Quantum Cascade Solutions
Avenue des Pâquiers 1
CH-2072 St-Blaise
T: +41 32 729 95 10
F: +41 32 729 95 19

Datasheet for #sbcw10789 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.

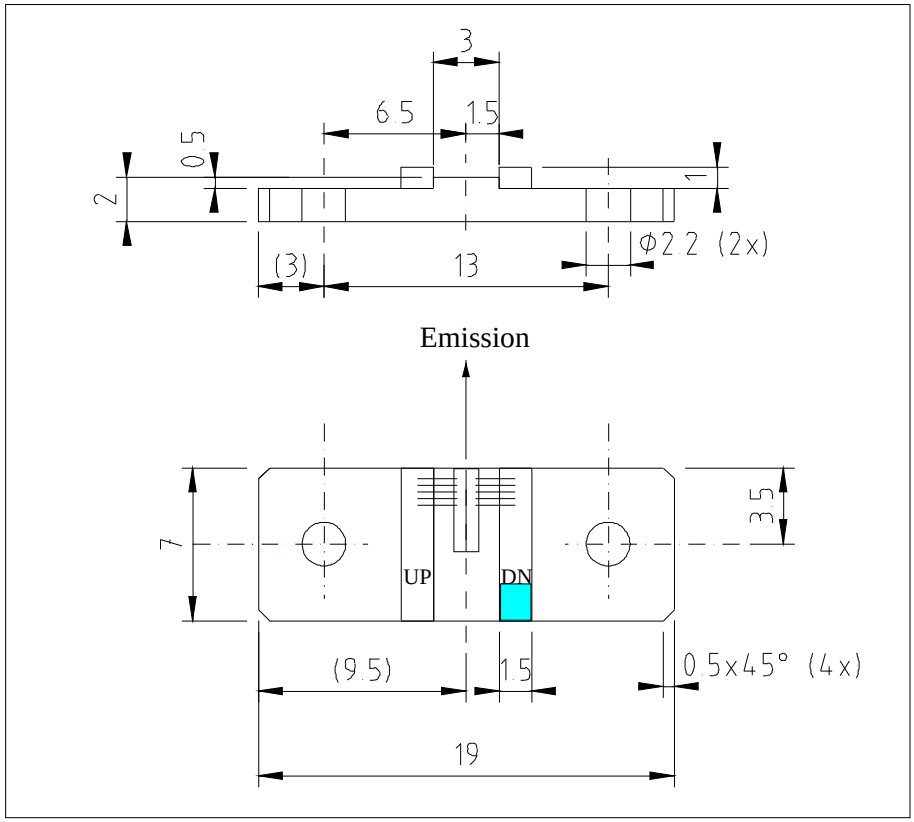

Figure 1: Support mounting for #sbcw10789 DN (please note that the laser is connected to the DN pad drawn in blue)

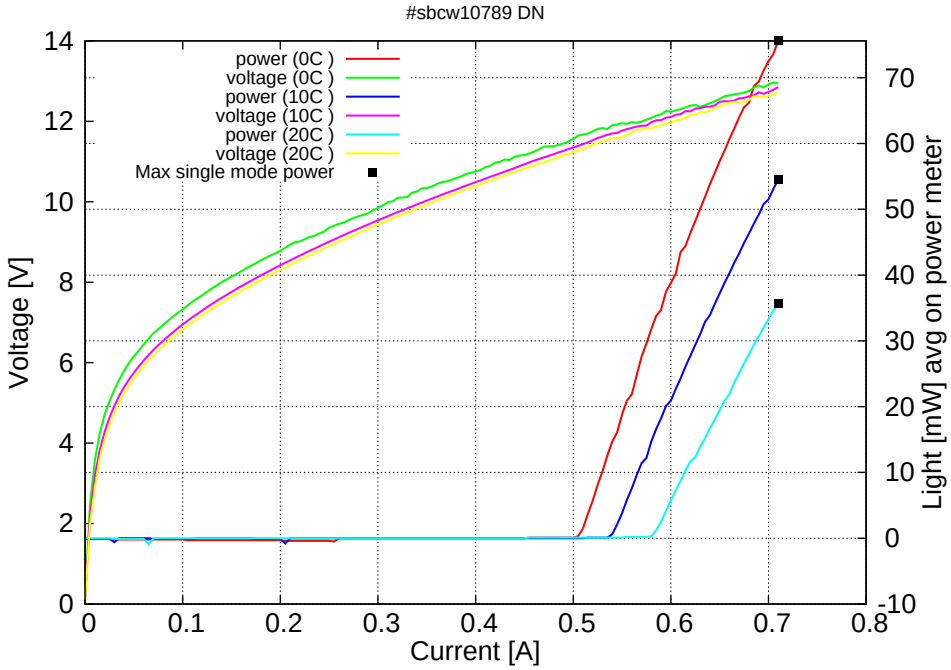

Figure 2: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: Ith=0.51A / Vth=11.7V (2-wires measurements). Maximum operation current: 0.71A for all temperatures.

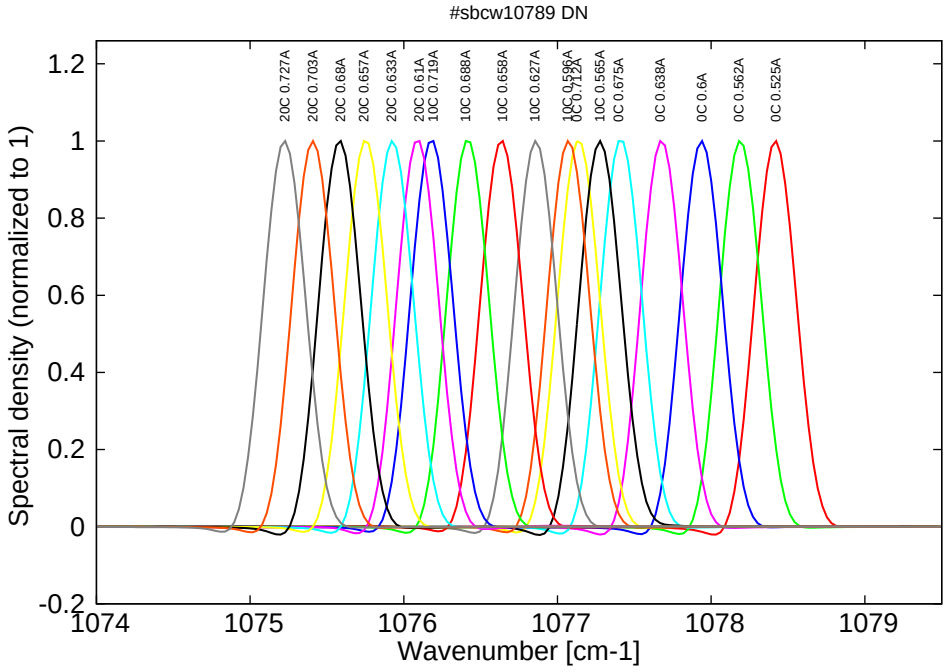

Figure 3: spectra at 0C, 10C and 20C in continuous-wave operation (front resistor current $I_F = 0$A and back resistor current $I_B = 0$A)

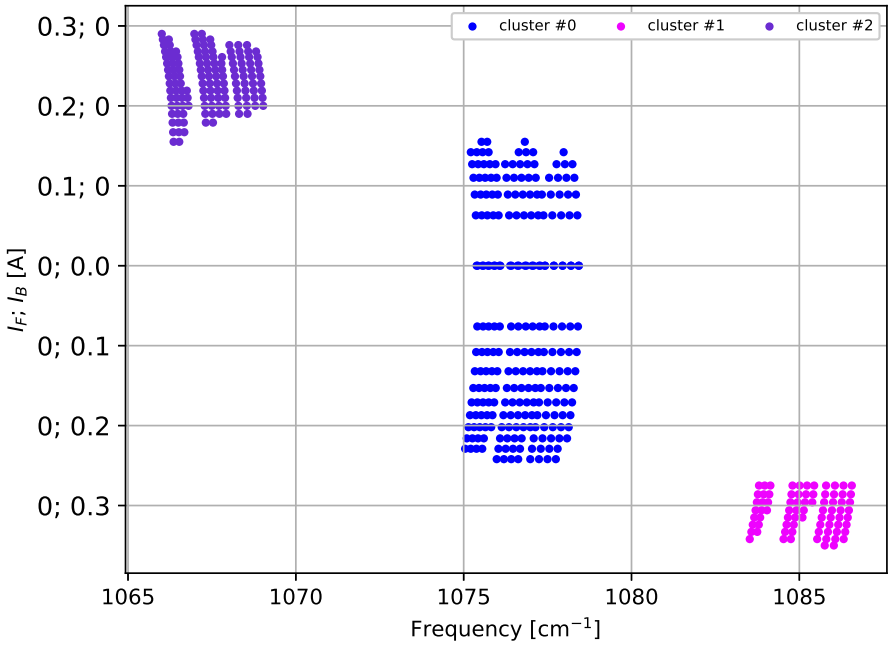

Figure 4: Emission frequency as a function of electrical current on the front resistor I_F or back resistor I_B. Either the back or the front resistors are heated, while no electrical current is flowing through the other resistor.

