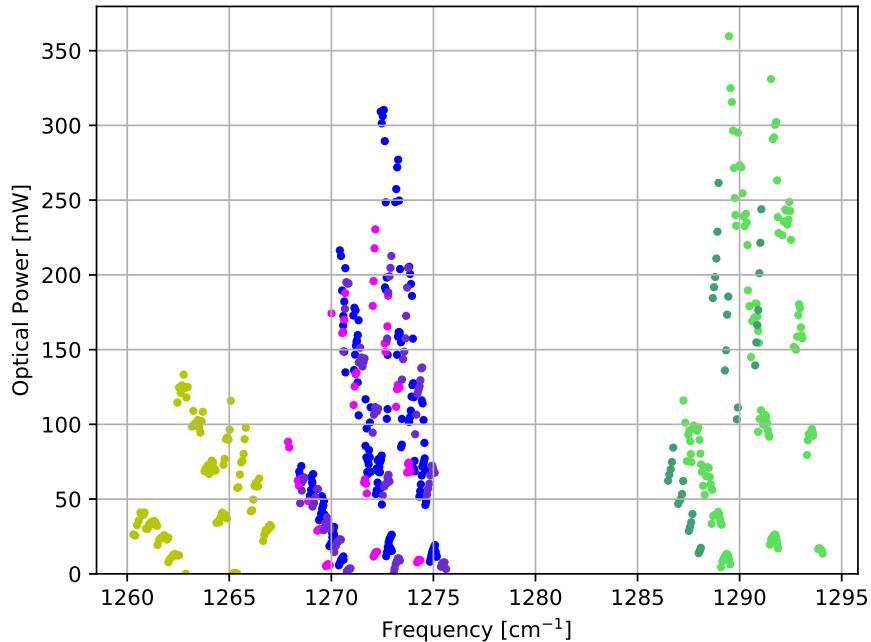


Figure 5: Optical power as a function of emission frequency.

Cluster	$I_B$ [A]	$V_B$ [V]	$I_F$ [A]	$V_F$ [V]	$I_L$ [A]	$V_L$ [V]	Freq $[\text{cm}^{-1}]$	T [C]	$P_{\text{opt}}$ [mW]
#0-Back	0.00 - 0.49	0.0 - 1.9	0	0	0.40 - 0.83	8.0 - 9.6	1268.4 - 1275.2	0 - 40	310
#0-Front	0	0	0.00 - 0.47	0.0 - 1.7	0.40 - 0.83	7.9 - 9.6	1268.4 - 1275.2	0 - 40	204
#1-Front	0	0	0.32 - 0.61	1.2 - 2.3	0.40 - 0.83	7.8 - 9.3	1267.9 - 1274.4	0 - 40	230
#2-Back	0.52 - 0.73	2.1 - 3.0	0	0	0.40 - 0.83	7.8 - 9.2	1268.5 - 1275.6	0 - 40	213
#3-Front	0	0	0.39 - 0.76	1.5 - 3.0	0.40 - 0.83	7.7 - 9.2	1287.3 - 1294.1	0 - 40	360
#4-Front	0	0	0.59 - 0.76	2.4 - 3.1	0.62 - 0.83	8.3 - 9.1	1286.5 - 1291.1	0 - 40	262
#5-Back	0.69 - 0.90	3.0 - 3.9	0	0	0.47 - 0.83	7.8 - 9.2	1260.3 - 1267.0	0 - 40	133

Table 1: Overview of the clusters.

Details of cluster #0-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.486	1.925	0.94	0.8	9.28	7.42	8.36	309	0	1272.42
0.0	0.0	0.45	1.774	0.80	0.8	9.30	7.44	8.24	301	0	1272.47
0.0	0.0	0.411	1.61	0.66	0.8	9.31	7.45	8.11	306	0	1272.52
0.0	0.0	0.367	1.427	0.52	0.8	9.34	7.47	7.99	310	0	1272.57
0.0	0.0	0.318	1.223	0.39	0.8	9.36	7.49	7.88	289	0	1272.62
0.0	0.0	0.26	0.982	0.26	0.8	9.39	7.52	7.77	249	0	1272.66
0.0	0.0	0.184	0.666	0.12	0.8	9.43	7.55	7.67	198	0	1272.71
0.0	0.0	0.0	0.0	0.00	0.8	9.55	7.64	7.64	110	0	1272.76
0.0	0.0	0.0	0.0	0.00	0.8	9.54	7.63	7.63	146	0	1272.76
0.0	0.0	0.486	1.925	0.94	0.7	8.94	6.26	7.20	249	0	1273.13
0.0	0.0	0.45	1.774	0.80	0.7	8.96	6.27	7.07	257	0	1273.18
0.0	0.0	0.411	1.61	0.66	0.7	8.97	6.28	6.94	272	0	1273.22
0.0	0.0	0.367	1.427	0.52	0.7	8.99	6.30	6.82	277	0	1273.27
0.0	0.0	0.318	1.223	0.39	0.7	9.02	6.31	6.70	250	0	1273.32
0.0	0.0	0.26	0.982	0.26	0.7	9.05	6.33	6.59	204	0	1273.36
0.0	0.0	0.184	0.666	0.12	0.7	9.09	6.36	6.48	155	0	1273.41
0.0	0.0	0.0	0.0	0.00	0.7	9.19	6.44	6.44	86	0	1273.45
0.0	0.0	0.0	0.0	0.00	0.7	9.18	6.43	6.43	104	0	1273.45
0.0	0.0	0.45	1.774	0.80	0.6	8.63	5.18	5.97	205	0	1273.81
0.0	0.0	0.411	1.61	0.66	0.6	8.64	5.18	5.85	201	0	1273.86
0.0	0.0	0.367	1.427	0.52	0.6	8.66	5.20	5.72	194	0	1273.90
0.0	0.0	0.318	1.223	0.39	0.6	8.68	5.21	5.60	186	0	1273.95
0.0	0.0	0.26	0.982	0.26	0.6	8.71	5.22	5.48	157	0	1273.99
0.0	0.0	0.184	0.666	0.12	0.6	8.75	5.25	5.37	118	0	1274.04
0.0	0.0	0.0	0.0	0.00	0.6	8.84	5.30	5.30	76	0	1274.08
0.0	0.0	0.0	0.0	0.00	0.6	8.84	5.31	5.31	69	0	1274.08
0.0	0.0	0.411	1.61	0.66	0.5	8.31	4.15	4.82	116	0	1274.43
0.0	0.0	0.367	1.427	0.52	0.5	8.32	4.16	4.69	114	0	1274.47
0.0	0.0	0.318	1.223	0.39	0.5	8.35	4.17	4.56	103	0	1274.51
0.0	0.0	0.26	0.982	0.26	0.5	8.37	4.18	4.44	88	0	1274.56
0.0	0.0	0.184	0.666	0.12	0.5	8.41	4.20	4.33	69	0	1274.60
0.0	0.0	0.0	0.0	0.00	0.5	8.50	4.25	4.25	48	0	1274.64
0.0	0.0	0.0	0.0	0.00	0.5	8.49	4.25	4.25	49	0	1274.64
0.0	0.0	0.26	0.982	0.26	0.4	8.02	3.21	3.46	16	0	1275.07
0.0	0.0	0.184	0.666	0.12	0.4	8.06	3.22	3.35	15	0	1275.11
0.0	0.0	0.0	0.0	0.00	0.4	8.14	3.26	3.26	12	0	1275.15
0.0	0.0	0.0	0.0	0.00	0.4	8.14	3.25	3.25	11	0	1275.15
0.0	0.0	0.411	1.642	0.67	0.814	9.23	7.52	8.19	216	20	1270.41
0.0	0.0	0.367	1.453	0.53	0.814	9.25	7.53	8.07	213	20	1270.47
0.0	0.0	0.318	1.242	0.39	0.814	9.28	7.55	7.95	190	20	1270.53
0.0	0.0	0.26	0.994	0.26	0.814	9.31	7.58	7.83	166	20	1270.58
0.0	0.0	0.184	0.672	0.12	0.814	9.34	7.61	7.73	149	20	1270.63
0.0	0.0	0.0	0.0	0.00	0.814	9.41	7.66	7.66	204	20	1270.69
0.0	0.0	0.0	0.0	0.00	0.814	9.43	7.68	7.68	135	20	1270.69
0.0	0.0	0.411	1.642	0.67	0.728	8.94	6.51	7.18	173	20	1271.07
0.0	0.0	0.367	1.453	0.53	0.728	8.96	6.52	7.06	178	20	1271.13

