

Datasheet for #sbcw21581 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 #sbcw21581 DN (please note that AlN submount numbering is A0NXX)

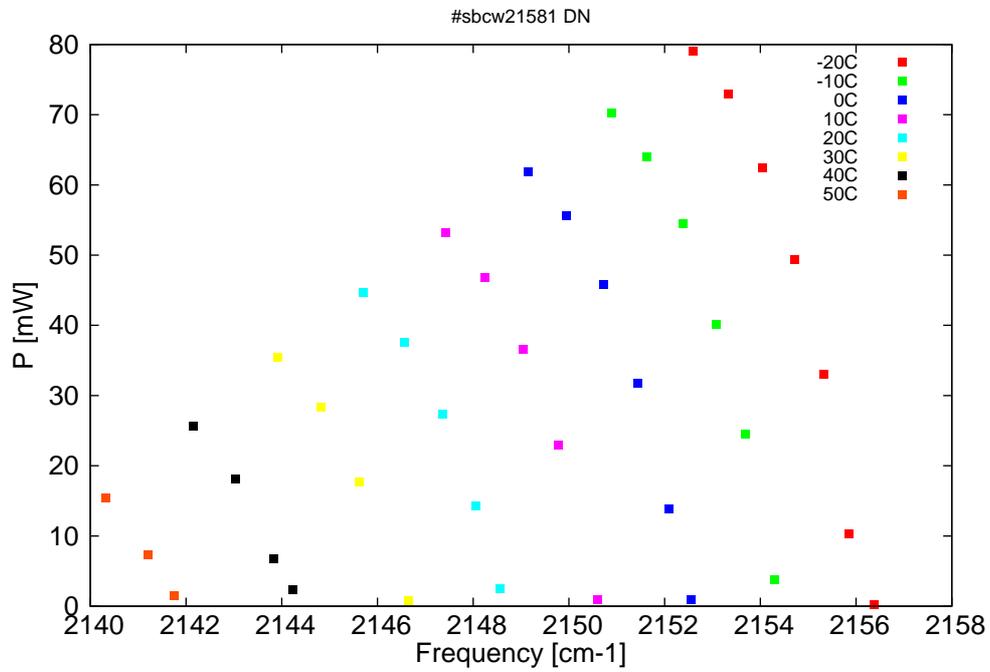


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

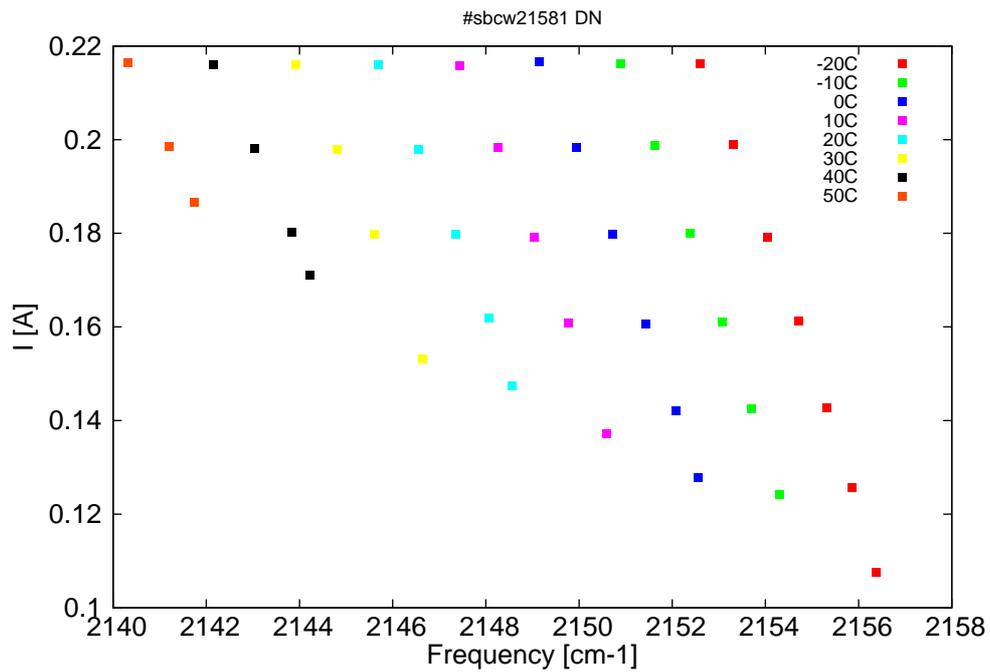


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4637.4	2156.4	0.2	-20	11.45	0.108
4638.5	2155.9	10.3	-20	11.51	0.126
4639.7	2155.3	33	-20	11.6	0.143
4641	2154.7	49.4	-20	11.71	0.161
4642.4	2154.1	62.4	-20	11.84	0.179
4644	2153.3	72.9	-20	12.01	0.199
4645.5	2152.6	79	-20	12.19	0.216
4641.9	2154.3	3.8	-10	11.47	0.124
4643.2	2153.7	24.6	-10	11.57	0.143
4644.5	2153.1	40.2	-10	11.68	0.161
4646	2152.4	54.5	-10	11.81	0.18
4647.6	2151.6	64	-10	11.97	0.199
4649.2	2150.9	70.2	-10	12.15	0.216
4645.7	2152.5	0.9	0	11.48	0.128
4646.6	2152.1	13.9	0	11.54	0.142
4648.1	2151.4	31.8	0	11.65	0.161
4649.6	2150.7	45.9	0	11.79	0.18
4651.3	2149.9	55.6	0	11.95	0.198
4653	2149.2	61.9	0	12.13	0.217