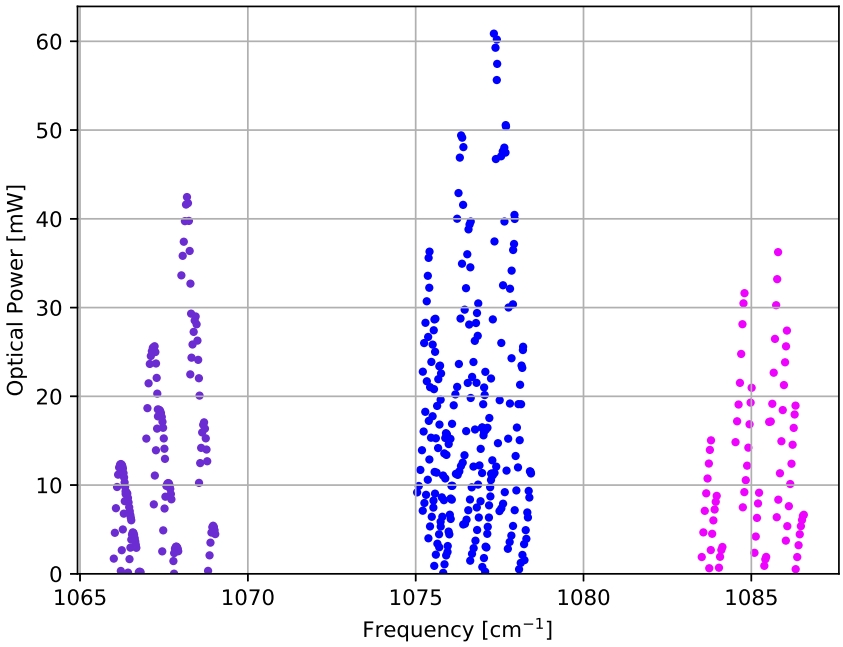

Figure 5: Optical power as a function of emission frequency.

Cluster	I_B [A]	V_B [V]	I_F [A]	V_F [V]	I_L [A]	V_L [V]	Freq [cm^{-1}]	T [C]	P_{opt} [mW]
#0-Back	0.00 - 0.24	0.0 - 7.0	0	0	0.53 - 0.70	11.3 - 12.8	1075.0 - 1078.4	0 - 20	60
#0-Front	0	0	0.00 - 0.15	0.0 - 4.7	0.53 - 0.70	11.5 - 12.8	1075.2 - 1078.4	0 - 20	61
#1-Back	0.28 - 0.35	6.9 - 9.1	0	0	0.56 - 0.70	11.4 - 12.3	1083.5 - 1086.6	0 - 20	36
#2-Front	0	0	0.15 - 0.29	4.2 - 7.4	0.56 - 0.70	11.5 - 12.5	1066.0 - 1069.0	0 - 20	42

Table 1: Overview of the clusters.

I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.242	7.049	1.71	0.675	12.36	8.35	10.05	16	0	1076.98
0.0	0.0	0.229	6.705	1.54	0.675	12.43	8.39	9.93	16	0	1077.04
0.0	0.0	0.216	6.466	1.40	0.675	12.43	8.39	9.78	16	0	1077.09
0.0	0.0	0.202	6.222	1.26	0.675	12.44	8.40	9.65	16	0	1077.14
0.0	0.0	0.187	5.853	1.09	0.675	12.45	8.40	9.49	18	0	1077.19
0.0	0.0	0.242	7.049	1.71	0.638	12.10	7.72	9.43	11	0	1077.24
0.0	0.0	0.171	5.567	0.95	0.675	12.44	8.40	9.35	22	0	1077.24
0.0	0.0	0.229	6.705	1.54	0.638	12.16	7.76	9.29	11	0	1077.30
0.0	0.0	0.153	5.099	0.78	0.675	12.46	8.41	9.19	29	0	1077.30
0.0	0.0	0.132	4.577	0.60	0.675	12.52	8.45	9.06	37	0	1077.35
0.0	0.0	0.216	6.466	1.40	0.638	12.16	7.76	9.15	11	0	1077.35
0.0	0.0	0.108	3.933	0.42	0.675	12.53	8.46	8.88	47	0	1077.39
0.0	0.0	0.202	6.222	1.26	0.638	12.17	7.76	9.02	12	0	1077.40
0.0	0.0	0.076	2.999	0.23	0.675	12.56	8.48	8.71	56	0	1077.42
0.0	0.0	0.0	0.0	0.00	0.675	12.78	8.63	8.63	60	0	1077.42
0.0	0.0	0.0	0.0	0.00	0.675	12.73	8.59	8.59	57	0	1077.43
0.0	0.0	0.187	5.853	1.09	0.638	12.19	7.77	8.87	15	0	1077.45
0.0	0.0	0.242	7.049	1.71	0.6	11.82	7.09	8.80	7	0	1077.50
0.0	0.0	0.171	5.567	0.95	0.638	12.18	7.77	8.72	20	0	1077.50
0.0	0.0	0.153	5.099	0.78	0.638	12.20	7.78	8.56	26	0	1077.55
0.0	0.0	0.229	6.705	1.54	0.6	11.88	7.13	8.66	7	0	1077.55
0.0	0.0	0.132	4.577	0.60	0.638	12.26	7.82	8.43	33	0	1077.60
0.0	0.0	0.216	6.466	1.40	0.6	11.88	7.13	8.52	8	0	1077.60
0.0	0.0	0.108	3.933	0.42	0.638	12.27	7.83	8.25	40	0	1077.64
0.0	0.0	0.202	6.222	1.26	0.6	11.89	7.13	8.39	9	0	1077.65
0.0	0.0	0.076	2.999	0.23	0.638	12.29	7.84	8.07	47	0	1077.68
0.0	0.0	0.0	0.0	0.00	0.638	12.52	7.99	7.99	51	0	1077.68
0.0	0.0	0.0	0.0	0.00	0.638	12.46	7.95	7.95	50	0	1077.69
0.0	0.0	0.187	5.853	1.09	0.6	11.91	7.14	8.24	12	0	1077.71
0.0	0.0	0.242	7.049	1.71	0.562	11.54	6.49	8.19	3	0	1077.75
0.0	0.0	0.171	5.567	0.95	0.6	11.91	7.15	8.10	15	0	1077.76
0.0	0.0	0.229	6.705	1.54	0.562	11.58	6.51	8.04	4	0	1077.80
0.0	0.0	0.153	5.099	0.78	0.6	11.93	7.16	7.94	19	0	1077.81
0.0	0.0	0.216	6.466	1.40	0.562	11.59	6.51	7.91	4	0	1077.85
0.0	0.0	0.132	4.577	0.60	0.6	11.97	7.18	7.79	24	0	1077.86
0.0	0.0	0.108	3.933	0.42	0.6	11.99	7.20	7.62	30	0	1077.90
0.0	0.0	0.202	6.222	1.26	0.562	11.60	6.52	7.78	5	0	1077.90
0.0	0.0	0.076	2.999	0.23	0.6	12.03	7.22	7.45	37	0	1077.93
0.0	0.0	0.0	0.0	0.00	0.6	12.21	7.32	7.32	40	0	1077.94
0.0	0.0	0.187	5.853	1.09	0.562	11.62	6.53	7.63	7	0	1077.95
0.0	0.0	0.0	0.0	0.00	0.6	12.17	7.30	7.30	40	0	1077.95
0.0	0.0	0.171	5.567	0.95	0.562	11.63	6.54	7.49	9	0	1078.00
0.0	0.0	0.153	5.099	0.78	0.562	11.65	6.55	7.33	12	0	1078.05
0.0	0.0	0.216	6.466	1.40	0.525	11.30	5.93	7.33	1	0	1078.08
0.0	0.0	0.132	4.577	0.60	0.562	11.69	6.57	7.17	15	0	1078.10
0.0	0.0	0.202	6.222	1.26	0.525	11.31	5.94	7.20	1	0	1078.13