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.318	1.242	0.39	0.728	8.98	6.54	6.93	176	20	1271.18
0.0	0.0	0.26	0.994	0.26	0.728	9.01	6.56	6.82	155	20	1271.24
0.0	0.0	0.184	0.672	0.12	0.728	9.04	6.58	6.71	128	20	1271.29
0.0	0.0	0.0	0.0	0.00	0.728	9.11	6.63	6.63	170	20	1271.33
0.0	0.0	0.0	0.0	0.00	0.728	9.13	6.64	6.64	106	20	1271.34
0.0	0.0	0.411	1.642	0.67	0.642	8.65	5.56	6.23	117	20	1271.68
0.0	0.0	0.367	1.453	0.53	0.642	8.67	5.57	6.10	97	20	1271.73
0.0	0.0	0.318	1.242	0.39	0.642	8.69	5.58	5.97	76	20	1271.78
0.0	0.0	0.26	0.994	0.26	0.642	8.71	5.59	5.85	73	20	1271.83
0.0	0.0	0.184	0.672	0.12	0.642	8.75	5.62	5.74	78	20	1271.88
0.0	0.0	0.0	0.0	0.00	0.642	8.82	5.66	5.66	111	20	1271.93
0.0	0.0	0.0	0.0	0.00	0.642	8.83	5.67	5.67	68	20	1271.93
0.0	0.0	0.411	1.642	0.67	0.556	8.37	4.65	5.33	70	20	1272.22
0.0	0.0	0.367	1.453	0.53	0.556	8.38	4.66	5.19	76	20	1272.27
0.0	0.0	0.318	1.242	0.39	0.556	8.40	4.67	5.06	77	20	1272.33
0.0	0.0	0.26	0.994	0.26	0.556	8.42	4.68	4.94	68	20	1272.38
0.0	0.0	0.184	0.672	0.12	0.556	8.45	4.70	4.82	57	20	1272.42
0.0	0.0	0.0	0.0	0.00	0.556	8.52	4.74	4.74	79	20	1272.47
0.0	0.0	0.0	0.0	0.00	0.556	8.53	4.74	4.74	46	20	1272.47
0.0	0.0	0.318	1.242	0.39	0.47	8.11	3.81	4.20	16	20	1272.83
0.0	0.0	0.26	0.994	0.26	0.47	8.13	3.82	4.08	18	20	1272.88
0.0	0.0	0.184	0.672	0.12	0.47	8.16	3.83	3.96	16	20	1272.92
0.0	0.0	0.0	0.0	0.00	0.47	8.22	3.87	3.87	26	20	1272.96
0.0	0.0	0.0	0.0	0.00	0.47	8.23	3.87	3.87	15	20	1272.96
0.0	0.0	0.26	0.998	0.26	0.83	9.28	7.70	7.96	68	40	1268.43
0.0	0.0	0.184	0.666	0.12	0.83	9.32	7.73	7.86	64	40	1268.48
0.0	0.0	0.0	0.0	0.00	0.83	9.39	7.79	7.79	72	40	1268.53
0.0	0.0	0.0	0.0	0.00	0.83	9.41	7.81	7.81	61	40	1268.54
0.0	0.0	0.26	0.998	0.26	0.76	9.03	6.87	7.12	65	40	1269.01
0.0	0.0	0.184	0.666	0.12	0.76	9.07	6.89	7.01	61	40	1269.06
0.0	0.0	0.0	0.0	0.00	0.76	9.14	6.95	6.95	67	40	1269.11
0.0	0.0	0.0	0.0	0.00	0.76	9.16	6.96	6.96	53	40	1269.12
0.0	0.0	0.26	0.998	0.26	0.69	8.79	6.07	6.32	52	40	1269.54
0.0	0.0	0.184	0.666	0.12	0.69	8.82	6.09	6.21	46	40	1269.60
0.0	0.0	0.0	0.0	0.00	0.69	8.89	6.14	6.14	49	40	1269.64
0.0	0.0	0.0	0.0	0.00	0.69	8.91	6.15	6.15	40	40	1269.65
0.0	0.0	0.26	0.998	0.26	0.62	8.55	5.30	5.56	28	40	1270.03
0.0	0.0	0.184	0.666	0.12	0.62	8.58	5.32	5.44	27	40	1270.09
0.0	0.0	0.0	0.0	0.00	0.62	8.65	5.36	5.36	31	40	1270.14
0.0	0.0	0.0	0.0	0.00	0.62	8.66	5.37	5.37	26	40	1270.14
0.0	0.0	0.26	0.998	0.26	0.55	8.31	4.57	4.83	9	40	1270.50
0.0	0.0	0.184	0.666	0.12	0.55	8.34	4.59	4.71	9	40	1270.55
0.0	0.0	0.0	0.0	0.00	0.55	8.41	4.62	4.62	12	40	1270.59
0.0	0.0	0.0	0.0	0.00	0.55	8.42	4.63	4.63	9	40	1270.60

Table 2:

Details of cluster #0-Front

I <sub>F</sub> [A]	V <sub>F</sub> [V]	I <sub>B</sub> [A]	V <sub>B</sub> [V]	Pel <sub>R</sub> [W]	I <sub>L</sub> [A]	V <sub>L</sub> [V]	P <sub>L</sub> [W]	P <sub>tot</sub> [W]	P <sub>opt</sub> [mW]	T [C]	freq [cm <sup>-1</sup> ]
0.273	0.967	0.0	0.0	0.26	0.8	9.41	7.53	7.79	192	0	1272.63
0.223	0.773	0.0	0.0	0.17	0.8	9.43	7.54	7.71	190	0	1272.67
0.157	0.514	0.0	0.0	0.08	0.8	9.46	7.57	7.65	104	0	1272.72
0.0	0.0	0.0	0.0	0.00	0.8	9.55	7.64	7.64	110	0	1272.76
0.0	0.0	0.0	0.0	0.00	0.8	9.54	7.63	7.63	146	0	1272.76
0.386	1.407	0.0	0.0	0.54	0.7	9.00	6.30	6.85	147	0	1273.22
0.352	1.275	0.0	0.0	0.45	0.7	9.02	6.31	6.76	159	0	1273.26
0.315	1.131	0.0	0.0	0.36	0.7	9.03	6.32	6.68	162	0	1273.30
0.273	0.967	0.0	0.0	0.26	0.7	9.05	6.34	6.60	162	0	1273.34
0.223	0.773	0.0	0.0	0.17	0.7	9.07	6.35	6.52	159	0	1273.38
0.157	0.514	0.0	0.0	0.08	0.7	9.11	6.38	6.46	85	0	1273.41
0.0	0.0	0.0	0.0	0.00	0.7	9.19	6.44	6.44	86	0	1273.45
0.0	0.0	0.0	0.0	0.00	0.7	9.18	6.43	6.43	104	0	1273.45
0.445	1.638	0.0	0.0	0.73	0.6	8.63	5.18	5.91	102	0	1273.78
0.417	1.529	0.0	0.0	0.64	0.6	8.64	5.19	5.82	102	0	1273.82
0.386	1.407	0.0	0.0	0.54	0.6	8.65	5.19	5.74	105	0	1273.86
0.352	1.275	0.0	0.0	0.45	0.6	8.67	5.20	5.65	109	0	1273.89
0.315	1.131	0.0	0.0	0.36	0.6	8.68	5.21	5.57	119	0	1273.93
0.273	0.967	0.0	0.0	0.26	0.6	8.70	5.22	5.49	126	0	1273.97
0.223	0.773	0.0	0.0	0.17	0.6	8.73	5.24	5.41	128	0	1274.01
0.157	0.514	0.0	0.0	0.08	0.6	8.76	5.26	5.34	70	0	1274.04
0.0	0.0	0.0	0.0	0.00	0.6	8.84	5.30	5.30	76	0	1274.08
0.0	0.0	0.0	0.0	0.00	0.6	8.84	5.31	5.31	69	0	1274.08
0.472	1.743	0.0	0.0	0.82	0.5	8.27	4.13	4.96	52	0	1274.31
0.445	1.638	0.0	0.0	0.73	0.5	8.28	4.14	4.87	55	0	1274.35
0.417	1.529	0.0	0.0	0.64	0.5	8.29	4.14	4.78	60	0	1274.38
0.386	1.407	0.0	0.0	0.54	0.5	8.30	4.15	4.69	66	0	1274.43
0.352	1.275	0.0	0.0	0.45	0.5	8.32	4.16	4.61	72	0	1274.46
0.315	1.131	0.0	0.0	0.36	0.5	8.33	4.17	4.52	73	0	1274.50
0.273	0.967	0.0	0.0	0.26	0.5	8.36	4.18	4.44	75	0	1274.53
0.223	0.773	0.0	0.0	0.17	0.5	8.38	4.19	4.36	77	0	1274.57
0.157	0.514	0.0	0.0	0.08	0.5	8.42	4.21	4.29	46	0	1274.61
0.0	0.0	0.0	0.0	0.00	0.5	8.50	4.25	4.25	48	0	1274.64
0.0	0.0	0.0	0.0	0.00	0.5	8.49	4.25	4.25	49	0	1274.64
0.472	1.743	0.0	0.0	0.82	0.4	7.90	3.16	3.98	8	0	1274.83
0.445	1.638	0.0	0.0	0.73	0.4	7.91	3.16	3.89	10	0	1274.87
0.417	1.529	0.0	0.0	0.64	0.4	7.92	3.17	3.81	12	0	1274.90
0.386	1.407	0.0	0.0	0.54	0.4	7.94	3.18	3.72	14	0	1274.94
0.352	1.275	0.0	0.0	0.45	0.4	7.96	3.18	3.63	16	0	1274.97
0.315	1.131	0.0	0.0	0.36	0.4	7.98	3.19	3.55	17	0	1275.01
0.273	0.967	0.0	0.0	0.26	0.4	8.00	3.20	3.46	18	0	1275.04
0.223	0.773	0.0	0.0	0.17	0.4	8.03	3.21	3.38	19	0	1275.08
0.157	0.514	0.0	0.0	0.08	0.4	8.06	3.23	3.31	12	0	1275.12
0.0	0.0	0.0	0.0	0.00	0.4	8.14	3.26	3.26	12	0	1275.15
0.0	0.0	0.0	0.0	0.00	0.4	8.14	3.25	3.25	11	0	1275.15
0.223	0.785	0.0	0.0	0.18	0.814	9.33	7.59	7.77	172	20	1270.59