4649.9	2150.6	0.9	10	11.51	0.137
4651.6	2149.8	23	10	11.64	0.161
4653.2	2149	36.6	10	11.77	0.179
4654.9	2148.3	46.8	10	11.93	0.198
4656.7	2147.4	53.3	10	12.1	0.216
4654.3	2148.6	2.5	20	11.57	0.147
4655.4	2148.1	14.3	20	11.65	0.162
4656.9	2147.4	27.4	20	11.77	0.18
4658.6	2146.6	37.6	20	11.91	0.198
4660.5	2145.7	44.7	20	12.08	0.216
4658.4	2146.6	0.8	30	11.63	0.153
4660.7	2145.6	17.7	30	11.77	0.18
4662.4	2144.8	28.3	30	11.91	0.198
4664.3	2143.9	35.5	30	12.07	0.216
4663.7	2144.2	2.3	40	11.75	0.171
4664.5	2143.8	6.8	40	11.8	0.18
4666.3	2143	18.1	40	11.92	0.198
4668.2	2142.1	25.7	40	12.07	0.216
4669.1	2141.7	1.5	50	11.89	0.187
4670.3	2141.2	7.3	50	11.96	0.199
4672.2	2140.3	15.4	50	12.09	0.216

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

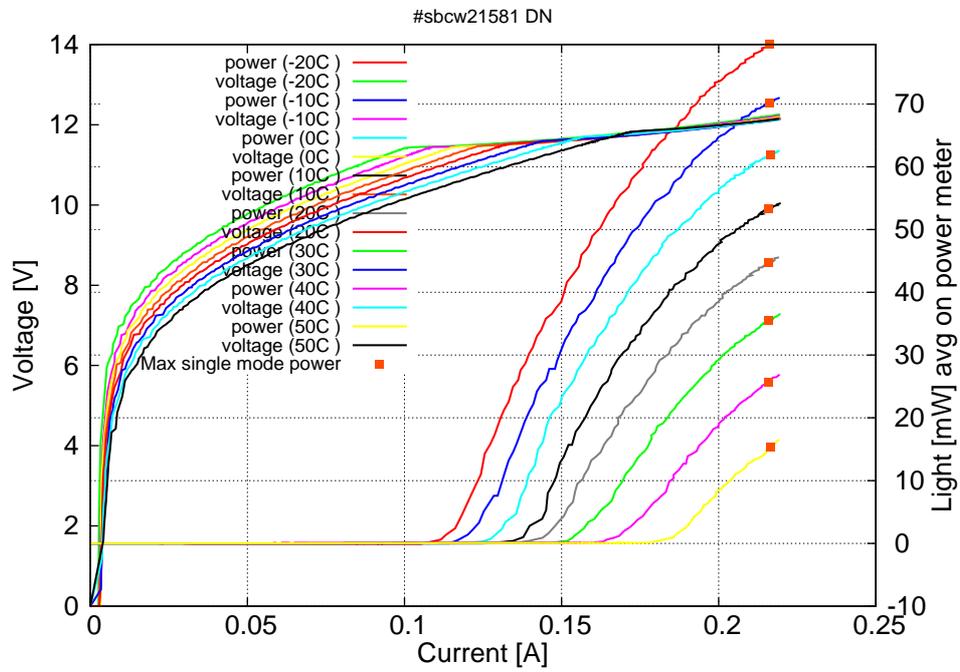


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=11.5V$ (2-wires measurements). Maximum operation current: 0.22A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

