

Datasheet for #sbcw20761 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 #sbcw20761 DN (please note that AlN submount numbering is A0RWL)

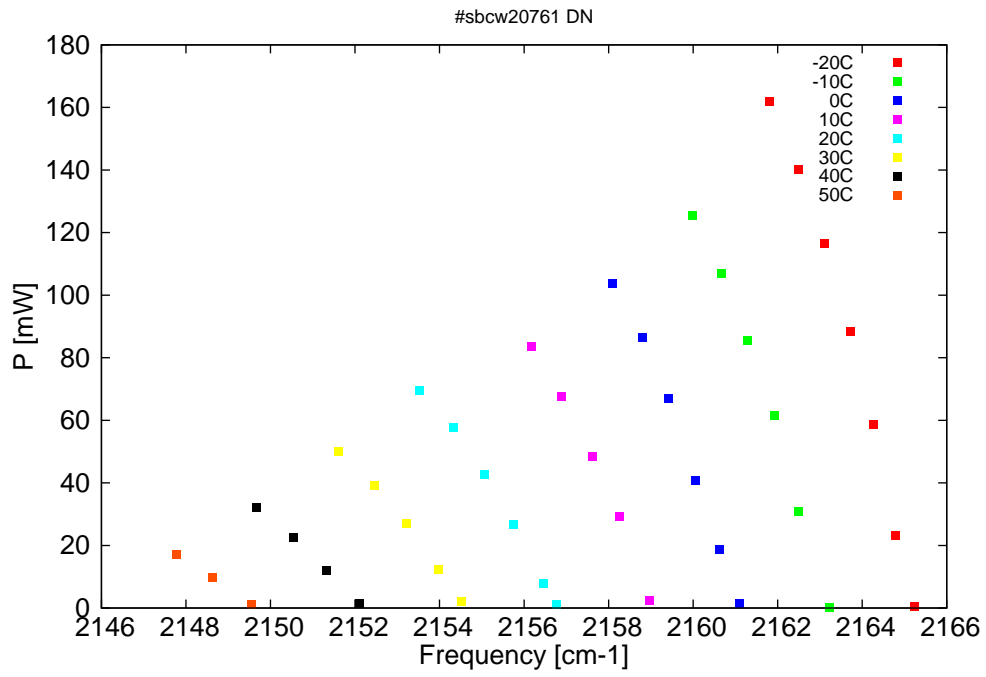


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

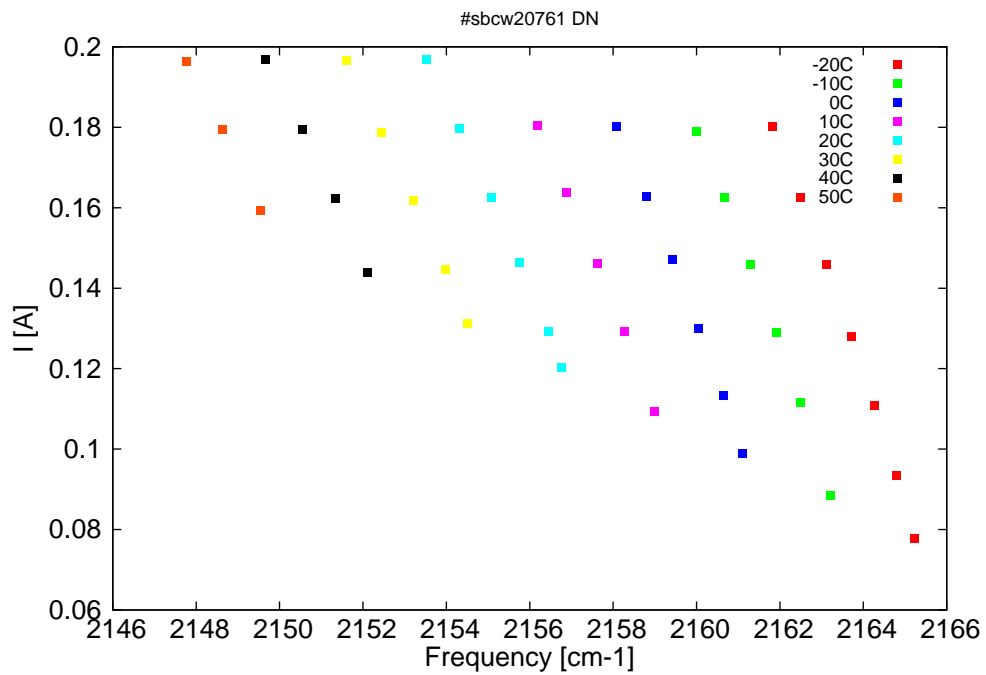


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4618.4	2165.2	0.5	-20	11.81	0.078
4619.4	2164.8	23.1	-20	11.98	0.093
4620.5	2164.3	58.8	-20	12.19	0.111
4621.7	2163.7	88.3	-20	12.38	0.128
4623	2163.1	116.5	-20	12.58	0.146
4624.3	2162.5	140.3	-20	12.76	0.163
4625.7	2161.8	161.7	-20	12.94	0.18
4622.7	2163.2	0.3	-10	11.82	0.089
4624.3	2162.5	31	-10	12.07	0.112
4625.5	2161.9	61.4	-10	12.26	0.129
4626.9	2161.3	85.4	-10	12.45	0.146
4628.2	2160.7	107	-10	12.62	0.162
4629.6	2160	125.5	-10	12.79	0.179
4627.3	2161.1	1.5	0	11.84	0.099
4628.3	2160.6	18.7	0	11.98	0.113
4629.5	2160.1	40.8	0	12.16	0.13
4630.9	2159.4	67.1	0	12.34	0.147
4632.2	2158.8	86.5	0	12.5	0.163
4633.7	2158.1	103.6	0	12.67	0.18
4631.8	2159	2.4	10	11.86	0.109
4633.4	2158.3	29.2	10	12.05	0.129
4634.8	2157.6	48.4	10	12.22	0.146
4636.3	2156.9	67.6	10	12.4	0.164
4637.8	2156.2	83.5	10	12.57	0.18
4636.6	2156.8	1	20	11.87	0.12
4637.2	2156.5	8	20	11.95	0.129
4638.8	2155.7	26.5	20	12.12	0.146
4640.2	2155.1	42.7	20	12.27	0.162
4641.8	2154.3	57.6	20	12.44	0.18
4643.6	2153.5	69.4	20	12.6	0.197
4641.4	2154.5	2.1	30	11.9	0.131
4642.6	2154	12.2	30	12.01	0.145
4644.2	2153.2	26.9	30	12.17	0.162
4645.9	2152.5	39.1	30	12.33	0.179
4647.7	2151.6	50.2	30	12.49	0.197
4646.6	2152.1	1.5	40	11.94	0.144
4648.3	2151.3	12.1	40	12.08	0.162
4650	2150.5	22.5	40	12.23	0.179
4651.9	2149.7	32	40	12.39	0.197
4652.1	2149.5	1.2	50	12	0.159
4654.1	2148.6	9.6	50	12.15	0.179
4656	2147.8	17	50	12.29	0.196

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

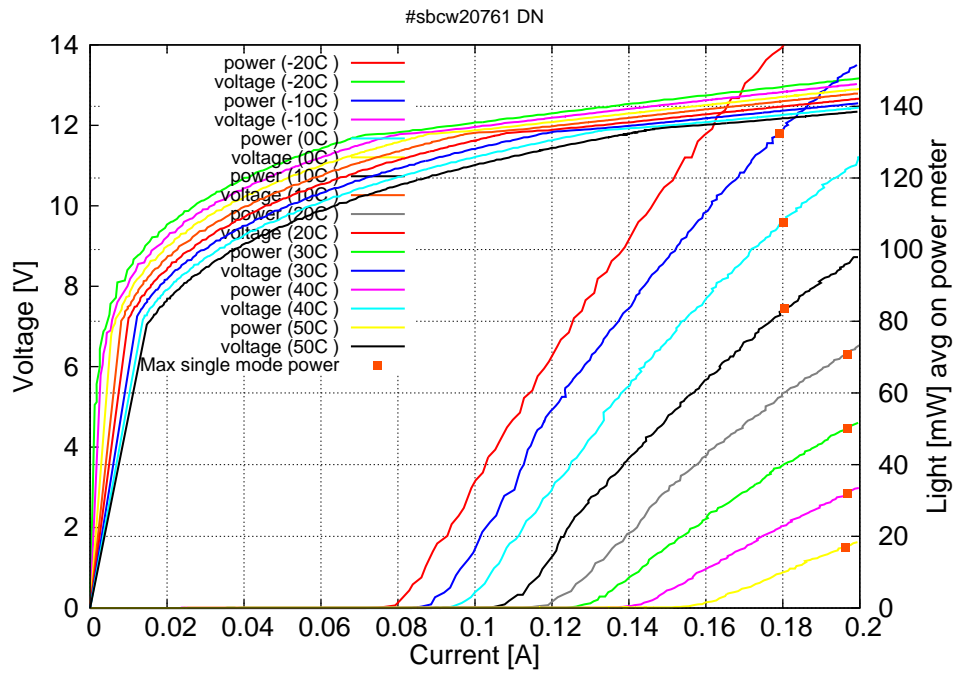


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=11.8V$ (2-wires measurements). Maximum operation current: 0.18A between -20C and 10C, 0.20A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

