

Datasheet for #sbcw21580 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 #sbcw21580 DN (please note that AlN submount numbering is A0NYE)

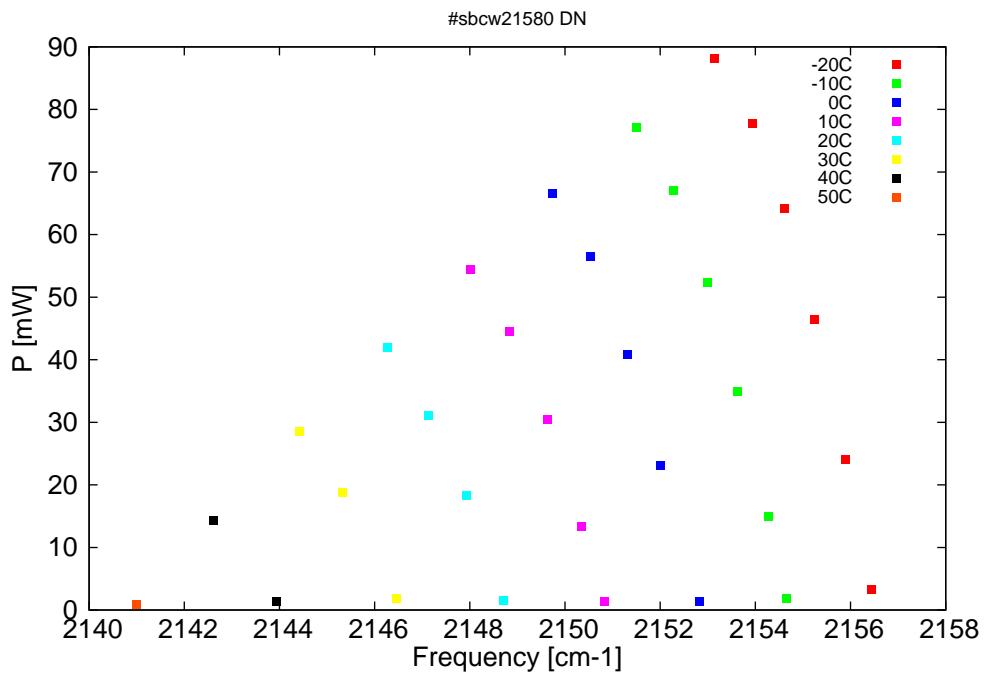


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

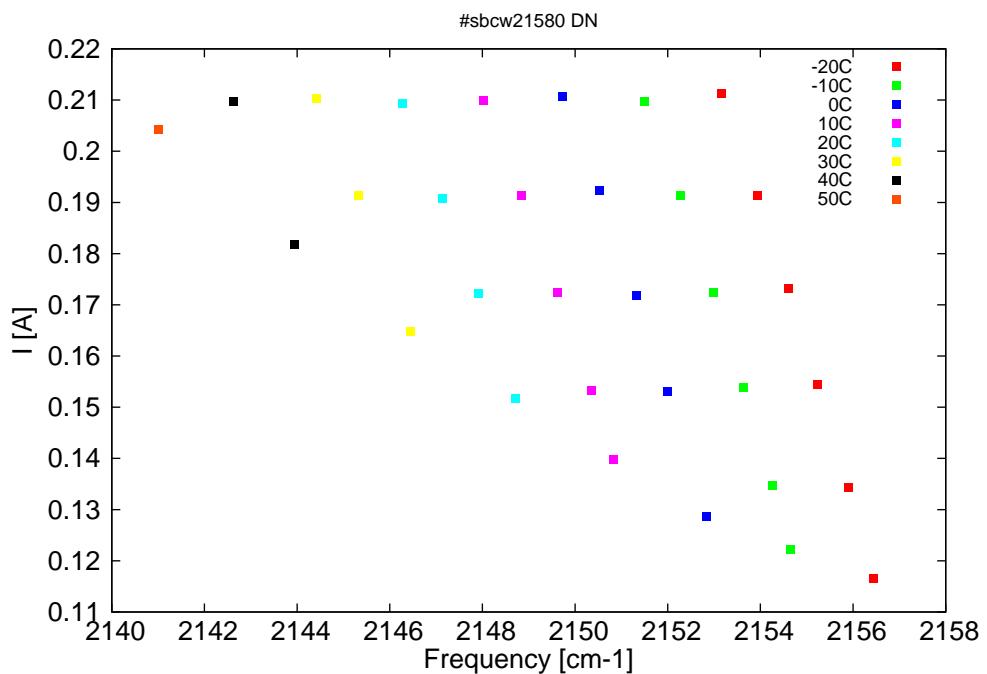


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4637.3	2156.4	3.3	-20	11.5	0.117
4638.4	2155.9	24.1	-20	11.61	0.134
4639.9	2155.2	46.5	-20	11.77	0.154
4641.2	2154.6	64.2	-20	11.93	0.173
4642.7	2153.9	77.7	-20	12.1	0.191
4644.4	2153.2	88.2	-20	12.32	0.211
4641.1	2154.7	1.9	-10	11.5	0.122
4641.9	2154.3	15	-10	11.58	0.135
4643.3	2153.6	34.9	-10	11.73	0.154
4644.7	2153	52.3	-10	11.89	0.172
4646.3	2152.3	67.1	-10	12.07	0.191
4647.9	2151.5	77.1	-10	12.28	0.21
4645	2152.8	1.3	0	11.53	0.129
4646.8	2152	23	0	11.7	0.153
4648.3	2151.3	40.8	0	11.87	0.172
4650	2150.5	56.6	0	12.06	0.192
4651.7	2149.7	66.5	0	12.27	0.211
4649.4	2150.8	1.4	10	11.6	0.14
4650.4	2150.3	13.3	10	11.69	0.153
4652	2149.6	30.5	10	11.86	0.172
4653.7	2148.8	44.6	10	12.05	0.191
4655.5	2148	54.4	10	12.25	0.21
4653.9	2148.7	1.6	20	11.69	0.152
4655.7	2147.9	18.2	20	11.86	0.172
4657.4	2147.1	31.2	20	12.04	0.191
4659.2	2146.3	41.9	20	12.25	0.209
4658.9	2146.5	1.8	30	11.82	0.165
4661.3	2145.3	18.7	30	12.05	0.191
4663.2	2144.4	28.5	30	12.27	0.21
4664.3	2143.9	1.4	40	12	0.182
4667.2	2142.6	14.4	40	12.28	0.21
4670.7	2141	0.9	50	12.28	0.204

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

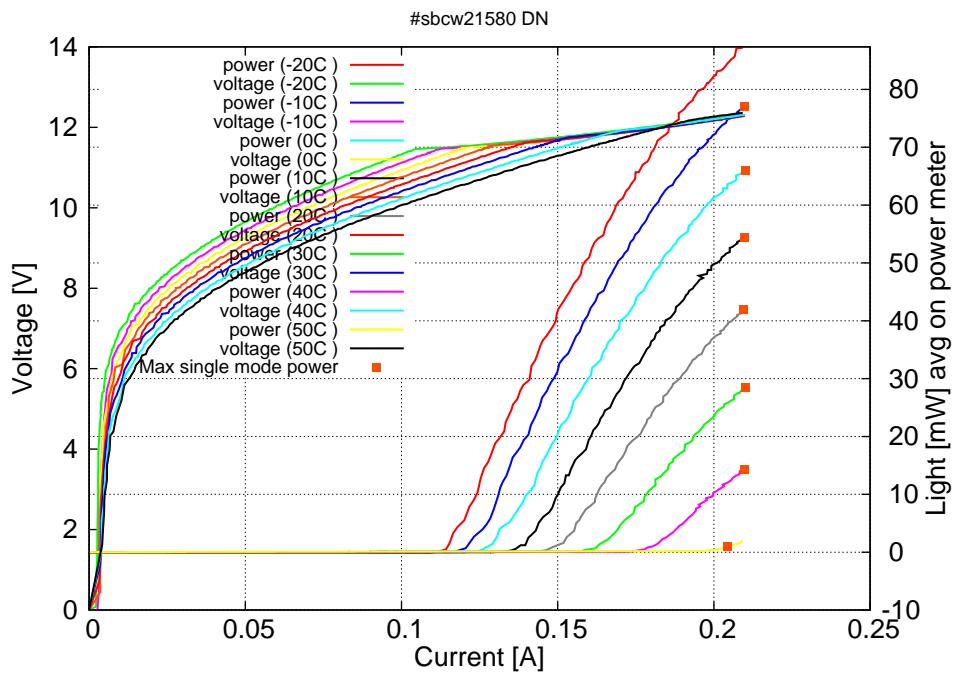


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=11.5V$ (2-wires measurements). Maximum operation current: 0.21A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

