

Datasheet for #sbcw23758 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 #sbcw23758 DN (please note that AlN submount numbering is A0VKY)

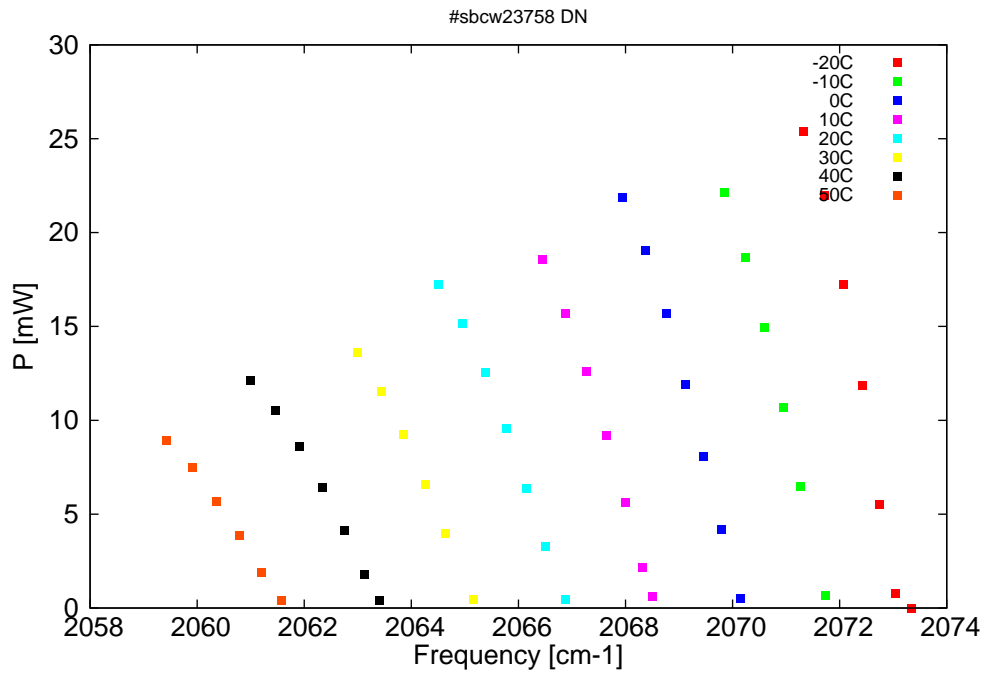


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

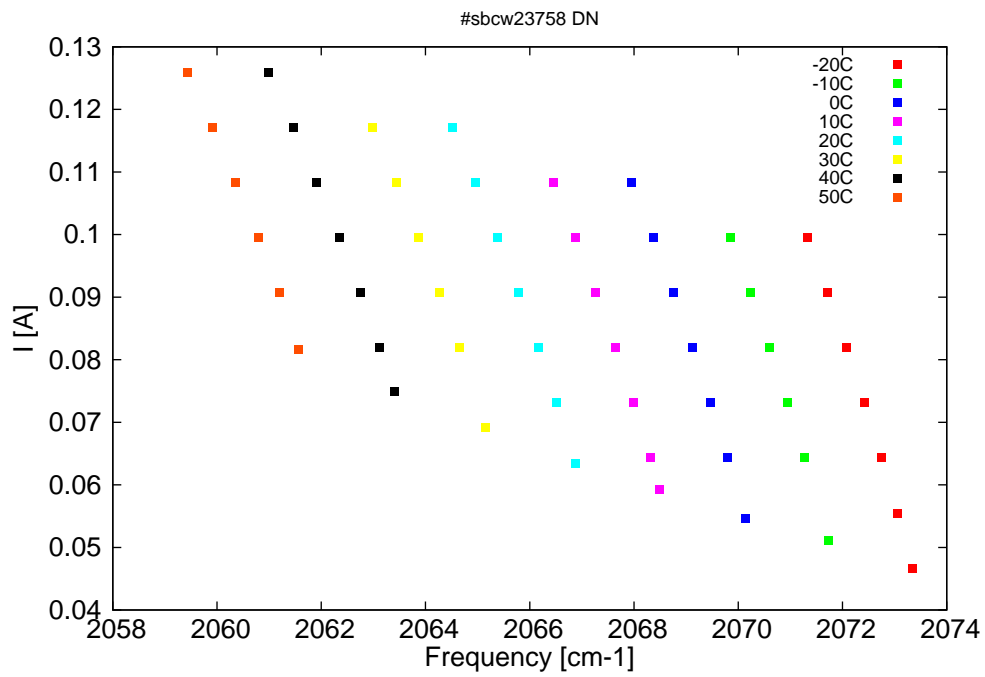


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4823.1	2073.3	0	-20	12.24	0.047
4823.8	2073.1	0.8	-20	12.57	0.056
4824.5	2072.7	5.5	-20	12.89	0.064
4825.3	2072.4	11.9	-20	13.22	0.073
4826.1	2072.1	17.2	-20	13.56	0.082
4826.9	2071.7	22	-20	13.91	0.091
4827.8	2071.3	25.4	-20	14.3	0.1
4826.9	2071.7	0.7	-10	12.23	0.051
4827.9	2071.3	6.5	-10	12.7	0.064
4828.7	2070.9	10.7	-10	13.02	0.073
4829.5	2070.6	14.9	-10	13.33	0.082
4830.4	2070.2	18.7	-10	13.67	0.091
4831.3	2069.9	22.1	-10	14.02	0.1
4830.6	2070.1	0.5	0	12.2	0.055
4831.4	2069.8	4.2	0	12.53	0.064
4832.2	2069.5	8.1	0	12.83	0.073
4833	2069.1	11.9	0	13.13	0.082
4833.8	2068.8	15.7	0	13.44	0.091
4834.7	2068.4	19	0	13.78	0.1
4835.7	2067.9	21.9	0	14.14	0.108
4834.4	2068.5	0.6	10	12.22	0.059
4834.8	2068.3	2.2	10	12.38	0.064
4835.6	2068	5.6	10	12.67	0.073
4836.4	2067.6	9.2	10	12.96	0.082
4837.3	2067.3	12.6	10	13.26	0.091
4838.2	2066.9	15.7	10	13.57	0.1
4839.2	2066.5	18.6	10	13.9	0.108
4838.2	2066.9	0.5	20	12.23	0.063
4839.1	2066.5	3.3	20	12.52	0.073
4839.9	2066.2	6.4	20	12.8	0.082
4840.8	2065.8	9.6	20	13.09	0.091
4841.7	2065.4	12.5	20	13.38	0.1
4842.7	2065	15.2	20	13.7	0.108
4843.7	2064.5	17.2	20	14.03	0.117
4842.2	2065.2	0.5	30	12.29	0.069
4843.5	2064.6	4	30	12.66	0.082
4844.3	2064.3	6.6	30	12.93	0.091
4845.3	2063.9	9.3	30	13.21	0.1
4846.3	2063.4	11.5	30	13.5	0.108
4847.3	2063	13.6	30	13.82	0.117
4846.4	2063.4	0.4	40	12.36	0.075
4847	2063.1	1.8	40	12.54	0.082
4847.9	2062.7	4.1	40	12.79	0.091
4848.9	2062.3	6.4	40	13.06	0.1
4849.9	2061.9	8.6	40	13.33	0.108
4850.9	2061.5	10.5	40	13.63	0.117
4852	2061	12.1	40	13.93	0.126
4850.7	2061.6	0.4	50	12.46	0.082
4851.6	2061.2	1.9	50	12.67	0.091

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4852.5	2060.8	3.9	50	12.92	0.1
4853.5	2060.4	5.7	50	13.18	0.108
4854.6	2059.9	7.5	50	13.45	0.117
4855.7	2059.4	8.9	50	13.74	0.126

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

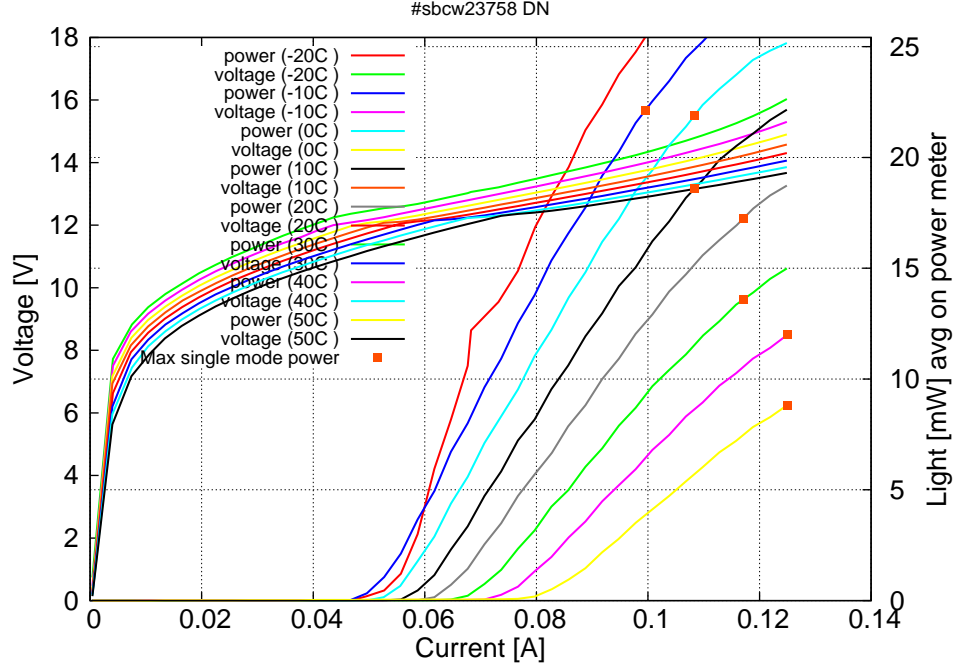


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.10A between -20C and -10C, 0.11A between 0C and 10C, 0.12A between 20C and 30C, 0.125A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