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.157	0.523	0.0	0.0	0.08	0.814	9.35	7.61	7.69	182	20	1270.63
0.0	0.0	0.0	0.0	0.00	0.814	9.41	7.66	7.66	204	20	1270.69
0.0	0.0	0.0	0.0	0.00	0.814	9.43	7.68	7.68	135	20	1270.69
0.352	1.299	0.0	0.0	0.46	0.728	8.98	6.54	6.99	136	20	1271.11
0.315	1.151	0.0	0.0	0.36	0.728	8.99	6.54	6.91	147	20	1271.16
0.273	0.985	0.0	0.0	0.27	0.728	9.00	6.55	6.82	152	20	1271.21
0.223	0.785	0.0	0.0	0.18	0.728	9.02	6.57	6.74	156	20	1271.25
0.157	0.523	0.0	0.0	0.08	0.728	9.04	6.58	6.67	160	20	1271.29
0.0	0.0	0.0	0.0	0.00	0.728	9.11	6.63	6.63	170	20	1271.33
0.0	0.0	0.0	0.0	0.00	0.728	9.13	6.64	6.64	106	20	1271.34
0.386	1.437	0.0	0.0	0.55	0.642	8.66	5.56	6.12	86	20	1271.67
0.352	1.299	0.0	0.0	0.46	0.642	8.67	5.57	6.03	78	20	1271.72
0.315	1.151	0.0	0.0	0.36	0.642	8.69	5.58	5.94	68	20	1271.76
0.273	0.985	0.0	0.0	0.27	0.642	8.70	5.59	5.86	67	20	1271.80
0.223	0.785	0.0	0.0	0.18	0.642	8.72	5.60	5.77	83	20	1271.85
0.157	0.523	0.0	0.0	0.08	0.642	8.75	5.62	5.70	101	20	1271.89
0.0	0.0	0.0	0.0	0.00	0.642	8.82	5.66	5.66	111	20	1271.93
0.0	0.0	0.0	0.0	0.00	0.642	8.83	5.67	5.67	68	20	1271.93
0.417	1.561	0.0	0.0	0.65	0.556	8.35	4.64	5.29	53	20	1272.18
0.386	1.437	0.0	0.0	0.55	0.556	8.36	4.65	5.20	56	20	1272.22
0.352	1.299	0.0	0.0	0.46	0.556	8.37	4.65	5.11	61	20	1272.26
0.315	1.151	0.0	0.0	0.36	0.556	8.38	4.66	5.02	68	20	1272.31
0.273	0.985	0.0	0.0	0.27	0.556	8.40	4.67	4.94	72	20	1272.35
0.223	0.785	0.0	0.0	0.18	0.556	8.42	4.68	4.86	75	20	1272.39
0.157	0.523	0.0	0.0	0.08	0.556	8.45	4.70	4.78	76	20	1272.43
0.0	0.0	0.0	0.0	0.00	0.556	8.52	4.74	4.74	79	20	1272.47
0.0	0.0	0.0	0.0	0.00	0.556	8.53	4.74	4.74	46	20	1272.47
0.417	1.561	0.0	0.0	0.65	0.47	8.04	3.78	4.43	12	20	1272.69
0.386	1.437	0.0	0.0	0.55	0.47	8.05	3.79	4.34	14	20	1272.72
0.352	1.299	0.0	0.0	0.46	0.47	8.07	3.79	4.25	18	20	1272.76
0.315	1.151	0.0	0.0	0.36	0.47	8.08	3.80	4.16	21	20	1272.81
0.273	0.985	0.0	0.0	0.27	0.47	8.10	3.81	4.08	23	20	1272.85
0.223	0.785	0.0	0.0	0.18	0.47	8.12	3.82	3.99	24	20	1272.89
0.157	0.523	0.0	0.0	0.08	0.47	8.15	3.83	3.91	25	20	1272.92
0.0	0.0	0.0	0.0	0.00	0.47	8.22	3.87	3.87	26	20	1272.96
0.0	0.0	0.0	0.0	0.00	0.47	8.23	3.87	3.87	15	20	1272.96
0.223	0.792	0.0	0.0	0.18	0.83	9.30	7.72	7.90	62	40	1268.42
0.157	0.518	0.0	0.0	0.08	0.83	9.33	7.74	7.82	66	40	1268.47
0.0	0.0	0.0	0.0	0.00	0.83	9.39	7.79	7.79	72	40	1268.53
0.0	0.0	0.0	0.0	0.00	0.83	9.41	7.81	7.81	61	40	1268.54
0.273	1.001	0.0	0.0	0.27	0.76	9.03	6.86	7.14	52	40	1268.95
0.223	0.792	0.0	0.0	0.18	0.76	9.05	6.88	7.05	56	40	1269.01
0.157	0.518	0.0	0.0	0.08	0.76	9.07	6.90	6.98	62	40	1269.06
0.0	0.0	0.0	0.0	0.00	0.76	9.14	6.95	6.95	67	40	1269.11
0.0	0.0	0.0	0.0	0.00	0.76	9.16	6.96	6.96	53	40	1269.12
0.352	1.336	0.0	0.0	0.47	0.69	8.75	6.04	6.51	36	40	1269.40
0.315	1.177	0.0	0.0	0.37	0.69	8.76	6.05	6.42	37	40	1269.45
0.273	1.001	0.0	0.0	0.27	0.69	8.78	6.06	6.33	40	40	1269.50

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.223	0.792	0.0	0.0	0.18	0.69	8.80	6.07	6.25	43	40	1269.55
0.157	0.518	0.0	0.0	0.08	0.69	8.82	6.09	6.17	46	40	1269.60
0.0	0.0	0.0	0.0	0.00	0.69	8.89	6.14	6.14	49	40	1269.64
0.0	0.0	0.0	0.0	0.00	0.69	8.91	6.15	6.15	40	40	1269.65
0.352	1.336	0.0	0.0	0.47	0.62	8.50	5.27	5.74	19	40	1269.90
0.315	1.177	0.0	0.0	0.37	0.62	8.51	5.28	5.65	18	40	1269.95
0.273	1.001	0.0	0.0	0.27	0.62	8.53	5.29	5.56	21	40	1270.00
0.223	0.792	0.0	0.0	0.18	0.62	8.55	5.30	5.48	24	40	1270.05
0.157	0.518	0.0	0.0	0.08	0.62	8.58	5.32	5.40	28	40	1270.09
0.0	0.0	0.0	0.0	0.00	0.62	8.65	5.36	5.36	31	40	1270.14
0.0	0.0	0.0	0.0	0.00	0.62	8.66	5.37	5.37	26	40	1270.14
0.352	1.336	0.0	0.0	0.47	0.55	8.25	4.54	5.01	6	40	1270.37
0.315	1.177	0.0	0.0	0.37	0.55	8.27	4.55	4.92	7	40	1270.42
0.273	1.001	0.0	0.0	0.27	0.55	8.28	4.56	4.83	9	40	1270.46
0.223	0.792	0.0	0.0	0.18	0.55	8.31	4.57	4.75	10	40	1270.51
0.157	0.518	0.0	0.0	0.08	0.55	8.34	4.58	4.67	11	40	1270.55
0.0	0.0	0.0	0.0	0.00	0.55	8.41	4.62	4.62	12	40	1270.59
0.0	0.0	0.0	0.0	0.00	0.55	8.42	4.63	4.63	9	40	1270.60

Table 3:

Details of cluster #1-Front

I <sub>F</sub> [A]	V <sub>F</sub> [V]	I <sub>B</sub> [A]	V <sub>B</sub> [V]	Pel <sub>R</sub> [W]	I <sub>L</sub> [A]	V <sub>L</sub> [V]	P <sub>L</sub> [W]	P <sub>tot</sub> [W]	P <sub>opt</sub> [mW]	T [C]	freq [cm <sup>-1</sup> ]
0.445	1.638	0.0	0.0	0.73	0.8	9.30	7.44	8.17	179	0	1272.03
0.417	1.529	0.0	0.0	0.64	0.8	9.31	7.45	8.09	196	0	1272.07
0.386	1.407	0.0	0.0	0.54	0.8	9.32	7.46	8.00	218	0	1272.11
0.352	1.275	0.0	0.0	0.45	0.8	9.34	7.47	7.92	230	0	1272.15
0.522	1.94	0.0	0.0	1.01	0.7	8.91	6.24	7.25	154	0	1272.61
0.498	1.847	0.0	0.0	0.92	0.7	8.92	6.25	7.17	149	0	1272.65
0.472	1.743	0.0	0.0	0.82	0.7	8.94	6.25	7.08	155	0	1272.70
0.445	1.638	0.0	0.0	0.73	0.7	8.95	6.26	6.99	166	0	1272.74
0.417	1.529	0.0	0.0	0.64	0.7	8.96	6.27	6.91	186	0	1272.78
0.568	2.124	0.0	0.0	1.21	0.6	8.54	5.13	6.33	112	0	1273.17
0.545	2.032	0.0	0.0	1.11	0.6	8.55	5.13	6.24	124	0	1273.22
0.522	1.94	0.0	0.0	1.01	0.6	8.56	5.14	6.15	126	0	1273.26
0.498	1.847	0.0	0.0	0.92	0.6	8.58	5.15	6.07	124	0	1273.30
0.472	1.743	0.0	0.0	0.82	0.6	8.59	5.16	5.98	125	0	1273.34
0.589	2.211	0.0	0.0	1.30	0.5	8.18	4.09	5.39	68	0	1273.71
0.568	2.124	0.0	0.0	1.21	0.5	8.20	4.10	5.30	74	0	1273.75
0.545	2.032	0.0	0.0	1.11	0.5	8.21	4.10	5.21	74	0	1273.80
0.522	1.94	0.0	0.0	1.01	0.5	8.22	4.11	5.12	71	0	1273.83
0.498	1.847	0.0	0.0	0.92	0.5	8.24	4.12	5.04	68	0	1273.87
0.61	2.297	0.0	0.0	1.40	0.4	7.81	3.13	4.53	8	0	1274.20
0.589	2.211	0.0	0.0	1.30	0.4	7.83	3.13	4.43	9	0	1274.24
0.568	2.124	0.0	0.0	1.21	0.4	7.84	3.14	4.34	9	0	1274.27
0.545	2.032	0.0	0.0	1.11	0.4	7.86	3.14	4.25	9	0	1274.31
0.522	1.94	0.0	0.0	1.01	0.4	7.87	3.15	4.16	9	0	1274.36
0.386	1.437	0.0	0.0	0.55	0.814	9.24	7.52	8.07	174	20	1270.01
0.472	1.788	0.0	0.0	0.84	0.728	8.90	6.48	7.32	161	20	1270.53
0.445	1.676	0.0	0.0	0.75	0.728	8.91	6.49	7.23	162	20	1270.58
0.417	1.561	0.0	0.0	0.65	0.728	8.92	6.50	7.15	170	20	1270.63
0.386	1.437	0.0	0.0	0.55	0.728	8.94	6.51	7.06	188	20	1270.68
0.498	1.895	0.0	0.0	0.94	0.642	8.59	5.52	6.46	113	20	1271.09
0.472	1.788	0.0	0.0	0.84	0.642	8.60	5.52	6.37	125	20	1271.14
0.445	1.676	0.0	0.0	0.75	0.642	8.62	5.53	6.28	134	20	1271.19
0.417	1.561	0.0	0.0	0.65	0.642	8.63	5.54	6.19	135	20	1271.23
0.522	1.995	0.0	0.0	1.04	0.556	8.28	4.61	5.65	61	20	1271.61
0.498	1.895	0.0	0.0	0.94	0.556	8.30	4.61	5.56	63	20	1271.65
0.472	1.788	0.0	0.0	0.84	0.556	8.31	4.62	5.46	60	20	1271.70
0.445	1.676	0.0	0.0	0.75	0.556	8.32	4.63	5.37	54	20	1271.74
0.545	2.093	0.0	0.0	1.14	0.47	7.97	3.75	4.89	12	20	1272.07
0.522	1.995	0.0	0.0	1.04	0.47	7.99	3.75	4.79	13	20	1272.12
0.498	1.895	0.0	0.0	0.94	0.47	8.00	3.76	4.70	14	20	1272.16
0.472	1.788	0.0	0.0	0.84	0.47	8.01	3.77	4.61	15	20	1272.20
0.445	1.676	0.0	0.0	0.75	0.47	8.03	3.77	4.52	15	20	1272.24
0.352	1.336	0.0	0.0	0.47	0.83	9.22	7.65	8.12	88	40	1267.88
0.315	1.177	0.0	0.0	0.37	0.83	9.24	7.67	8.04	85	40	1267.93
0.417	1.613	0.0	0.0	0.67	0.76	8.94	6.80	7.47	62	40	1268.36
0.386	1.482	0.0	0.0	0.57	0.76	8.96	6.81	7.38	59	40	1268.41

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.352	1.336	0.0	0.0	0.47	0.76	8.97	6.82	7.29	60	40	1268.47
0.315	1.177	0.0	0.0	0.37	0.76	8.99	6.83	7.20	64	40	1268.52
0.445	1.738	0.0	0.0	0.77	0.69	8.68	5.99	6.76	49	40	1268.86
0.417	1.613	0.0	0.0	0.67	0.69	8.69	6.00	6.67	49	40	1268.91
0.386	1.482	0.0	0.0	0.57	0.69	8.71	6.01	6.58	48	40	1268.96
0.472	1.857	0.0	0.0	0.88	0.62	8.42	5.22	6.10	29	40	1269.31
0.445	1.738	0.0	0.0	0.77	0.62	8.44	5.23	6.00	29	40	1269.37
0.417	1.613	0.0	0.0	0.67	0.62	8.45	5.24	5.91	30	40	1269.41
0.386	1.482	0.0	0.0	0.57	0.62	8.47	5.25	5.82	30	40	1269.46
0.498	1.968	0.0	0.0	0.98	0.55	8.17	4.49	5.47	5	40	1269.73
0.472	1.857	0.0	0.0	0.88	0.55	8.18	4.50	5.38	6	40	1269.79
0.445	1.738	0.0	0.0	0.77	0.55	8.20	4.51	5.28	6	40	1269.83
0.417	1.613	0.0	0.0	0.67	0.55	8.21	4.52	5.19	6	40	1269.88
0.386	1.482	0.0	0.0	0.57	0.55	8.23	4.53	5.10	6	40	1269.92

Table 4:

Details of cluster #2-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.735	3.041	2.24	0.8	9.14	7.31	9.55	157	0	1272.74
0.0	0.0	0.712	2.927	2.08	0.8	9.15	7.32	9.41	188	0	1272.79
0.0	0.0	0.687	2.82	1.94	0.8	9.17	7.34	9.27	199	0	1272.85
0.0	0.0	0.662	2.699	1.79	0.8	9.19	7.35	9.14	205	0	1272.89
0.0	0.0	0.636	2.577	1.64	0.8	9.21	7.37	9.01	213	0	1272.94
0.0	0.0	0.735	3.041	2.24	0.7	8.80	6.16	8.39	130	0	1273.46
0.0	0.0	0.712	2.927	2.08	0.7	8.81	6.17	8.25	144	0	1273.51
0.0	0.0	0.687	2.82	1.94	0.7	8.82	6.18	8.11	149	0	1273.57
0.0	0.0	0.662	2.699	1.79	0.7	8.84	6.19	7.97	158	0	1273.63
0.0	0.0	0.636	2.577	1.64	0.7	8.86	6.20	7.84	173	0	1273.67
0.0	0.0	0.609	2.458	1.50	0.7	8.88	6.21	7.71	191	0	1273.71
0.0	0.0	0.581	2.333	1.36	0.7	8.90	6.23	7.59	205	0	1273.76
0.0	0.0	0.735	3.041	2.24	0.6	8.46	5.08	7.31	93	0	1274.11
0.0	0.0	0.712	2.927	2.08	0.6	8.47	5.08	7.17	106	0	1274.16
0.0	0.0	0.687	2.82	1.94	0.6	8.48	5.09	7.03	120	0	1274.22
0.0	0.0	0.662	2.699	1.79	0.6	8.49	5.10	6.88	123	0	1274.27
0.0	0.0	0.636	2.577	1.64	0.6	8.51	5.11	6.75	126	0	1274.32
0.0	0.0	0.609	2.458	1.50	0.6	8.53	5.12	6.62	130	0	1274.36
0.0	0.0	0.581	2.333	1.36	0.6	8.55	5.13	6.49	137	0	1274.41
0.0	0.0	0.551	2.204	1.21	0.6	8.58	5.15	6.36	138	0	1274.45
0.0	0.0	0.735	3.041	2.24	0.5	8.12	4.06	6.30	53	0	1274.69
0.0	0.0	0.712	2.927	2.08	0.5	8.13	4.07	6.15	57	0	1274.74
0.0	0.0	0.687	2.82	1.94	0.5	8.14	4.07	6.01	60	0	1274.80
0.0	0.0	0.662	2.699	1.79	0.5	8.15	4.08	5.86	66	0	1274.85
0.0	0.0	0.636	2.577	1.64	0.5	8.17	4.08	5.72	72	0	1274.89
0.0	0.0	0.609	2.458	1.50	0.5	8.18	4.09	5.59	72	0	1274.94
0.0	0.0	0.581	2.333	1.36	0.5	8.21	4.10	5.46	70	0	1274.99
0.0	0.0	0.551	2.204	1.21	0.5	8.23	4.11	5.33	68	0	1275.03
0.0	0.0	0.52	2.071	1.08	0.5	8.25	4.13	5.20	68	0	1275.06
0.0	0.0	0.662	2.699	1.79	0.4	7.80	3.12	4.91	5	0	1275.37
0.0	0.0	0.636	2.577	1.64	0.4	7.81	3.13	4.76	7	0	1275.42
0.0	0.0	0.609	2.458	1.50	0.4	7.83	3.13	4.63	7	0	1275.47
0.0	0.0	0.581	2.333	1.36	0.4	7.84	3.14	4.49	8	0	1275.50
0.0	0.0	0.551	2.204	1.21	0.4	7.87	3.15	4.36	8	0	1275.54
0.0	0.0	0.52	2.071	1.08	0.4	7.89	3.15	4.23	3	0	1275.62
0.0	0.0	0.712	3.021	2.15	0.814	9.09	7.40	9.55	149	20	1270.58
0.0	0.0	0.687	2.903	1.99	0.814	9.10	7.41	9.40	177	20	1270.67
0.0	0.0	0.662	2.763	1.83	0.814	9.11	7.42	9.24	195	20	1270.73
0.0	0.0	0.636	2.657	1.69	0.814	9.13	7.43	9.12	194	20	1270.79
0.0	0.0	0.609	2.523	1.54	0.814	9.15	7.45	8.98	194	20	1270.84
0.0	0.0	0.687	2.903	1.99	0.728	8.80	6.41	8.40	141	20	1271.34
0.0	0.0	0.662	2.763	1.83	0.728	8.81	6.41	8.24	151	20	1271.42
0.0	0.0	0.636	2.657	1.69	0.728	8.82	6.42	8.11	145	20	1271.47
0.0	0.0	0.609	2.523	1.54	0.728	8.84	6.44	7.97	139	20	1271.53
0.0	0.0	0.581	2.391	1.39	0.728	8.86	6.45	7.84	142	20	1271.58
0.0	0.0	0.551	2.258	1.24	0.728	8.89	6.47	7.72	144	20	1271.62

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I <sub>F</sub>	V <sub>F</sub>	I <sub>B</sub>	V <sub>B</sub>	Pel <sub>R</sub>	I <sub>L</sub>	V <sub>L</sub>	P <sub>L</sub>	P <sub>tot</sub>	P <sub>opt</sub>	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm <sup>-1</sup> ]
0.0	0.0	0.662	2.763	1.83	0.642	8.52	5.47	7.30	94	20	1272.03
0.0	0.0	0.636	2.657	1.69	0.642	8.53	5.47	7.16	106	20	1272.08
0.0	0.0	0.609	2.523	1.54	0.642	8.54	5.49	7.02	112	20	1272.14
0.0	0.0	0.581	2.391	1.39	0.642	8.56	5.50	6.89	110	20	1272.19
0.0	0.0	0.551	2.258	1.24	0.642	8.59	5.51	6.76	109	20	1272.24
0.0	0.0	0.52	2.122	1.10	0.642	8.61	5.53	6.63	111	20	1272.29
0.0	0.0	0.687	2.903	1.99	0.556	8.21	4.57	6.56	52	20	1272.52
0.0	0.0	0.662	2.763	1.83	0.556	8.22	4.57	6.40	58	20	1272.58
0.0	0.0	0.636	2.657	1.69	0.556	8.23	4.58	6.27	60	20	1272.64
0.0	0.0	0.609	2.523	1.54	0.556	8.25	4.59	6.12	60	20	1272.70
0.0	0.0	0.581	2.391	1.39	0.556	8.27	4.60	5.98	64	20	1272.75
0.0	0.0	0.551	2.258	1.24	0.556	8.29	4.61	5.85	66	20	1272.80
0.0	0.0	0.52	2.122	1.10	0.556	8.31	4.62	5.72	62	20	1272.85
0.0	0.0	0.687	2.903	1.99	0.47	7.92	3.72	5.72	1	20	1273.06
0.0	0.0	0.662	2.763	1.83	0.47	7.93	3.73	5.55	3	20	1273.10
0.0	0.0	0.636	2.657	1.69	0.47	7.94	3.73	5.42	7	20	1273.15
0.0	0.0	0.609	2.523	1.54	0.47	7.95	3.74	5.27	9	20	1273.21
0.0	0.0	0.581	2.391	1.39	0.47	7.96	3.74	5.13	10	20	1273.26
0.0	0.0	0.551	2.258	1.24	0.47	7.98	3.75	5.00	10	20	1273.31
0.0	0.0	0.52	2.122	1.10	0.47	8.00	3.76	4.86	9	20	1273.36
0.0	0.0	0.662	2.864	1.90	0.83	9.09	7.55	9.44	47	40	1268.47
0.0	0.0	0.636	2.733	1.74	0.83	9.10	7.55	9.29	56	40	1268.55
0.0	0.0	0.609	2.597	1.58	0.83	9.11	7.56	9.15	63	40	1268.62
0.0	0.0	0.581	2.463	1.43	0.83	9.13	7.58	9.01	64	40	1268.68
0.0	0.0	0.662	2.864	1.90	0.76	8.84	6.72	8.62	45	40	1269.08
0.0	0.0	0.636	2.733	1.74	0.76	8.85	6.73	8.46	47	40	1269.15
0.0	0.0	0.609	2.597	1.58	0.76	8.86	6.73	8.32	51	40	1269.23
0.0	0.0	0.581	2.463	1.43	0.76	8.88	6.75	8.18	57	40	1269.29
0.0	0.0	0.551	2.32	1.28	0.76	8.90	6.77	8.04	57	40	1269.35
0.0	0.0	0.662	2.864	1.90	0.69	8.60	5.93	7.83	29	40	1269.63
0.0	0.0	0.636	2.733	1.74	0.69	8.60	5.94	7.67	34	40	1269.71
0.0	0.0	0.609	2.597	1.58	0.69	8.61	5.94	7.53	38	40	1269.78
0.0	0.0	0.581	2.463	1.43	0.69	8.63	5.95	7.39	36	40	1269.84
0.0	0.0	0.551	2.32	1.28	0.69	8.65	5.97	7.25	33	40	1269.90
0.0	0.0	0.52	2.174	1.13	0.69	8.68	5.99	7.12	30	40	1269.95
0.0	0.0	0.662	2.864	1.90	0.62	8.35	5.18	7.07	15	40	1270.14
0.0	0.0	0.636	2.733	1.74	0.62	8.36	5.18	6.92	19	40	1270.22
0.0	0.0	0.609	2.597	1.58	0.62	8.37	5.19	6.77	21	40	1270.29
0.0	0.0	0.581	2.463	1.43	0.62	8.38	5.20	6.63	22	40	1270.35
0.0	0.0	0.551	2.32	1.28	0.62	8.40	5.21	6.49	23	40	1270.41
0.0	0.0	0.52	2.174	1.13	0.62	8.43	5.22	6.35	23	40	1270.46
0.0	0.0	0.609	2.597	1.58	0.55	8.13	4.47	6.05	2	40	1270.76
0.0	0.0	0.581	2.463	1.43	0.55	8.14	4.48	5.91	3	40	1270.83
0.0	0.0	0.551	2.32	1.28	0.55	8.16	4.49	5.77	4	40	1270.88
0.0	0.0	0.52	2.174	1.13	0.55	8.18	4.50	5.63	4	40	1270.94

Table 5:

Details of cluster #3-Front

I <sub>F</sub> [A]	V <sub>F</sub> [V]	I <sub>B</sub> [A]	V <sub>B</sub> [V]	Pel <sub>R</sub> [W]	I <sub>L</sub> [A]	V <sub>L</sub> [V]	P <sub>L</sub> [W]	P <sub>tot</sub> [W]	P <sub>opt</sub> [mW]	T [C]	freq [cm <sup>-1</sup> ]
0.63	2.376	0.0	0.0	1.50	0.8	9.17	7.33	8.83	331	0	1291.54
0.61	2.297	0.0	0.0	1.40	0.8	9.14	7.32	8.72	291	0	1291.62
0.589	2.211	0.0	0.0	1.30	0.8	9.15	7.32	8.62	292	0	1291.69
0.568	2.124	0.0	0.0	1.21	0.8	9.15	7.32	8.53	300	0	1291.74
0.545	2.032	0.0	0.0	1.11	0.8	9.17	7.33	8.44	302	0	1291.79
0.522	1.94	0.0	0.0	1.01	0.8	9.19	7.35	8.36	263	0	1291.84
0.498	1.847	0.0	0.0	0.92	0.8	9.21	7.37	8.29	239	0	1291.87
0.472	1.743	0.0	0.0	0.82	0.8	9.25	7.40	8.22	228	0	1291.91
0.704	2.688	0.0	0.0	1.89	0.7	8.78	6.15	8.04	227	0	1292.10
0.686	2.61	0.0	0.0	1.79	0.7	8.77	6.14	7.93	236	0	1292.17
0.668	2.533	0.0	0.0	1.69	0.7	8.77	6.14	7.83	244	0	1292.23
0.649	2.456	0.0	0.0	1.59	0.7	8.77	6.14	7.73	243	0	1292.29
0.63	2.376	0.0	0.0	1.50	0.7	8.78	6.15	7.64	234	0	1292.34
0.61	2.297	0.0	0.0	1.40	0.7	8.79	6.15	7.56	237	0	1292.39
0.589	2.211	0.0	0.0	1.30	0.7	8.81	6.17	7.47	249	0	1292.44
0.568	2.124	0.0	0.0	1.21	0.7	8.83	6.18	7.39	243	0	1292.48
0.545	2.032	0.0	0.0	1.11	0.7	8.85	6.20	7.30	223	0	1292.52
0.755	2.908	0.0	0.0	2.20	0.6	8.40	5.04	7.23	152	0	1292.65
0.738	2.837	0.0	0.0	2.09	0.6	8.39	5.04	7.13	151	0	1292.71
0.721	2.759	0.0	0.0	1.99	0.6	8.40	5.04	7.03	150	0	1292.77
0.704	2.688	0.0	0.0	1.89	0.6	8.40	5.04	6.93	159	0	1292.82
0.686	2.61	0.0	0.0	1.79	0.6	8.41	5.05	6.84	173	0	1292.87
0.668	2.533	0.0	0.0	1.69	0.6	8.42	5.05	6.75	180	0	1292.91
0.649	2.456	0.0	0.0	1.59	0.6	8.44	5.06	6.66	178	0	1292.96
0.63	2.376	0.0	0.0	1.50	0.6	8.45	5.07	6.57	165	0	1293.00
0.61	2.297	0.0	0.0	1.40	0.6	8.47	5.08	6.48	160	0	1293.04
0.589	2.211	0.0	0.0	1.30	0.6	8.49	5.10	6.40	158	0	1293.08
0.755	2.908	0.0	0.0	2.20	0.5	8.03	4.01	6.21	79	0	1293.30
0.738	2.837	0.0	0.0	2.09	0.5	8.04	4.02	6.11	89	0	1293.34
0.721	2.759	0.0	0.0	1.99	0.5	8.05	4.03	6.01	93	0	1293.39
0.704	2.688	0.0	0.0	1.89	0.5	8.06	4.03	5.92	94	0	1293.43
0.686	2.61	0.0	0.0	1.79	0.5	8.08	4.04	5.83	94	0	1293.47
0.668	2.533	0.0	0.0	1.69	0.5	8.09	4.05	5.74	95	0	1293.51
0.649	2.456	0.0	0.0	1.59	0.5	8.11	4.06	5.65	97	0	1293.55
0.63	2.376	0.0	0.0	1.50	0.5	8.13	4.07	5.56	95	0	1293.58
0.61	2.297	0.0	0.0	1.40	0.5	8.15	4.08	5.48	92	0	1293.61
0.755	2.908	0.0	0.0	2.20	0.4	7.68	3.07	5.27	17	0	1293.85
0.738	2.837	0.0	0.0	2.09	0.4	7.69	3.08	5.17	17	0	1293.89
0.721	2.759	0.0	0.0	1.99	0.4	7.70	3.08	5.07	17	0	1293.93
0.704	2.688	0.0	0.0	1.89	0.4	7.72	3.09	4.98	17	0	1293.96
0.686	2.61	0.0	0.0	1.79	0.4	7.74	3.10	4.89	16	0	1294.00
0.668	2.533	0.0	0.0	1.69	0.4	7.76	3.10	4.79	15	0	1294.04
0.649	2.456	0.0	0.0	1.59	0.4	7.78	3.11	4.71	14	0	1294.07
0.589	2.28	0.0	0.0	1.34	0.814	9.11	7.42	8.76	360	20	1289.48
0.568	2.19	0.0	0.0	1.24	0.814	9.10	7.40	8.65	325	20	1289.55
0.545	2.093	0.0	0.0	1.14	0.814	9.10	7.41	8.55	316	20	1289.62

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I <sub>F</sub> [A]	V <sub>F</sub> [V]	I <sub>B</sub> [A]	V <sub>B</sub> [V]	Pel <sub>R</sub> [W]	I <sub>L</sub> [A]	V <sub>L</sub> [V]	P <sub>L</sub> [W]	P <sub>tot</sub> [W]	P <sub>opt</sub> [mW]	T [C]	freq [cm <sup>-1</sup> ]
0.522	1.995	0.0	0.0	1.04	0.814	9.11	7.41	8.46	297	20	1289.68
0.498	1.895	0.0	0.0	0.94	0.814	9.13	7.43	8.37	271	20	1289.73
0.472	1.788	0.0	0.0	0.84	0.814	9.15	7.45	8.29	251	20	1289.76
0.445	1.676	0.0	0.0	0.75	0.814	9.18	7.47	8.22	240	20	1289.80
0.417	1.561	0.0	0.0	0.65	0.814	9.21	7.50	8.15	233	20	1289.83
0.668	2.629	0.0	0.0	1.76	0.728	8.80	6.41	8.16	295	20	1289.92
0.649	2.545	0.0	0.0	1.65	0.728	8.79	6.40	8.05	273	20	1290.01
0.63	2.462	0.0	0.0	1.55	0.728	8.78	6.39	7.95	272	20	1290.08
0.61	2.375	0.0	0.0	1.45	0.728	8.79	6.40	7.85	255	20	1290.15
0.589	2.28	0.0	0.0	1.34	0.728	8.79	6.40	7.74	239	20	1290.20
0.568	2.19	0.0	0.0	1.24	0.728	8.80	6.40	7.65	233	20	1290.25
0.545	2.093	0.0	0.0	1.14	0.728	8.81	6.42	7.56	241	20	1290.30
0.522	1.995	0.0	0.0	1.04	0.728	8.83	6.43	7.47	235	20	1290.35
0.498	1.895	0.0	0.0	0.94	0.728	8.86	6.45	7.39	220	20	1290.39
0.721	2.874	0.0	0.0	2.07	0.642	8.48	5.44	7.51	190	20	1290.41
0.704	2.795	0.0	0.0	1.97	0.642	8.47	5.44	7.40	179	20	1290.48
0.686	2.714	0.0	0.0	1.86	0.642	8.47	5.44	7.30	145	20	1290.56
0.668	2.629	0.0	0.0	1.76	0.642	8.47	5.44	7.19	169	20	1290.62
0.649	2.545	0.0	0.0	1.65	0.642	8.47	5.44	7.09	170	20	1290.68
0.63	2.462	0.0	0.0	1.55	0.642	8.48	5.45	7.00	172	20	1290.73
0.61	2.375	0.0	0.0	1.45	0.642	8.50	5.45	6.90	181	20	1290.78
0.589	2.28	0.0	0.0	1.34	0.642	8.51	5.46	6.80	181	20	1290.83
0.568	2.19	0.0	0.0	1.24	0.642	8.52	5.47	6.71	172	20	1290.87
0.755	3.034	0.0	0.0	2.29	0.556	8.16	4.53	6.83	95	20	1290.91
0.545	2.093	0.0	0.0	1.14	0.642	8.54	5.48	6.62	163	20	1290.91
0.522	1.995	0.0	0.0	1.04	0.642	8.56	5.50	6.54	155	20	1290.95
0.738	2.953	0.0	0.0	2.18	0.556	8.15	4.53	6.71	104	20	1290.98
0.721	2.874	0.0	0.0	2.07	0.556	8.15	4.53	6.60	109	20	1291.04
0.704	2.795	0.0	0.0	1.97	0.556	8.15	4.53	6.50	104	20	1291.10
0.686	2.714	0.0	0.0	1.86	0.556	8.16	4.54	6.40	100	20	1291.16
0.668	2.629	0.0	0.0	1.76	0.556	8.17	4.54	6.30	101	20	1291.21
0.649	2.545	0.0	0.0	1.65	0.556	8.18	4.55	6.20	106	20	1291.26
0.63	2.462	0.0	0.0	1.55	0.556	8.20	4.56	6.11	105	20	1291.31
0.61	2.375	0.0	0.0	1.45	0.556	8.21	4.57	6.02	101	20	1291.35
0.589	2.28	0.0	0.0	1.34	0.556	8.23	4.58	5.92	96	20	1291.38
0.568	2.19	0.0	0.0	1.24	0.556	8.24	4.58	5.83	93	20	1291.42
0.545	2.093	0.0	0.0	1.14	0.556	8.27	4.60	5.74	92	20	1291.45
0.755	3.034	0.0	0.0	2.29	0.47	7.83	3.68	5.97	19	20	1291.48
0.738	2.953	0.0	0.0	2.18	0.47	7.84	3.68	5.86	23	20	1291.55
0.721	2.874	0.0	0.0	2.07	0.47	7.84	3.69	5.76	24	20	1291.60
0.704	2.795	0.0	0.0	1.97	0.47	7.85	3.69	5.66	25	20	1291.64
0.686	2.714	0.0	0.0	1.86	0.47	7.87	3.70	5.56	26	20	1291.69
0.668	2.629	0.0	0.0	1.76	0.47	7.88	3.70	5.46	26	20	1291.73
0.649	2.545	0.0	0.0	1.65	0.47	7.90	3.71	5.36	25	20	1291.78
0.63	2.462	0.0	0.0	1.55	0.47	7.91	3.72	5.27	23	20	1291.82
0.61	2.375	0.0	0.0	1.45	0.47	7.93	3.73	5.18	20	20	1291.85
0.589	2.28	0.0	0.0	1.34	0.47	7.95	3.74	5.08	17	20	1291.88
0.568	2.281	0.0	0.0	1.30	0.83	9.09	7.54	8.84	116	40	1287.25

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el,R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.545	2.179	0.0	0.0	1.19	0.83	9.08	7.54	8.72	101	40	1287.34
0.522	2.074	0.0	0.0	1.08	0.83	9.08	7.54	8.62	75	40	1287.42
0.498	1.968	0.0	0.0	0.98	0.83	9.09	7.55	8.53	93	40	1287.48
0.472	1.857	0.0	0.0	0.88	0.83	9.11	7.56	8.44	96	40	1287.54
0.445	1.738	0.0	0.0	0.77	0.83	9.14	7.58	8.36	89	40	1287.58
0.417	1.613	0.0	0.0	0.67	0.83	9.16	7.61	8.28	80	40	1287.61
0.386	1.482	0.0	0.0	0.57	0.83	9.20	7.63	8.21	75	40	1287.64
0.61	2.477	0.0	0.0	1.51	0.76	8.82	6.70	8.21	99	40	1287.75
0.589	2.379	0.0	0.0	1.40	0.76	8.81	6.70	8.10	98	40	1287.84
0.568	2.281	0.0	0.0	1.30	0.76	8.81	6.70	8.00	96	40	1287.91
0.545	2.179	0.0	0.0	1.19	0.76	8.82	6.71	7.89	98	40	1287.98
0.522	2.074	0.0	0.0	1.08	0.76	8.84	6.72	7.80	90	40	1288.03
0.498	1.968	0.0	0.0	0.98	0.76	8.86	6.73	7.71	80	40	1288.08
0.472	1.857	0.0	0.0	0.88	0.76	8.88	6.75	7.63	73	40	1288.12
0.445	1.738	0.0	0.0	0.77	0.76	8.91	6.77	7.54	68	40	1288.15
0.649	2.658	0.0	0.0	1.73	0.69	8.55	5.90	7.63	59	40	1288.21
0.63	2.569	0.0	0.0	1.62	0.69	8.55	5.90	7.52	53	40	1288.29
0.61	2.477	0.0	0.0	1.51	0.69	8.55	5.90	7.41	65	40	1288.36
0.589	2.379	0.0	0.0	1.40	0.69	8.55	5.90	7.30	71	40	1288.42
0.568	2.281	0.0	0.0	1.30	0.69	8.57	5.91	7.21	71	40	1288.48
0.545	2.179	0.0	0.0	1.19	0.69	8.59	5.93	7.11	65	40	1288.53
0.522	2.074	0.0	0.0	1.08	0.69	8.61	5.94	7.02	60	40	1288.58
0.498	1.968	0.0	0.0	0.98	0.69	8.63	5.95	6.93	57	40	1288.62
0.686	2.823	0.0	0.0	1.94	0.62	8.29	5.14	7.08	33	40	1288.63
0.472	1.857	0.0	0.0	0.88	0.69	8.65	5.97	6.85	56	40	1288.65
0.668	2.753	0.0	0.0	1.84	0.62	8.29	5.14	6.98	39	40	1288.71
0.649	2.658	0.0	0.0	1.73	0.62	8.29	5.14	6.87	39	40	1288.78
0.63	2.569	0.0	0.0	1.62	0.62	8.30	5.14	6.76	39	40	1288.84
0.61	2.477	0.0	0.0	1.51	0.62	8.31	5.15	6.66	40	40	1288.90
0.589	2.379	0.0	0.0	1.40	0.62	8.32	5.16	6.56	41	40	1288.95
0.568	2.281	0.0	0.0	1.30	0.62	8.34	5.17	6.46	40	40	1289.00
0.545	2.179	0.0	0.0	1.19	0.62	8.36	5.18	6.37	37	40	1289.04
0.522	2.074	0.0	0.0	1.08	0.62	8.38	5.19	6.28	34	40	1289.08
0.704	2.9	0.0	0.0	2.04	0.55	8.03	4.42	6.46	4	40	1289.09
0.498	1.968	0.0	0.0	0.98	0.62	8.40	5.21	6.19	33	40	1289.11
0.686	2.823	0.0	0.0	1.94	0.55	8.03	4.42	6.36	8	40	1289.16
0.668	2.753	0.0	0.0	1.84	0.55	8.04	4.42	6.26	10	40	1289.22
0.649	2.658	0.0	0.0	1.73	0.55	8.05	4.43	6.15	12	40	1289.27
0.63	2.569	0.0	0.0	1.62	0.55	8.06	4.43	6.05	13	40	1289.33
0.61	2.477	0.0	0.0	1.51	0.55	8.07	4.44	5.95	13	40	1289.38
0.589	2.379	0.0	0.0	1.40	0.55	8.09	4.45	5.85	12	40	1289.43
0.568	2.281	0.0	0.0	1.30	0.55	8.11	4.46	5.75	11	40	1289.47
0.545	2.179	0.0	0.0	1.19	0.55	8.13	4.47	5.66	9	40	1289.51
0.522	2.074	0.0	0.0	1.08	0.55	8.15	4.48	5.57	6	40	1289.54

Table 6:

Details of cluster #4-Front

I <sub>F</sub> [A]	V <sub>F</sub> [V]	I <sub>B</sub> [A]	V <sub>B</sub> [V]	Pel <sub>R</sub> [W]	I <sub>L</sub> [A]	V <sub>L</sub> [V]	P <sub>L</sub> [W]	P <sub>tot</sub> [W]	P <sub>opt</sub> [mW]	T [C]	freq [cm <sup>-1</sup> ]
0.755	2.908	0.0	0.0	2.20	0.8	9.10	7.28	9.48	139	0	1290.76
0.738	2.837	0.0	0.0	2.09	0.8	9.11	7.28	9.38	155	0	1290.82
0.721	2.759	0.0	0.0	1.99	0.8	9.11	7.28	9.27	166	0	1290.87
0.704	2.688	0.0	0.0	1.89	0.8	9.11	7.29	9.18	176	0	1290.91
0.686	2.61	0.0	0.0	1.79	0.8	9.11	7.29	9.08	201	0	1290.97
0.668	2.533	0.0	0.0	1.69	0.8	9.12	7.30	8.99	221	0	1291.02
0.649	2.456	0.0	0.0	1.59	0.8	9.13	7.30	8.90	244	0	1291.06
0.704	2.795	0.0	0.0	1.97	0.814	9.08	7.39	9.36	184	20	1288.69
0.686	2.714	0.0	0.0	1.86	0.814	9.08	7.39	9.25	192	20	1288.75
0.668	2.629	0.0	0.0	1.76	0.814	9.08	7.39	9.15	199	20	1288.80
0.649	2.545	0.0	0.0	1.65	0.814	9.08	7.39	9.05	211	20	1288.86
0.63	2.462	0.0	0.0	1.55	0.814	9.09	7.40	8.95	229	20	1288.91
0.61	2.375	0.0	0.0	1.45	0.814	9.10	7.41	8.86	262	20	1288.97
0.738	2.953	0.0	0.0	2.18	0.728	8.76	6.38	8.56	136	20	1289.28
0.721	2.874	0.0	0.0	2.07	0.728	8.77	6.38	8.45	150	20	1289.34
0.704	2.795	0.0	0.0	1.97	0.728	8.77	6.38	8.35	173	20	1289.39
0.686	2.714	0.0	0.0	1.86	0.728	8.77	6.39	8.25	185	20	1289.44
0.755	3.034	0.0	0.0	2.29	0.642	8.46	5.43	7.72	103	20	1289.87
0.738	2.953	0.0	0.0	2.18	0.642	8.46	5.43	7.61	111	20	1289.92
0.668	2.753	0.0	0.0	1.84	0.83	9.06	7.52	9.36	62	40	1286.50
0.649	2.658	0.0	0.0	1.73	0.83	9.05	7.52	9.24	66	40	1286.56
0.63	2.569	0.0	0.0	1.62	0.83	9.06	7.52	9.13	70	40	1286.62
0.61	2.477	0.0	0.0	1.51	0.83	9.06	7.52	9.03	75	40	1286.68
0.589	2.379	0.0	0.0	1.40	0.83	9.06	7.52	8.92	84	40	1286.75
0.704	2.9	0.0	0.0	2.04	0.76	8.80	6.69	8.73	47	40	1286.99
0.686	2.823	0.0	0.0	1.94	0.76	8.80	6.68	8.62	49	40	1287.06
0.668	2.753	0.0	0.0	1.84	0.76	8.80	6.69	8.53	50	40	1287.11
0.649	2.658	0.0	0.0	1.73	0.76	8.80	6.69	8.41	53	40	1287.18
0.63	2.569	0.0	0.0	1.62	0.76	8.80	6.69	8.31	62	40	1287.24
0.721	2.979	0.0	0.0	2.15	0.69	8.54	5.89	8.04	29	40	1287.51
0.704	2.9	0.0	0.0	2.04	0.69	8.54	5.89	7.93	31	40	1287.57
0.686	2.823	0.0	0.0	1.94	0.69	8.54	5.89	7.83	35	40	1287.63
0.668	2.753	0.0	0.0	1.84	0.69	8.55	5.90	7.74	40	40	1287.69
0.738	3.082	0.0	0.0	2.27	0.62	8.28	5.14	7.41	14	40	1288.00
0.721	2.979	0.0	0.0	2.15	0.62	8.29	5.14	7.29	16	40	1288.05
0.704	2.9	0.0	0.0	2.04	0.62	8.29	5.14	7.18	17	40	1288.10

Table 7:

Details of cluster #5-Back

$I_F$	$V_F$	$I_B$	$V_B$	$P_{el_R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.881	3.752	3.31	0.8	9.05	7.24	10.55	73	0	1264.71
0.0	0.0	0.862	3.666	3.16	0.8	9.06	7.25	10.41	77	0	1264.77
0.0	0.0	0.842	3.557	2.99	0.8	9.07	7.26	10.25	90	0	1264.84
0.0	0.0	0.822	3.457	2.84	0.8	9.09	7.27	10.11	91	0	1264.90
0.0	0.0	0.801	3.351	2.68	0.8	9.11	7.29	9.97	90	0	1264.96
0.0	0.0	0.779	3.244	2.53	0.8	9.13	7.30	9.83	96	0	1265.02
0.0	0.0	0.757	3.135	2.37	0.8	9.15	7.32	9.70	116	0	1265.07
0.0	0.0	0.9	3.841	3.46	0.7	8.70	6.09	9.55	57	0	1265.39
0.0	0.0	0.881	3.752	3.31	0.7	8.71	6.10	9.40	58	0	1265.45
0.0	0.0	0.862	3.666	3.16	0.7	8.72	6.10	9.26	66	0	1265.52
0.0	0.0	0.842	3.557	2.99	0.7	8.73	6.11	9.11	75	0	1265.58
0.0	0.0	0.822	3.457	2.84	0.7	8.75	6.12	8.96	76	0	1265.64
0.0	0.0	0.801	3.351	2.68	0.7	8.76	6.13	8.82	80	0	1265.70
0.0	0.0	0.779	3.244	2.53	0.7	8.78	6.15	8.67	90	0	1265.75
0.0	0.0	0.757	3.135	2.37	0.7	8.80	6.16	8.54	98	0	1265.81
0.0	0.0	0.9	3.841	3.46	0.6	8.36	5.01	8.47	42	0	1266.05
0.0	0.0	0.881	3.752	3.31	0.6	8.37	5.02	8.33	43	0	1266.12
0.0	0.0	0.862	3.666	3.16	0.6	8.38	5.03	8.19	50	0	1266.18
0.0	0.0	0.842	3.557	2.99	0.6	8.39	5.03	8.03	59	0	1266.24
0.0	0.0	0.822	3.457	2.84	0.6	8.40	5.04	7.88	61	0	1266.31
0.0	0.0	0.801	3.351	2.68	0.6	8.42	5.05	7.74	59	0	1266.35
0.0	0.0	0.779	3.244	2.53	0.6	8.44	5.06	7.59	59	0	1266.41
0.0	0.0	0.757	3.135	2.37	0.6	8.46	5.08	7.45	64	0	1266.46
0.0	0.0	0.9	3.841	3.46	0.5	8.01	4.01	7.46	22	0	1266.66
0.0	0.0	0.881	3.752	3.31	0.5	8.02	4.01	7.32	26	0	1266.72
0.0	0.0	0.862	3.666	3.16	0.5	8.03	4.02	7.18	29	0	1266.77
0.0	0.0	0.842	3.557	2.99	0.5	8.04	4.02	7.02	29	0	1266.84
0.0	0.0	0.822	3.457	2.84	0.5	8.06	4.03	6.87	29	0	1266.89
0.0	0.0	0.801	3.351	2.68	0.5	8.07	4.04	6.72	32	0	1266.94
0.0	0.0	0.779	3.244	2.53	0.5	8.09	4.05	6.57	33	0	1267.00
0.0	0.0	0.757	3.135	2.37	0.5	8.11	4.06	6.43	31	0	1267.04
0.0	0.0	0.881	3.875	3.41	0.814	8.98	7.31	10.73	115	20	1262.46
0.0	0.0	0.862	3.768	3.25	0.814	8.99	7.32	10.57	125	20	1262.54
0.0	0.0	0.842	3.663	3.08	0.814	9.00	7.33	10.41	121	20	1262.62
0.0	0.0	0.822	3.584	2.95	0.814	9.01	7.34	10.28	126	20	1262.69
0.0	0.0	0.801	3.47	2.78	0.814	9.03	7.35	10.13	133	20	1262.77
0.0	0.0	0.779	3.367	2.62	0.814	9.04	7.36	9.98	124	20	1262.84
0.0	0.0	0.757	3.248	2.46	0.814	9.06	7.38	9.83	118	20	1262.90
0.0	0.0	0.735	3.14	2.31	0.814	9.08	7.39	9.70	125	20	1262.96
0.0	0.0	0.881	3.875	3.41	0.728	8.69	6.32	9.74	99	20	1263.16
0.0	0.0	0.862	3.768	3.25	0.728	8.69	6.33	9.58	109	20	1263.23
0.0	0.0	0.842	3.663	3.08	0.728	8.71	6.34	9.42	101	20	1263.31
0.0	0.0	0.822	3.584	2.95	0.728	8.71	6.34	9.29	99	20	1263.38
0.0	0.0	0.801	3.47	2.78	0.728	8.73	6.35	9.13	103	20	1263.46
0.0	0.0	0.779	3.367	2.62	0.728	8.74	6.36	8.99	98	20	1263.53
0.0	0.0	0.757	3.248	2.46	0.728	8.76	6.38	8.84	94	20	1263.58

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el_R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.735	3.14	2.31	0.728	8.78	6.39	8.70	102	20	1263.64
0.0	0.0	0.712	3.021	2.15	0.728	8.80	6.41	8.56	108	20	1263.70
0.0	0.0	0.881	3.875	3.41	0.642	8.39	5.39	8.80	69	20	1263.79
0.0	0.0	0.862	3.768	3.25	0.642	8.40	5.39	8.64	71	20	1263.86
0.0	0.0	0.842	3.663	3.08	0.642	8.41	5.40	8.48	73	20	1263.94
0.0	0.0	0.822	3.584	2.95	0.642	8.42	5.41	8.35	67	20	1264.01
0.0	0.0	0.801	3.47	2.78	0.642	8.43	5.41	8.19	68	20	1264.08
0.0	0.0	0.779	3.367	2.62	0.642	8.45	5.42	8.05	76	20	1264.14
0.0	0.0	0.757	3.248	2.46	0.642	8.46	5.43	7.89	74	20	1264.21
0.0	0.0	0.735	3.14	2.31	0.642	8.48	5.45	7.75	71	20	1264.27
0.0	0.0	0.712	3.021	2.15	0.642	8.51	5.46	7.61	69	20	1264.32
0.0	0.0	0.881	3.875	3.41	0.556	8.10	4.50	7.92	34	20	1264.37
0.0	0.0	0.862	3.768	3.25	0.556	8.11	4.51	7.75	35	20	1264.44
0.0	0.0	0.842	3.663	3.08	0.556	8.12	4.51	7.60	34	20	1264.51
0.0	0.0	0.822	3.584	2.95	0.556	8.13	4.52	7.46	38	20	1264.58
0.0	0.0	0.801	3.47	2.78	0.556	8.14	4.52	7.30	41	20	1264.65
0.0	0.0	0.779	3.367	2.62	0.556	8.15	4.53	7.16	39	20	1264.71
0.0	0.0	0.757	3.248	2.46	0.556	8.17	4.54	7.00	38	20	1264.77
0.0	0.0	0.735	3.14	2.31	0.556	8.19	4.55	6.86	39	20	1264.83
0.0	0.0	0.712	3.021	2.15	0.556	8.21	4.56	6.71	37	20	1264.89
0.0	0.0	0.779	3.367	2.62	0.47	7.85	3.69	6.31	0	20	1265.17
0.0	0.0	0.801	3.47	2.78	0.47	7.84	3.68	6.46	0	20	1265.22
0.0	0.0	0.757	3.248	2.46	0.47	7.87	3.70	6.16	1	20	1265.30
0.0	0.0	0.735	3.14	2.31	0.47	7.89	3.71	6.01	0	20	1265.37
0.0	0.0	0.712	3.021	2.15	0.47	7.91	3.72	5.87	0	20	1265.38
0.0	0.0	0.842	3.813	3.21	0.83	9.00	7.47	10.68	26	40	1260.30
0.0	0.0	0.822	3.702	3.04	0.83	8.99	7.46	10.50	26	40	1260.39
0.0	0.0	0.801	3.595	2.88	0.83	9.00	7.47	10.35	33	40	1260.48
0.0	0.0	0.779	3.481	2.71	0.83	9.01	7.48	10.19	36	40	1260.56
0.0	0.0	0.757	3.364	2.55	0.83	9.02	7.49	10.03	41	40	1260.65
0.0	0.0	0.735	3.248	2.39	0.83	9.03	7.50	9.88	41	40	1260.72
0.0	0.0	0.712	3.124	2.22	0.83	9.05	7.51	9.74	39	40	1260.79
0.0	0.0	0.687	2.992	2.06	0.83	9.08	7.54	9.59	41	40	1260.85
0.0	0.0	0.842	3.813	3.21	0.76	8.75	6.65	9.86	30	40	1260.92
0.0	0.0	0.822	3.702	3.04	0.76	8.74	6.64	9.69	30	40	1261.00
0.0	0.0	0.801	3.595	2.88	0.76	8.75	6.65	9.53	33	40	1261.09
0.0	0.0	0.779	3.481	2.71	0.76	8.76	6.66	9.37	35	40	1261.18
0.0	0.0	0.757	3.364	2.55	0.76	8.77	6.67	9.21	33	40	1261.25
0.0	0.0	0.735	3.248	2.39	0.76	8.79	6.68	9.07	35	40	1261.32
0.0	0.0	0.712	3.124	2.22	0.76	8.80	6.69	8.92	34	40	1261.40
0.0	0.0	0.687	2.992	2.06	0.76	8.83	6.71	8.76	32	40	1261.46
0.0	0.0	0.842	3.813	3.21	0.69	8.50	5.87	9.08	19	40	1261.48
0.0	0.0	0.822	3.702	3.04	0.69	8.49	5.86	8.90	23	40	1261.57
0.0	0.0	0.801	3.595	2.88	0.69	8.50	5.87	8.75	24	40	1261.65
0.0	0.0	0.779	3.481	2.71	0.69	8.51	5.87	8.59	24	40	1261.73
0.0	0.0	0.757	3.364	2.55	0.69	8.53	5.88	8.43	26	40	1261.81
0.0	0.0	0.735	3.248	2.39	0.69	8.54	5.89	8.28	25	40	1261.89
0.0	0.0	0.712	3.124	2.22	0.69	8.56	5.90	8.13	23	40	1261.95

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$I_F$	$V_F$	$I_B$	$V_B$	$P_{el_R}$	$I_L$	$V_L$	$P_L$	$P_{tot}$	$P_{opt}$	T	freq
[A]	[V]	[A]	[V]	[W]	[A]	[V]	[W]	[W]	[mW]	[C]	[cm $^{-1}$ ]
0.0	0.0	0.842	3.813	3.21	0.62	8.26	5.12	8.33	8	40	1262.01
0.0	0.0	0.687	2.992	2.06	0.69	8.58	5.92	7.97	24	40	1262.02
0.0	0.0	0.822	3.702	3.04	0.62	8.25	5.12	8.16	10	40	1262.09
0.0	0.0	0.801	3.595	2.88	0.62	8.26	5.12	8.00	11	40	1262.17
0.0	0.0	0.779	3.481	2.71	0.62	8.27	5.13	7.84	13	40	1262.26
0.0	0.0	0.757	3.364	2.55	0.62	8.28	5.13	7.68	13	40	1262.33
0.0	0.0	0.735	3.248	2.39	0.62	8.29	5.14	7.53	12	40	1262.40
0.0	0.0	0.712	3.124	2.22	0.62	8.31	5.15	7.38	12	40	1262.47
0.0	0.0	0.687	2.992	2.06	0.62	8.33	5.17	7.22	12	40	1262.53
0.0	0.0	0.735	3.248	2.39	0.55	8.05	4.43	6.82	0	40	1262.87

Table 8: