

Datasheet for #sbcw20756 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 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 #sbcw20756 DN

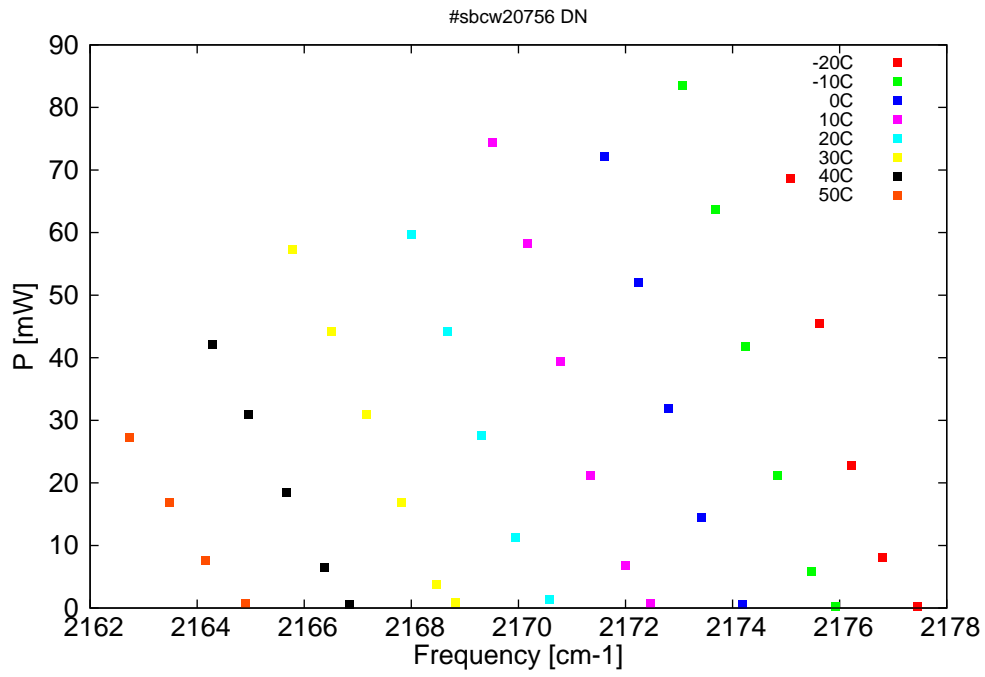


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

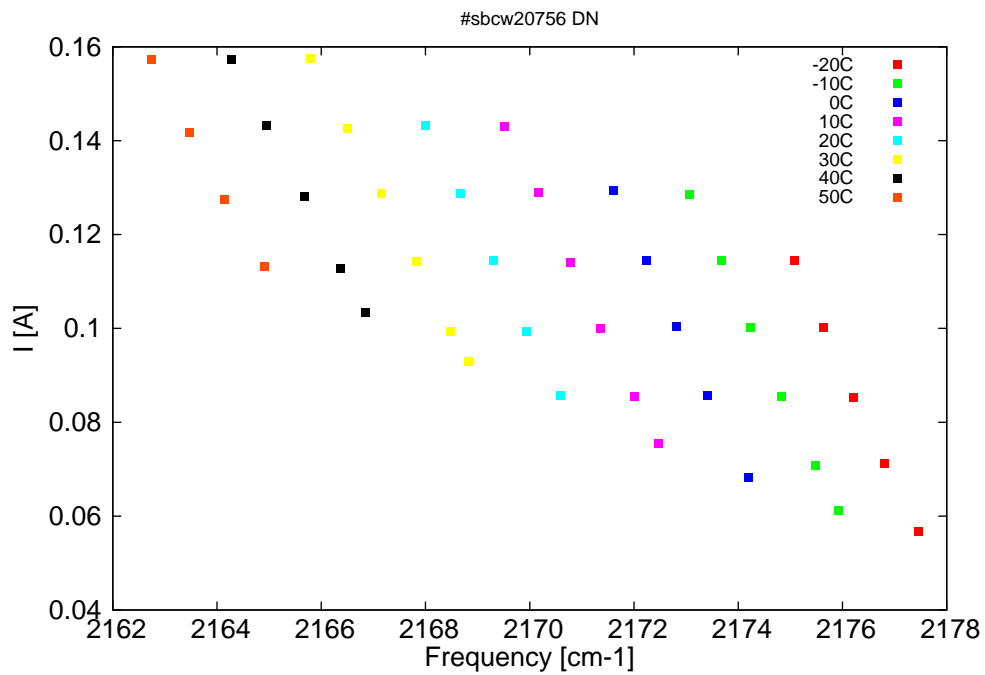


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4592.5	2177.5	0.2	-20	12.83	0.057
4593.9	2176.8	8.1	-20	13.09	0.071
4595.1	2176.2	22.7	-20	13.33	0.085
4596.4	2175.6	45.5	-20	13.61	0.1
4597.5	2175.1	68.6	-20	13.89	0.115
4595.8	2175.9	0.3	-10	12.8	0.061
4596.7	2175.5	5.9	-10	12.95	0.071
4598	2174.8	21.2	-10	13.19	0.086
4599.3	2174.2	41.8	-10	13.45	0.1
4600.5	2173.7	63.7	-10	13.71	0.114
4601.8	2173.1	83.4	-10	13.99	0.128
4599.4	2174.2	0.5	0	12.81	0.068
4601.1	2173.4	14.4	0	13.08	0.086
4602.3	2172.8	31.8	0	13.31	0.1
4603.6	2172.2	52.1	0	13.56	0.114
4604.9	2171.6	72.2	0	13.83	0.129
4603.1	2172.5	0.7	10	12.84	0.076
4604	2172	6.8	10	12.98	0.086
4605.4	2171.4	21.1	10	13.19	0.1
4606.6	2170.8	39.4	10	13.42	0.114
4607.9	2170.2	58.2	10	13.67	0.129
4609.3	2169.5	74.4	10	13.92	0.143
4607	2170.6	1.4	20	12.89	0.086
4608.4	2169.9	11.2	20	13.09	0.099
4609.8	2169.3	27.6	20	13.31	0.114
4611.1	2168.7	44.2	20	13.53	0.129
4612.5	2168	59.7	20	13.78	0.143
4610.8	2168.8	0.9	30	12.94	0.093
4611.5	2168.5	3.8	30	13.02	0.099
4612.9	2167.8	16.8	30	13.21	0.114
4614.3	2167.2	30.9	30	13.42	0.129
4615.7	2166.5	44.2	30	13.64	0.143
4617.3	2165.8	57.3	30	13.87	0.158
4615	2166.9	0.5	40	13.02	0.103
4616	2166.4	6.4	40	13.13	0.113
4617.5	2165.7	18.4	40	13.31	0.128
4619	2165	30.9	40	13.52	0.143
4620.5	2164.3	42.1	40	13.73	0.157
4619.1	2164.9	0.7	50	13.11	0.113
4620.8	2164.2	7.6	50	13.25	0.127
4622.2	2163.5	16.9	50	13.42	0.142
4623.8	2162.7	27.2	50	13.62	0.157

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

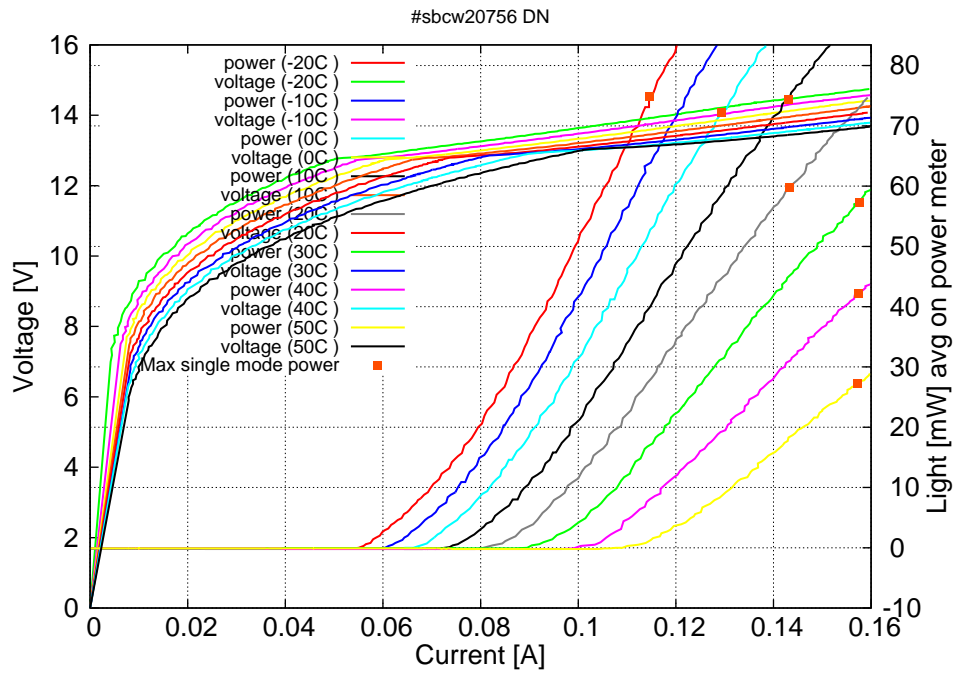


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=12.8V$ (2-wires measurements). Maximum operation current: 0.12A at -20C, 0.13A at -10C and 0C, 0.145A at 10C and 20C, 0.16A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