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.108	3.933	0.42	0.562	11.72	6.58	7.01	19	0	1078.14
0.0	0.0	0.076	2.999	0.23	0.562	11.77	6.61	6.84	23	0	1078.18
0.0	0.0	0.187	5.853	1.09	0.525	11.34	5.95	7.05	2	0	1078.18
0.0	0.0	0.0	0.0	0.00	0.562	11.91	6.70	6.70	25	0	1078.19
0.0	0.0	0.0	0.0	0.00	0.562	11.91	6.69	6.69	26	0	1078.20
0.0	0.0	0.171	5.567	0.95	0.525	11.35	5.96	6.91	3	0	1078.23
0.0	0.0	0.153	5.099	0.78	0.525	11.36	5.96	6.74	5	0	1078.28
0.0	0.0	0.132	4.577	0.60	0.525	11.40	5.99	6.59	7	0	1078.33
0.0	0.0	0.108	3.933	0.42	0.525	11.43	6.00	6.43	9	0	1078.37
0.0	0.0	0.076	2.999	0.23	0.525	11.50	6.04	6.26	12	0	1078.40
0.0	0.0	0.0	0.0	0.00	0.525	11.70	6.14	6.14	11	0	1078.42
0.0	0.0	0.0	0.0	0.00	0.525	11.72	6.15	6.15	11	0	1078.44
0.0	0.0	0.242	6.486	1.57	0.688	12.33	8.48	10.05	15	10	1075.98
0.0	0.0	0.229	6.181	1.42	0.688	12.35	8.50	9.91	15	10	1076.04
0.0	0.0	0.216	5.938	1.28	0.688	12.37	8.51	9.79	17	10	1076.08
0.0	0.0	0.202	5.628	1.14	0.688	12.37	8.51	9.65	19	10	1076.13
0.0	0.0	0.187	5.268	0.99	0.688	12.40	8.53	9.51	20	10	1076.18
0.0	0.0	0.242	6.486	1.57	0.658	12.12	7.98	9.55	11	10	1076.20
0.0	0.0	0.171	4.915	0.84	0.688	12.42	8.55	9.39	21	10	1076.24
0.0	0.0	0.229	6.181	1.42	0.658	12.14	7.99	9.40	11	10	1076.25
0.0	0.0	0.153	4.503	0.69	0.688	12.44	8.56	9.24	24	10	1076.29
0.0	0.0	0.216	5.938	1.28	0.658	12.16	8.00	9.28	12	10	1076.30
0.0	0.0	0.132	3.981	0.53	0.688	12.46	8.57	9.10	29	10	1076.34
0.0	0.0	0.202	5.628	1.14	0.658	12.18	8.01	9.15	12	10	1076.35
0.0	0.0	0.108	3.307	0.36	0.688	12.49	8.59	8.95	35	10	1076.38
0.0	0.0	0.0	0.0	0.00	0.688	12.74	8.76	8.76	49	10	1076.39
0.0	0.0	0.187	5.268	0.99	0.658	12.19	8.02	9.01	13	10	1076.40
0.0	0.0	0.076	2.409	0.18	0.688	12.53	8.62	8.80	42	10	1076.41
0.0	0.0	0.242	6.486	1.57	0.627	11.91	7.47	9.04	6	10	1076.42
0.0	0.0	0.0	0.0	0.00	0.688	12.64	8.70	8.70	48	10	1076.42
0.0	0.0	0.171	4.915	0.84	0.658	12.21	8.04	8.88	13	10	1076.45
0.0	0.0	0.229	6.181	1.42	0.627	11.93	7.48	8.89	6	10	1076.47
0.0	0.0	0.153	4.503	0.69	0.658	12.23	8.05	8.74	16	10	1076.50
0.0	0.0	0.216	5.938	1.28	0.627	11.95	7.49	8.77	6	10	1076.52
0.0	0.0	0.132	3.981	0.53	0.658	12.25	8.06	8.59	22	10	1076.55
0.0	0.0	0.202	5.628	1.14	0.627	11.96	7.50	8.64	7	10	1076.57
0.0	0.0	0.108	3.307	0.36	0.658	12.29	8.08	8.44	28	10	1076.59
0.0	0.0	0.0	0.0	0.00	0.658	12.51	8.23	8.23	39	10	1076.60
0.0	0.0	0.187	5.268	0.99	0.627	11.97	7.51	8.49	8	10	1076.62
0.0	0.0	0.242	6.486	1.57	0.596	11.69	6.97	8.54	1	10	1076.62
0.0	0.0	0.076	2.409	0.18	0.658	12.33	8.11	8.30	35	10	1076.63
0.0	0.0	0.0	0.0	0.00	0.658	12.44	8.18	8.18	40	10	1076.64
0.0	0.0	0.171	4.915	0.84	0.627	11.99	7.52	8.36	10	10	1076.67
0.0	0.0	0.229	6.181	1.42	0.596	11.72	6.98	8.40	2	10	1076.68
0.0	0.0	0.153	4.503	0.69	0.627	12.02	7.53	8.22	12	10	1076.72
0.0	0.0	0.216	5.938	1.28	0.596	11.73	6.99	8.27	3	10	1076.73
0.0	0.0	0.132	3.981	0.53	0.627	12.04	7.55	8.07	16	10	1076.77
0.0	0.0	0.202	5.628	1.14	0.596	11.74	7.00	8.14	4	10	1076.78

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.108	3.307	0.36	0.627	12.07	7.57	7.93	22	10	1076.81
0.0	0.0	0.0	0.0	0.00	0.627	12.30	7.71	7.71	29	10	1076.83
0.0	0.0	0.187	5.268	0.99	0.596	11.76	7.01	7.99	5	10	1076.83
0.0	0.0	0.076	2.409	0.18	0.627	12.11	7.60	7.78	27	10	1076.85
0.0	0.0	0.0	0.0	0.00	0.627	12.23	7.67	7.67	30	10	1076.86
0.0	0.0	0.171	4.915	0.84	0.596	11.78	7.02	7.86	6	10	1076.88
0.0	0.0	0.153	4.503	0.69	0.596	11.80	7.03	7.72	8	10	1076.93
0.0	0.0	0.132	3.981	0.53	0.596	11.82	7.05	7.57	11	10	1076.98
0.0	0.0	0.202	5.628	1.14	0.565	11.52	6.51	7.65	1	10	1076.99
0.0	0.0	0.108	3.307	0.36	0.596	11.86	7.07	7.42	16	10	1077.02
0.0	0.0	0.187	5.268	0.99	0.565	11.54	6.52	7.50	2	10	1077.03
0.0	0.0	0.0	0.0	0.00	0.596	12.05	7.18	7.18	21	10	1077.04
0.0	0.0	0.076	2.409	0.18	0.596	11.89	7.09	7.27	20	10	1077.06
0.0	0.0	0.0	0.0	0.00	0.596	12.02	7.16	7.16	23	10	1077.08
0.0	0.0	0.171	4.915	0.84	0.565	11.56	6.53	7.37	3	10	1077.08
0.0	0.0	0.153	4.503	0.69	0.565	11.58	6.54	7.23	5	10	1077.13
0.0	0.0	0.132	3.981	0.53	0.565	11.61	6.56	7.08	6	10	1077.18
0.0	0.0	0.108	3.307	0.36	0.565	11.64	6.58	6.93	9	10	1077.23
0.0	0.0	0.0	0.0	0.00	0.565	11.88	6.71	6.71	11	10	1077.25
0.0	0.0	0.076	2.409	0.18	0.565	11.69	6.60	6.79	11	10	1077.26
0.0	0.0	0.0	0.0	0.00	0.565	11.83	6.68	6.68	13	10	1077.28
0.0	0.0	0.229	5.972	1.37	0.703	12.36	8.69	10.06	9	20	1075.04
0.0	0.0	0.216	5.626	1.22	0.703	12.37	8.70	9.91	10	20	1075.09
0.0	0.0	0.202	5.28	1.07	0.703	12.40	8.72	9.79	12	20	1075.14
0.0	0.0	0.187	4.885	0.91	0.703	12.42	8.73	9.64	14	20	1075.19
0.0	0.0	0.229	5.972	1.37	0.68	12.21	8.30	9.67	7	20	1075.21
0.0	0.0	0.171	4.571	0.78	0.703	12.41	8.73	9.51	16	20	1075.24
0.0	0.0	0.216	5.626	1.22	0.68	12.22	8.31	9.53	8	20	1075.26
0.0	0.0	0.153	4.148	0.63	0.703	12.45	8.75	9.39	18	20	1075.29
0.0	0.0	0.202	5.28	1.07	0.68	12.25	8.33	9.40	9	20	1075.31
0.0	0.0	0.132	3.644	0.48	0.703	12.48	8.77	9.25	22	20	1075.33
0.0	0.0	0.187	4.885	0.91	0.68	12.26	8.33	9.25	11	20	1075.36
0.0	0.0	0.108	2.992	0.32	0.703	12.51	8.80	9.12	27	20	1075.37
0.0	0.0	0.229	5.972	1.37	0.657	12.05	7.92	9.29	4	20	1075.38
0.0	0.0	0.0	0.0	0.00	0.703	12.75	8.96	8.96	36	20	1075.38
0.0	0.0	0.076	2.1	0.16	0.703	12.54	8.82	8.98	32	20	1075.41
0.0	0.0	0.171	4.571	0.78	0.68	12.26	8.34	9.12	13	20	1075.41
0.0	0.0	0.0	0.0	0.00	0.703	12.70	8.93	8.93	36	20	1075.41
0.0	0.0	0.216	5.626	1.22	0.657	12.07	7.93	9.14	5	20	1075.43
0.0	0.0	0.153	4.148	0.63	0.68	12.30	8.36	9.00	15	20	1075.46
0.0	0.0	0.202	5.28	1.07	0.657	12.08	7.94	9.01	6	20	1075.48
0.0	0.0	0.132	3.644	0.48	0.68	12.33	8.39	8.87	18	20	1075.50
0.0	0.0	0.187	4.885	0.91	0.657	12.10	7.95	8.86	7	20	1075.53
0.0	0.0	0.108	2.992	0.32	0.68	12.36	8.41	8.73	21	20	1075.55
0.0	0.0	0.229	5.972	1.37	0.633	11.89	7.52	8.89	1	20	1075.55
0.0	0.0	0.0	0.0	0.00	0.68	12.56	8.54	8.54	29	20	1075.56
0.0	0.0	0.171	4.571	0.78	0.657	12.11	7.96	8.74	9	20	1075.58
0.0	0.0	0.076	2.1	0.16	0.68	12.38	8.42	8.58	25	20	1075.58

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.0	0.0	0.00	0.68	12.56	8.54	8.54	29	20	1075.59
0.0	0.0	0.216	5.626	1.22	0.633	11.90	7.53	8.75	2	20	1075.60
0.0	0.0	0.153	4.148	0.63	0.657	12.14	7.98	8.61	11	20	1075.62
0.0	0.0	0.202	5.28	1.07	0.633	11.91	7.54	8.61	3	20	1075.65
0.0	0.0	0.132	3.644	0.48	0.657	12.18	8.00	8.48	14	20	1075.67
0.0	0.0	0.187	4.885	0.91	0.633	11.94	7.56	8.47	4	20	1075.70
0.0	0.0	0.108	2.992	0.32	0.657	12.21	8.02	8.34	17	20	1075.71
0.0	0.0	0.0	0.0	0.00	0.657	12.41	8.15	8.15	23	20	1075.73
0.0	0.0	0.076	2.1	0.16	0.657	12.24	8.04	8.20	20	20	1075.74
0.0	0.0	0.171	4.571	0.78	0.633	11.95	7.56	8.35	5	20	1075.75
0.0	0.0	0.0	0.0	0.00	0.657	12.39	8.14	8.14	23	20	1075.76
0.0	0.0	0.153	4.148	0.63	0.633	11.98	7.58	8.22	6	20	1075.79
0.0	0.0	0.202	5.28	1.07	0.61	11.76	7.17	8.24	0	20	1075.82
0.0	0.0	0.132	3.644	0.48	0.633	12.01	7.60	8.09	8	20	1075.84
0.0	0.0	0.187	4.885	0.91	0.61	11.78	7.18	8.10	1	20	1075.86
0.0	0.0	0.108	2.992	0.32	0.633	12.04	7.62	7.94	11	20	1075.88
0.0	0.0	0.0	0.0	0.00	0.633	12.25	7.75	7.75	16	20	1075.90
0.0	0.0	0.171	4.571	0.78	0.61	11.79	7.19	7.98	2	20	1075.91
0.0	0.0	0.076	2.1	0.16	0.633	12.07	7.64	7.80	13	20	1075.92
0.0	0.0	0.0	0.0	0.00	0.633	12.21	7.73	7.73	16	20	1075.93
0.0	0.0	0.153	4.148	0.63	0.61	11.82	7.21	7.85	3	20	1075.96
0.0	0.0	0.132	3.644	0.48	0.61	11.86	7.23	7.71	4	20	1076.00
0.0	0.0	0.108	2.992	0.32	0.61	11.88	7.24	7.57	6	20	1076.04
0.0	0.0	0.0	0.0	0.00	0.61	12.13	7.40	7.40	10	20	1076.07
0.0	0.0	0.076	2.1	0.16	0.61	11.94	7.29	7.45	8	20	1076.08
0.0	0.0	0.0	0.0	0.00	0.61	12.10	7.38	7.38	10	20	1076.09

Table 2:

Details of cluster #0-Front

I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.089	3.364	0.0	0.0	0.30	0.675	12.62	8.52	8.82	61	0	1077.33
0.063	2.731	0.0	0.0	0.17	0.675	12.57	8.48	8.66	59	0	1077.38
0.0	0.0	0.0	0.0	0.00	0.675	12.78	8.63	8.63	60	0	1077.42
0.0	0.0	0.0	0.0	0.00	0.675	12.73	8.59	8.59	57	0	1077.43
0.11	3.928	0.0	0.0	0.43	0.638	12.39	7.90	8.33	47	0	1077.55
0.089	3.364	0.0	0.0	0.30	0.638	12.36	7.89	8.18	48	0	1077.59
0.063	2.731	0.0	0.0	0.17	0.638	12.42	7.92	8.09	48	0	1077.64
0.0	0.0	0.0	0.0	0.00	0.638	12.52	7.99	7.99	51	0	1077.68
0.0	0.0	0.0	0.0	0.00	0.638	12.46	7.95	7.95	50	0	1077.69
0.127	4.298	0.0	0.0	0.55	0.6	12.02	7.21	7.76	30	0	1077.77
0.11	3.928	0.0	0.0	0.43	0.6	12.15	7.29	7.72	32	0	1077.81
0.089	3.364	0.0	0.0	0.30	0.6	12.12	7.27	7.57	34	0	1077.86
0.063	2.731	0.0	0.0	0.17	0.6	12.12	7.27	7.45	36	0	1077.90
0.0	0.0	0.0	0.0	0.00	0.6	12.21	7.32	7.32	40	0	1077.94
0.0	0.0	0.0	0.0	0.00	0.6	12.17	7.30	7.30	40	0	1077.95
0.142	4.719	0.0	0.0	0.67	0.562	11.73	6.59	7.26	13	0	1077.98
0.127	4.298	0.0	0.0	0.55	0.562	11.75	6.60	7.15	16	0	1078.02
0.11	3.928	0.0	0.0	0.43	0.562	11.89	6.68	7.12	19	0	1078.06
0.089	3.364	0.0	0.0	0.30	0.562	11.80	6.63	6.93	21	0	1078.11
0.063	2.731	0.0	0.0	0.17	0.562	11.81	6.64	6.81	23	0	1078.15
0.0	0.0	0.0	0.0	0.00	0.562	11.91	6.70	6.70	25	0	1078.19
0.0	0.0	0.0	0.0	0.00	0.562	11.91	6.69	6.69	26	0	1078.20
0.127	4.298	0.0	0.0	0.55	0.525	11.47	6.02	6.57	2	0	1078.24
0.11	3.928	0.0	0.0	0.43	0.525	11.49	6.03	6.47	4	0	1078.30
0.089	3.364	0.0	0.0	0.30	0.525	11.48	6.03	6.32	6	0	1078.34
0.063	2.731	0.0	0.0	0.17	0.525	11.50	6.04	6.21	9	0	1078.39
0.0	0.0	0.0	0.0	0.00	0.525	11.70	6.14	6.14	11	0	1078.42
0.0	0.0	0.0	0.0	0.00	0.525	11.72	6.15	6.15	11	0	1078.44
0.127	3.86	0.0	0.0	0.49	0.688	12.50	8.60	9.09	40	10	1076.23
0.11	3.386	0.0	0.0	0.37	0.688	12.62	8.68	9.05	43	10	1076.28
0.089	2.777	0.0	0.0	0.25	0.688	12.59	8.66	8.91	47	10	1076.32
0.063	1.994	0.0	0.0	0.13	0.688	12.63	8.69	8.82	49	10	1076.35
0.0	0.0	0.0	0.0	0.00	0.688	12.74	8.76	8.76	49	10	1076.39
0.0	0.0	0.0	0.0	0.00	0.688	12.64	8.70	8.70	48	10	1076.42
0.127	3.86	0.0	0.0	0.49	0.658	12.29	8.09	8.58	30	10	1076.46
0.11	3.386	0.0	0.0	0.37	0.658	12.40	8.16	8.53	32	10	1076.50
0.089	2.777	0.0	0.0	0.25	0.658	12.38	8.15	8.39	36	10	1076.54
0.063	1.994	0.0	0.0	0.13	0.658	12.42	8.17	8.30	39	10	1076.57
0.0	0.0	0.0	0.0	0.00	0.658	12.51	8.23	8.23	39	10	1076.60
0.0	0.0	0.0	0.0	0.00	0.658	12.44	8.18	8.18	40	10	1076.64
0.142	4.305	0.0	0.0	0.61	0.627	12.07	7.57	8.18	20	10	1076.64
0.127	3.86	0.0	0.0	0.49	0.627	12.10	7.58	8.07	22	10	1076.68
0.11	3.386	0.0	0.0	0.37	0.627	12.17	7.63	8.00	24	10	1076.72
0.089	2.777	0.0	0.0	0.25	0.627	12.16	7.62	7.87	26	10	1076.76
0.063	1.994	0.0	0.0	0.13	0.627	12.20	7.65	7.77	28	10	1076.80
0.155	4.607	0.0	0.0	0.71	0.596	11.84	7.05	7.77	7	10	1076.82

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.0	0.0	0.00	0.627	12.30	7.71	7.71	29	10	1076.83
0.142	4.305	0.0	0.0	0.61	0.596	11.86	7.07	7.68	10	10	1076.86
0.0	0.0	0.0	0.0	0.00	0.627	12.23	7.67	7.67	30	10	1076.86
0.127	3.86	0.0	0.0	0.49	0.596	11.88	7.08	7.57	12	10	1076.90
0.11	3.386	0.0	0.0	0.37	0.596	11.94	7.11	7.49	14	10	1076.94
0.089	2.777	0.0	0.0	0.25	0.596	11.94	7.12	7.36	16	10	1076.98
0.063	1.994	0.0	0.0	0.13	0.596	11.98	7.14	7.26	19	10	1077.01
0.0	0.0	0.0	0.0	0.00	0.596	12.05	7.18	7.18	21	10	1077.04
0.142	4.305	0.0	0.0	0.61	0.565	11.63	6.57	7.18	0	10	1077.07
0.0	0.0	0.0	0.0	0.00	0.596	12.02	7.16	7.16	23	10	1077.08
0.127	3.86	0.0	0.0	0.49	0.565	11.67	6.59	7.08	3	10	1077.11
0.11	3.386	0.0	0.0	0.37	0.565	11.73	6.63	7.00	5	10	1077.15
0.089	2.777	0.0	0.0	0.25	0.565	11.72	6.62	6.87	8	10	1077.19
0.063	1.994	0.0	0.0	0.13	0.565	11.77	6.65	6.78	10	10	1077.22
0.0	0.0	0.0	0.0	0.00	0.565	11.88	6.71	6.71	11	10	1077.25
0.0	0.0	0.0	0.0	0.00	0.565	11.83	6.68	6.68	13	10	1077.28
0.142	3.83	0.0	0.0	0.54	0.703	12.56	8.83	9.38	23	20	1075.21
0.127	3.451	0.0	0.0	0.44	0.703	12.56	8.83	9.27	26	20	1075.25
0.11	3.009	0.0	0.0	0.33	0.703	12.57	8.84	9.17	28	20	1075.29
0.089	2.526	0.0	0.0	0.22	0.703	12.60	8.86	9.08	31	20	1075.33
0.063	1.748	0.0	0.0	0.11	0.703	12.62	8.87	8.98	34	20	1075.36
0.0	0.0	0.0	0.0	0.00	0.703	12.75	8.96	8.96	36	20	1075.38
0.142	3.83	0.0	0.0	0.54	0.68	12.40	8.43	8.98	17	20	1075.39
0.0	0.0	0.0	0.0	0.00	0.703	12.70	8.93	8.93	36	20	1075.41
0.127	3.451	0.0	0.0	0.44	0.68	12.39	8.43	8.87	21	20	1075.43
0.11	3.009	0.0	0.0	0.33	0.68	12.41	8.44	8.77	24	20	1075.47
0.089	2.526	0.0	0.0	0.22	0.68	12.44	8.46	8.68	26	20	1075.51
0.155	4.175	0.0	0.0	0.65	0.657	12.22	8.03	8.68	8	20	1075.53
0.063	1.748	0.0	0.0	0.11	0.68	12.46	8.48	8.59	27	20	1075.54
0.0	0.0	0.0	0.0	0.00	0.68	12.56	8.54	8.54	29	20	1075.56
0.142	3.83	0.0	0.0	0.54	0.657	12.24	8.04	8.59	11	20	1075.56
0.0	0.0	0.0	0.0	0.00	0.68	12.56	8.54	8.54	29	20	1075.59
0.127	3.451	0.0	0.0	0.44	0.657	12.23	8.04	8.48	15	20	1075.60
0.11	3.009	0.0	0.0	0.33	0.657	12.25	8.05	8.38	19	20	1075.64
0.089	2.526	0.0	0.0	0.22	0.657	12.28	8.07	8.29	22	20	1075.67
0.155	4.175	0.0	0.0	0.65	0.633	12.06	7.63	8.28	3	20	1075.70
0.063	1.748	0.0	0.0	0.11	0.657	12.31	8.09	8.20	23	20	1075.71
0.0	0.0	0.0	0.0	0.00	0.657	12.41	8.15	8.15	23	20	1075.73
0.142	3.83	0.0	0.0	0.54	0.633	12.07	7.64	8.19	6	20	1075.74
0.0	0.0	0.0	0.0	0.00	0.657	12.39	8.14	8.14	23	20	1075.76
0.127	3.451	0.0	0.0	0.44	0.633	12.07	7.64	8.08	9	20	1075.78
0.11	3.009	0.0	0.0	0.33	0.633	12.09	7.65	7.98	11	20	1075.82
0.089	2.526	0.0	0.0	0.22	0.633	12.11	7.67	7.89	14	20	1075.85
0.063	1.748	0.0	0.0	0.11	0.633	12.14	7.69	7.80	15	20	1075.88
0.0	0.0	0.0	0.0	0.00	0.633	12.25	7.75	7.75	16	20	1075.90
0.0	0.0	0.0	0.0	0.00	0.633	12.21	7.73	7.73	16	20	1075.93
0.127	3.451	0.0	0.0	0.44	0.61	11.91	7.27	7.70	2	20	1075.95
0.11	3.009	0.0	0.0	0.33	0.61	11.94	7.28	7.61	5	20	1075.98

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.089	2.526	0.0	0.0	0.22	0.61	11.96	7.29	7.52	7	20	1076.02
0.063	1.748	0.0	0.0	0.11	0.61	12.01	7.32	7.44	8	20	1076.04
0.0	0.0	0.0	0.0	0.00	0.61	12.13	7.40	7.40	10	20	1076.07
0.0	0.0	0.0	0.0	0.00	0.61	12.10	7.38	7.38	10	20	1076.09

Table 3:

I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.342	8.924	3.05	0.675	12.19	8.23	11.28	17	0	1085.53
0.0	0.0	0.333	8.693	2.89	0.675	12.21	8.24	11.13	17	0	1085.58
0.0	0.0	0.324	8.566	2.78	0.675	12.22	8.25	11.03	19	0	1085.62
0.0	0.0	0.315	8.422	2.65	0.675	12.23	8.26	10.91	23	0	1085.67
0.0	0.0	0.306	8.216	2.51	0.675	12.28	8.29	10.80	26	0	1085.70
0.0	0.0	0.296	8.088	2.39	0.675	12.29	8.30	10.69	30	0	1085.74
0.0	0.0	0.35	9.066	3.17	0.638	11.92	7.61	10.78	6	0	1085.76
0.0	0.0	0.286	7.924	2.27	0.675	12.29	8.30	10.56	33	0	1085.77
0.0	0.0	0.275	7.691	2.12	0.675	12.33	8.32	10.44	36	0	1085.80
0.0	0.0	0.342	8.924	3.05	0.638	11.93	7.61	10.66	8	0	1085.80
0.0	0.0	0.333	8.693	2.89	0.638	11.94	7.62	10.51	11	0	1085.85
0.0	0.0	0.324	8.566	2.78	0.638	11.96	7.63	10.40	15	0	1085.90
0.0	0.0	0.315	8.422	2.65	0.638	11.97	7.63	10.29	18	0	1085.94
0.0	0.0	0.306	8.216	2.51	0.638	12.06	7.69	10.21	21	0	1085.97
0.0	0.0	0.296	8.088	2.39	0.638	12.02	7.67	10.06	24	0	1086.00
0.0	0.0	0.35	9.066	3.17	0.6	11.64	6.99	10.16	4	0	1086.03
0.0	0.0	0.286	7.924	2.27	0.638	12.03	7.67	9.94	26	0	1086.03
0.0	0.0	0.275	7.691	2.12	0.638	12.07	7.70	9.81	27	0	1086.06
0.0	0.0	0.342	8.924	3.05	0.6	11.65	6.99	10.04	5	0	1086.07
0.0	0.0	0.333	8.693	2.89	0.6	11.66	7.00	9.89	8	0	1086.12
0.0	0.0	0.324	8.566	2.78	0.6	11.68	7.01	9.78	10	0	1086.16
0.0	0.0	0.315	8.422	2.65	0.6	11.69	7.02	9.67	12	0	1086.20
0.0	0.0	0.306	8.216	2.51	0.6	11.74	7.04	9.56	15	0	1086.23
0.0	0.0	0.296	8.088	2.39	0.6	11.74	7.04	9.44	16	0	1086.26
0.0	0.0	0.286	7.924	2.27	0.6	11.75	7.05	9.32	18	0	1086.29
0.0	0.0	0.275	7.691	2.12	0.6	11.82	7.09	9.21	19	0	1086.32
0.0	0.0	0.342	8.924	3.05	0.562	11.37	6.39	9.44	1	0	1086.32
0.0	0.0	0.333	8.693	2.89	0.562	11.38	6.40	9.29	2	0	1086.37
0.0	0.0	0.324	8.566	2.78	0.562	11.40	6.41	9.18	3	0	1086.41
0.0	0.0	0.315	8.422	2.65	0.562	11.42	6.42	9.07	4	0	1086.44
0.0	0.0	0.306	8.216	2.51	0.562	11.45	6.44	8.95	5	0	1086.48
0.0	0.0	0.296	8.088	2.39	0.562	11.46	6.44	8.83	6	0	1086.51
0.0	0.0	0.286	7.924	2.27	0.562	11.47	6.45	8.71	7	0	1086.54
0.0	0.0	0.275	7.691	2.12	0.562	11.52	6.47	8.59	7	0	1086.56
0.0	0.0	0.342	8.655	2.96	0.688	12.20	8.39	11.35	15	10	1084.53
0.0	0.0	0.333	8.432	2.81	0.688	12.20	8.40	11.20	17	10	1084.58
0.0	0.0	0.324	8.145	2.64	0.688	12.22	8.40	11.04	19	10	1084.62
0.0	0.0	0.315	7.974	2.51	0.688	12.23	8.41	10.93	22	10	1084.66
0.0	0.0	0.306	7.796	2.39	0.688	12.22	8.41	10.79	25	10	1084.70
0.0	0.0	0.296	7.608	2.25	0.688	12.26	8.43	10.68	28	10	1084.73
0.0	0.0	0.342	8.655	2.96	0.658	11.99	7.89	10.85	7	10	1084.75
0.0	0.0	0.286	7.398	2.12	0.688	12.27	8.44	10.56	30	10	1084.77
0.0	0.0	0.333	8.432	2.81	0.658	12.00	7.90	10.70	9	10	1084.79
0.0	0.0	0.275	7.215	1.98	0.688	12.28	8.45	10.43	32	10	1084.80
0.0	0.0	0.324	8.145	2.64	0.658	12.02	7.91	10.54	11	10	1084.83
0.0	0.0	0.315	7.974	2.51	0.658	12.03	7.91	10.43	12	10	1084.87

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.0	0.0	0.306	7.796	2.39	0.658	12.02	7.91	10.29	14	10	1084.91
0.0	0.0	0.296	7.608	2.25	0.658	12.05	7.93	10.18	17	10	1084.95
0.0	0.0	0.286	7.398	2.12	0.658	12.07	7.94	10.06	19	10	1084.98
0.0	0.0	0.275	7.215	1.98	0.658	12.08	7.95	9.93	21	10	1085.01
0.0	0.0	0.315	7.974	2.51	0.627	11.81	7.41	9.92	2	10	1085.09
0.0	0.0	0.306	7.796	2.39	0.627	11.80	7.40	9.79	4	10	1085.13
0.0	0.0	0.296	7.608	2.25	0.627	11.84	7.42	9.68	6	10	1085.17
0.0	0.0	0.286	7.398	2.12	0.627	11.85	7.43	9.55	8	10	1085.20
0.0	0.0	0.275	7.215	1.98	0.627	11.87	7.44	9.42	9	10	1085.23
0.0	0.0	0.296	7.608	2.25	0.596	11.62	6.92	9.18	1	10	1085.39
0.0	0.0	0.286	7.398	2.12	0.596	11.63	6.93	9.05	2	10	1085.42
0.0	0.0	0.275	7.215	1.98	0.596	11.65	6.94	8.93	2	10	1085.44
0.0	0.0	0.342	8.177	2.80	0.703	12.23	8.60	11.40	2	20	1083.52
0.0	0.0	0.333	8.031	2.67	0.703	12.24	8.60	11.28	5	20	1083.57
0.0	0.0	0.324	7.937	2.57	0.703	12.24	8.61	11.18	7	20	1083.61
0.0	0.0	0.315	7.692	2.42	0.703	12.26	8.62	11.04	9	20	1083.66
0.0	0.0	0.306	7.58	2.32	0.703	12.27	8.63	10.95	11	20	1083.70
0.0	0.0	0.296	7.401	2.19	0.703	12.28	8.63	10.82	12	20	1083.73
0.0	0.0	0.333	8.031	2.67	0.68	12.08	8.21	10.89	1	20	1083.75
0.0	0.0	0.286	7.099	2.03	0.703	12.29	8.64	10.67	14	20	1083.77
0.0	0.0	0.324	7.937	2.57	0.68	12.09	8.22	10.79	3	20	1083.79
0.0	0.0	0.275	6.9	1.90	0.703	12.30	8.65	10.55	15	20	1083.80
0.0	0.0	0.315	7.692	2.42	0.68	12.11	8.23	10.66	5	20	1083.83
0.0	0.0	0.306	7.58	2.32	0.68	12.12	8.24	10.56	6	20	1083.87
0.0	0.0	0.296	7.401	2.19	0.68	12.12	8.24	10.43	7	20	1083.91
0.0	0.0	0.286	7.099	2.03	0.68	12.13	8.25	10.28	8	20	1083.94
0.0	0.0	0.275	6.9	1.90	0.68	12.15	8.26	10.16	9	20	1083.97
0.0	0.0	0.306	7.58	2.32	0.657	11.96	7.86	10.18	1	20	1084.04
0.0	0.0	0.296	7.401	2.19	0.657	11.97	7.86	10.05	2	20	1084.07
0.0	0.0	0.286	7.099	2.03	0.657	11.97	7.87	9.90	3	20	1084.11
0.0	0.0	0.275	6.9	1.90	0.657	11.99	7.88	9.78	3	20	1084.14

Table 4:

Details of cluster #2-Front

I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.276	7.396	0.0	0.0	2.04	0.675	12.37	8.35	10.39	34	0	1068.02
0.268	7.248	0.0	0.0	1.94	0.675	12.37	8.35	10.29	36	0	1068.06
0.261	7.106	0.0	0.0	1.85	0.675	12.37	8.35	10.21	37	0	1068.09
0.253	6.92	0.0	0.0	1.75	0.675	12.39	8.36	10.11	40	0	1068.12
0.245	6.746	0.0	0.0	1.65	0.675	12.39	8.37	10.02	42	0	1068.16
0.237	6.623	0.0	0.0	1.57	0.675	12.40	8.37	9.94	42	0	1068.19
0.228	6.457	0.0	0.0	1.47	0.675	12.40	8.37	9.84	42	0	1068.22
0.219	6.257	0.0	0.0	1.37	0.675	12.43	8.39	9.76	40	0	1068.24
0.21	6.144	0.0	0.0	1.29	0.675	12.41	8.38	9.67	36	0	1068.27
0.276	7.396	0.0	0.0	2.04	0.638	12.11	7.73	9.77	22	0	1068.28
0.2	5.906	0.0	0.0	1.18	0.675	12.48	8.42	9.61	33	0	1068.29
0.19	5.701	0.0	0.0	1.08	0.675	12.48	8.42	9.51	29	0	1068.31
0.268	7.248	0.0	0.0	1.94	0.638	12.11	7.72	9.67	24	0	1068.32
0.261	7.106	0.0	0.0	1.85	0.638	12.11	7.72	9.58	26	0	1068.35
0.253	6.92	0.0	0.0	1.75	0.638	12.12	7.73	9.48	27	0	1068.39
0.245	6.746	0.0	0.0	1.65	0.638	12.13	7.74	9.39	29	0	1068.42
0.237	6.623	0.0	0.0	1.57	0.638	12.16	7.76	9.33	29	0	1068.44
0.228	6.457	0.0	0.0	1.47	0.638	12.17	7.76	9.23	28	0	1068.47
0.219	6.257	0.0	0.0	1.37	0.638	12.18	7.77	9.14	26	0	1068.50
0.21	6.144	0.0	0.0	1.29	0.638	12.16	7.76	9.05	24	0	1068.52
0.2	5.906	0.0	0.0	1.18	0.638	12.22	7.80	8.98	22	0	1068.54
0.276	7.396	0.0	0.0	2.04	0.6	11.83	7.10	9.14	10	0	1068.55
0.19	5.701	0.0	0.0	1.08	0.638	12.21	7.79	8.87	20	0	1068.56
0.268	7.248	0.0	0.0	1.94	0.6	11.83	7.10	9.04	12	0	1068.58
0.261	7.106	0.0	0.0	1.85	0.6	11.83	7.10	8.95	14	0	1068.61
0.253	6.92	0.0	0.0	1.75	0.6	11.85	7.11	8.86	16	0	1068.64
0.245	6.746	0.0	0.0	1.65	0.6	11.85	7.11	8.77	17	0	1068.67
0.237	6.623	0.0	0.0	1.57	0.6	11.89	7.13	8.70	17	0	1068.70
0.228	6.457	0.0	0.0	1.47	0.6	11.93	7.16	8.63	16	0	1068.72
0.219	6.257	0.0	0.0	1.37	0.6	11.93	7.16	8.53	15	0	1068.75
0.21	6.144	0.0	0.0	1.29	0.6	11.91	7.15	8.44	14	0	1068.77
0.2	5.906	0.0	0.0	1.18	0.6	11.95	7.17	8.35	13	0	1068.79
0.268	7.248	0.0	0.0	1.94	0.562	11.54	6.49	8.43	0	0	1068.82
0.261	7.106	0.0	0.0	1.85	0.562	11.55	6.49	8.34	2	0	1068.86
0.253	6.92	0.0	0.0	1.75	0.562	11.56	6.50	8.25	4	0	1068.89
0.245	6.746	0.0	0.0	1.65	0.562	11.57	6.51	8.16	5	0	1068.92
0.237	6.623	0.0	0.0	1.57	0.562	11.61	6.53	8.10	5	0	1068.94
0.228	6.457	0.0	0.0	1.47	0.562	11.67	6.56	8.03	5	0	1068.97
0.219	6.257	0.0	0.0	1.37	0.562	11.66	6.55	7.92	5	0	1068.99
0.21	6.144	0.0	0.0	1.29	0.562	11.65	6.55	7.84	5	0	1069.01
0.2	5.906	0.0	0.0	1.18	0.562	11.67	6.56	7.74	4	0	1069.03
0.29	7.307	0.0	0.0	2.12	0.688	12.28	8.45	10.57	15	10	1066.98
0.283	7.203	0.0	0.0	2.04	0.688	12.29	8.46	10.50	19	10	1067.01
0.276	7.079	0.0	0.0	1.95	0.688	12.30	8.46	10.41	21	10	1067.04
0.268	6.927	0.0	0.0	1.86	0.688	12.31	8.47	10.32	24	10	1067.08
0.261	6.786	0.0	0.0	1.77	0.688	12.31	8.47	10.24	25	10	1067.11

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.253	6.586	0.0	0.0	1.67	0.688	12.32	8.48	10.14	25	10	1067.14
0.245	6.446	0.0	0.0	1.58	0.688	12.32	8.48	10.06	25	10	1067.17
0.237	6.298	0.0	0.0	1.49	0.688	12.34	8.49	9.98	26	10	1067.20
0.29	7.307	0.0	0.0	2.12	0.658	12.07	7.94	10.06	8	10	1067.20
0.228	6.122	0.0	0.0	1.40	0.688	12.35	8.50	9.89	26	10	1067.22
0.283	7.203	0.0	0.0	2.04	0.658	12.08	7.95	9.99	11	10	1067.23
0.219	5.939	0.0	0.0	1.30	0.688	12.36	8.51	9.81	25	10	1067.24
0.276	7.079	0.0	0.0	1.95	0.658	12.09	7.95	9.91	14	10	1067.26
0.21	5.747	0.0	0.0	1.21	0.688	12.38	8.52	9.72	24	10	1067.26
0.2	5.506	0.0	0.0	1.10	0.688	12.39	8.52	9.62	22	10	1067.28
0.268	6.927	0.0	0.0	1.86	0.658	12.10	7.96	9.82	16	10	1067.30
0.19	5.33	0.0	0.0	1.01	0.688	12.40	8.53	9.55	20	10	1067.30
0.179	5.164	0.0	0.0	0.92	0.688	12.43	8.55	9.47	19	10	1067.32
0.261	6.786	0.0	0.0	1.77	0.658	12.10	7.96	9.73	18	10	1067.32
0.253	6.586	0.0	0.0	1.67	0.658	12.12	7.97	9.64	18	10	1067.35
0.245	6.446	0.0	0.0	1.58	0.658	12.12	7.97	9.55	18	10	1067.38
0.237	6.298	0.0	0.0	1.49	0.658	12.14	7.99	9.48	18	10	1067.41
0.228	6.122	0.0	0.0	1.40	0.658	12.15	7.99	9.39	18	10	1067.44
0.283	7.203	0.0	0.0	2.04	0.627	11.87	7.44	9.48	3	10	1067.45
0.219	5.939	0.0	0.0	1.30	0.658	12.16	8.00	9.30	17	10	1067.46
0.21	5.747	0.0	0.0	1.21	0.658	12.18	8.01	9.22	16	10	1067.47
0.276	7.079	0.0	0.0	1.95	0.627	11.87	7.44	9.40	5	10	1067.48
0.2	5.506	0.0	0.0	1.10	0.658	12.19	8.02	9.12	15	10	1067.50
0.19	5.33	0.0	0.0	1.01	0.658	12.20	8.03	9.04	14	10	1067.51
0.268	6.927	0.0	0.0	1.86	0.627	11.88	7.45	9.31	7	10	1067.52
0.179	5.164	0.0	0.0	0.92	0.658	12.23	8.04	8.97	13	10	1067.53
0.261	6.786	0.0	0.0	1.77	0.627	11.88	7.45	9.22	9	10	1067.54
0.253	6.586	0.0	0.0	1.67	0.627	11.90	7.46	9.13	10	10	1067.57
0.245	6.446	0.0	0.0	1.58	0.627	11.90	7.46	9.04	10	10	1067.60
0.237	6.298	0.0	0.0	1.49	0.627	11.93	7.48	8.97	10	10	1067.63
0.228	6.122	0.0	0.0	1.40	0.627	11.93	7.48	8.88	10	10	1067.65
0.219	5.939	0.0	0.0	1.30	0.627	11.94	7.49	8.79	10	10	1067.67
0.21	5.747	0.0	0.0	1.21	0.627	11.96	7.50	8.71	10	10	1067.69
0.2	5.506	0.0	0.0	1.10	0.627	11.97	7.51	8.61	9	10	1067.71
0.19	5.33	0.0	0.0	1.01	0.627	11.99	7.52	8.53	8	10	1067.72
0.253	6.586	0.0	0.0	1.67	0.596	11.68	6.96	8.63	1	10	1067.78
0.261	6.786	0.0	0.0	1.77	0.596	11.67	6.96	8.73	0	10	1067.80
0.245	6.446	0.0	0.0	1.58	0.596	11.69	6.97	8.54	2	10	1067.80
0.237	6.298	0.0	0.0	1.49	0.596	11.71	6.98	8.47	3	10	1067.83
0.228	6.122	0.0	0.0	1.40	0.596	11.72	6.98	8.38	3	10	1067.85
0.219	5.939	0.0	0.0	1.30	0.596	11.73	6.99	8.29	3	10	1067.87
0.21	5.747	0.0	0.0	1.21	0.596	11.74	7.00	8.21	3	10	1067.89
0.2	5.506	0.0	0.0	1.10	0.596	11.76	7.01	8.11	3	10	1067.91
0.19	5.33	0.0	0.0	1.01	0.596	11.77	7.02	8.03	3	10	1067.93
0.29	6.931	0.0	0.0	2.01	0.703	12.32	8.66	10.67	2	20	1066.01
0.283	6.783	0.0	0.0	1.92	0.703	12.34	8.67	10.59	5	20	1066.04
0.276	6.698	0.0	0.0	1.85	0.703	12.41	8.73	10.58	7	20	1066.07
0.268	6.483	0.0	0.0	1.74	0.703	12.38	8.71	10.44	10	20	1066.10

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I_F [A]	V_F [V]	I_B [A]	V_B [V]	Pel_R [W]	I_L [A]	V_L [V]	P_L [W]	P_{tot} [W]	P_{opt} [mW]	T [C]	freq [cm^{-1}]
0.261	6.393	0.0	0.0	1.67	0.703	12.41	8.73	10.39	11	20	1066.13
0.253	6.262	0.0	0.0	1.58	0.703	12.41	8.73	10.31	12	20	1066.16
0.245	6.104	0.0	0.0	1.50	0.703	12.41	8.72	10.22	12	20	1066.19
0.283	6.783	0.0	0.0	1.92	0.68	12.15	8.26	10.18	0	20	1066.22
0.237	5.909	0.0	0.0	1.40	0.703	12.42	8.73	10.13	12	20	1066.22
0.228	5.719	0.0	0.0	1.30	0.703	12.45	8.75	10.05	12	20	1066.24
0.276	6.698	0.0	0.0	1.85	0.68	12.30	8.36	10.21	3	20	1066.24
0.219	5.562	0.0	0.0	1.22	0.703	12.45	8.75	9.97	12	20	1066.26
0.268	6.483	0.0	0.0	1.74	0.68	12.23	8.32	10.05	5	20	1066.27
0.21	5.38	0.0	0.0	1.13	0.703	12.44	8.75	9.88	12	20	1066.28
0.2	5.173	0.0	0.0	1.03	0.703	12.47	8.76	9.80	11	20	1066.30
0.261	6.393	0.0	0.0	1.67	0.68	12.27	8.34	10.01	7	20	1066.30
0.19	4.969	0.0	0.0	0.94	0.703	12.47	8.77	9.71	11	20	1066.31
0.179	4.7	0.0	0.0	0.84	0.703	12.52	8.80	9.64	10	20	1066.33
0.253	6.262	0.0	0.0	1.58	0.68	12.25	8.33	9.92	8	20	1066.33
0.167	4.449	0.0	0.0	0.74	0.703	12.54	8.81	9.56	10	20	1066.34
0.155	4.175	0.0	0.0	0.65	0.703	12.54	8.81	9.46	9	20	1066.36
0.245	6.104	0.0	0.0	1.50	0.68	12.25	8.33	9.83	9	20	1066.36
0.237	5.909	0.0	0.0	1.40	0.68	12.29	8.36	9.76	9	20	1066.38
0.228	5.719	0.0	0.0	1.30	0.68	12.29	8.35	9.66	9	20	1066.41
0.219	5.562	0.0	0.0	1.22	0.68	12.29	8.36	9.57	9	20	1066.43
0.268	6.483	0.0	0.0	1.74	0.657	12.07	7.93	9.67	0	20	1066.43
0.21	5.38	0.0	0.0	1.13	0.68	12.30	8.36	9.49	8	20	1066.45
0.2	5.173	0.0	0.0	1.03	0.68	12.31	8.37	9.40	8	20	1066.46
0.261	6.393	0.0	0.0	1.67	0.657	12.10	7.95	9.62	2	20	1066.47
0.19	4.969	0.0	0.0	0.94	0.68	12.31	8.37	9.31	7	20	1066.48
0.179	4.7	0.0	0.0	0.84	0.68	12.35	8.40	9.24	7	20	1066.50
0.253	6.262	0.0	0.0	1.58	0.657	12.09	7.94	9.53	3	20	1066.50
0.167	4.449	0.0	0.0	0.74	0.68	12.39	8.42	9.17	6	20	1066.51
0.155	4.175	0.0	0.0	0.65	0.68	12.37	8.41	9.06	6	20	1066.53
0.245	6.104	0.0	0.0	1.50	0.657	12.09	7.94	9.44	4	20	1066.53
0.237	5.909	0.0	0.0	1.40	0.657	12.12	7.96	9.37	4	20	1066.55
0.228	5.719	0.0	0.0	1.30	0.657	12.12	7.97	9.27	5	20	1066.57
0.219	5.562	0.0	0.0	1.22	0.657	12.13	7.97	9.18	5	20	1066.59
0.21	5.38	0.0	0.0	1.13	0.657	12.14	7.97	9.10	4	20	1066.61
0.2	5.173	0.0	0.0	1.03	0.657	12.14	7.98	9.01	4	20	1066.63
0.19	4.969	0.0	0.0	0.94	0.657	12.15	7.98	8.93	4	20	1066.65
0.179	4.7	0.0	0.0	0.84	0.657	12.18	8.00	8.84	3	20	1066.66
0.167	4.449	0.0	0.0	0.74	0.657	12.22	8.03	8.77	3	20	1066.68
0.219	5.562	0.0	0.0	1.22	0.633	11.96	7.57	8.79	0	20	1066.75
0.21	5.38	0.0	0.0	1.13	0.633	11.97	7.58	8.70	0	20	1066.78
0.2	5.173	0.0	0.0	1.03	0.633	11.97	7.58	8.61	0	20	1066.80

Table 5: