

Datasheet for #sbcw23755 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 bias and positive bias on the specific zones drawn below. To be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.



Figure 1: Mechanical and electrical interface for #sbcw23755 DN (please note that AlN submount numbering is A0Y4N)

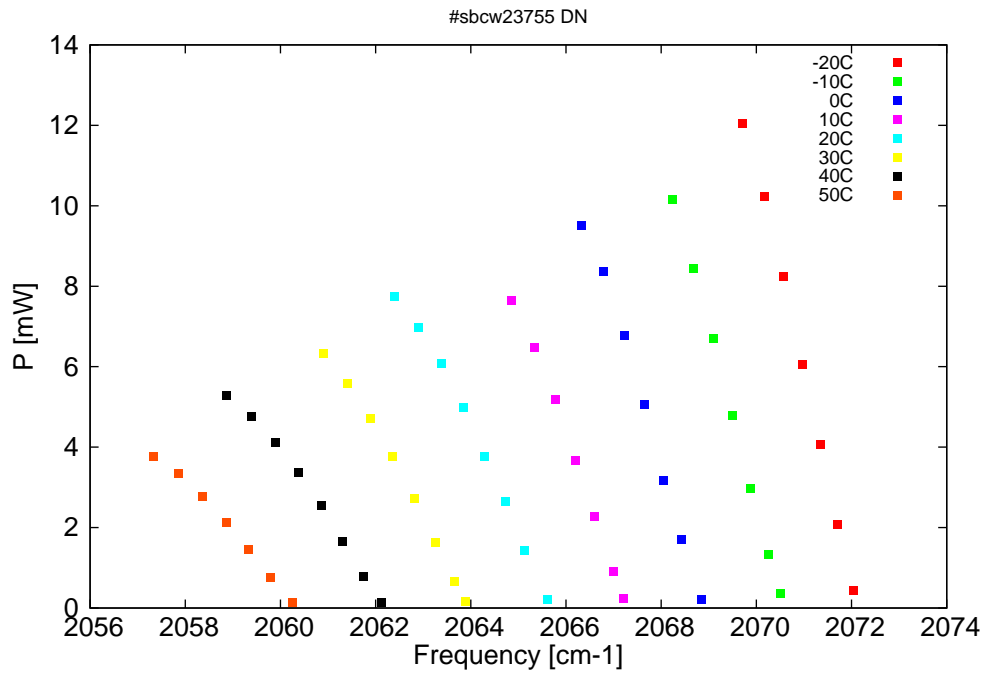


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

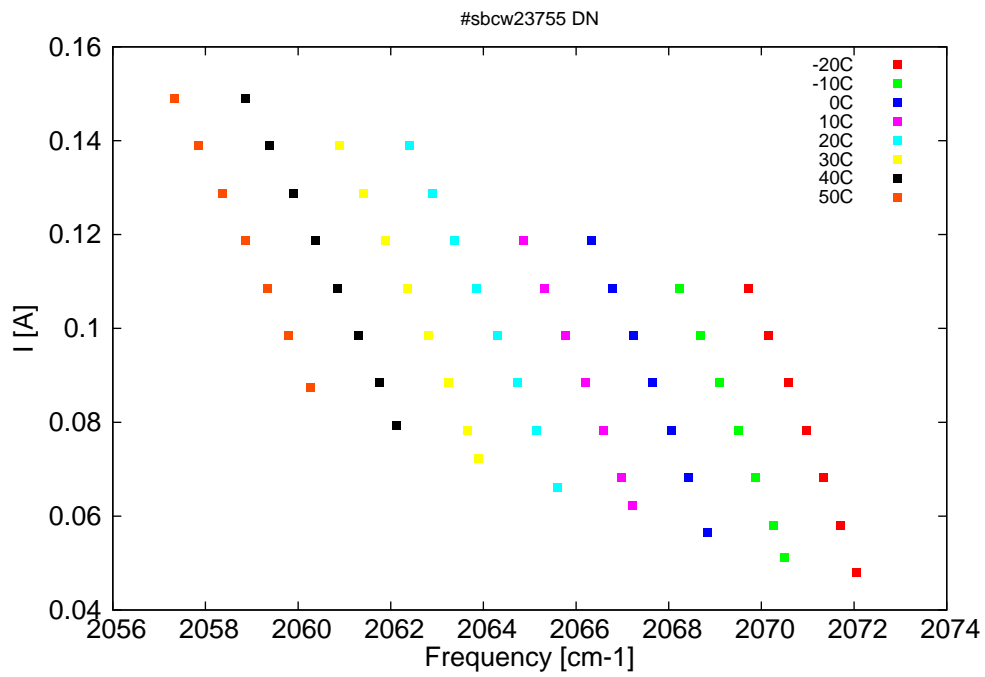


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4826.1	2072	0.4	-20	12.06	0.048
4826.9	2071.7	2.1	-20	12.44	0.058
4827.8	2071.4	4.1	-20	12.8	0.068
4828.6	2071	6.1	-20	13.14	0.078
4829.6	2070.6	8.2	-20	13.49	0.088
4830.5	2070.2	10.2	-20	13.85	0.099
4831.6	2069.7	12	-20	14.24	0.109
4829.7	2070.5	0.4	-10	11.99	0.051
4830.3	2070.3	1.3	-10	12.24	0.058
4831.2	2069.9	3	-10	12.59	0.068
4832.1	2069.5	4.8	-10	12.92	0.078
4833	2069.1	6.7	-10	13.25	0.088
4834	2068.7	8.4	-10	13.59	0.099
4835	2068.2	10.2	-10	13.93	0.109
4833.6	2068.8	0.2	0	12.03	0.057
4834.6	2068.4	1.7	0	12.42	0.068
4835.5	2068.1	3.2	0	12.74	0.078
4836.4	2067.7	5.1	0	13.06	0.088
4837.4	2067.2	6.8	0	13.37	0.099
4838.4	2066.8	8.4	0	13.7	0.109
4839.5	2066.3	9.5	0	14.04	0.119
4837.4	2067.2	0.2	10	12.07	0.062
4838	2067	0.9	10	12.25	0.068
4838.9	2066.6	2.3	10	12.56	0.078
4839.8	2066.2	3.7	10	12.87	0.088
4840.8	2065.8	5.2	10	13.17	0.099
4841.8	2065.3	6.5	10	13.48	0.109
4842.9	2064.9	7.6	10	13.79	0.119
4841.2	2065.6	0.2	20	12.05	0.066
4842.3	2065.1	1.4	20	12.4	0.078
4843.3	2064.7	2.6	20	12.69	0.088
4844.3	2064.3	3.8	20	12.98	0.099
4845.3	2063.9	5	20	13.27	0.109
4846.4	2063.4	6.1	20	13.56	0.119
4847.5	2062.9	7	20	13.86	0.129
4848.7	2062.4	7.7	20	14.16	0.139
4845.2	2063.9	0.2	30	12.09	0.072
4845.8	2063.7	0.7	30	12.25	0.078
4846.7	2063.2	1.6	30	12.53	0.088
4847.7	2062.8	2.7	30	12.8	0.099
4848.8	2062.4	3.8	30	13.08	0.109
4849.9	2061.9	4.7	30	13.35	0.119
4851.1	2061.4	5.6	30	13.63	0.129
4852.2	2060.9	6.3	30	13.9	0.139
4849.4	2062.1	0.1	40	12.16	0.079
4850.3	2061.7	0.8	40	12.39	0.088
4851.3	2061.3	1.7	40	12.65	0.099
4852.4	2060.9	2.5	40	12.91	0.109
4853.5	2060.4	3.4	40	13.17	0.119

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λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
4854.6	2059.9	4.1	40	13.43	0.129
4855.8	2059.4	4.8	40	13.69	0.139
4857.1	2058.9	5.3	40	13.96	0.149
4853.8	2060.3	0.1	50	12.26	0.088
4854.9	2059.8	0.8	50	12.52	0.099
4855.9	2059.3	1.5	50	12.76	0.109
4857.1	2058.9	2.1	50	13.01	0.119
4858.2	2058.4	2.8	50	13.25	0.129
4859.4	2057.9	3.3	50	13.49	0.139
4860.7	2057.3	3.8	50	13.74	0.149

Table 1: Singlemode optical output power as function of operating parameters.

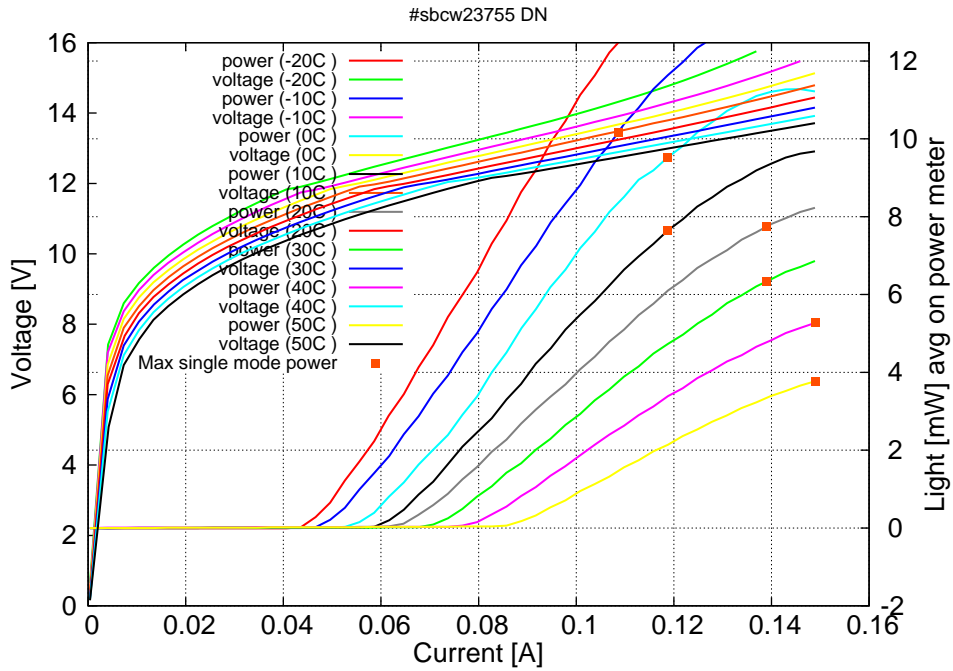


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.04\text{A}$ / $V_{th}=11.8\text{V}$ (2-wires measurements). Maximum operation current: 0.11A between -20C and -10C, 0.12A between 0C and 10C, 0.14A between 20C and 30C, 0.15A between 40C and 50C.

