

Datasheet for #sbcw21582 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 #sbcw21582 DN (please note that AlN submount numbering is A0NYW)

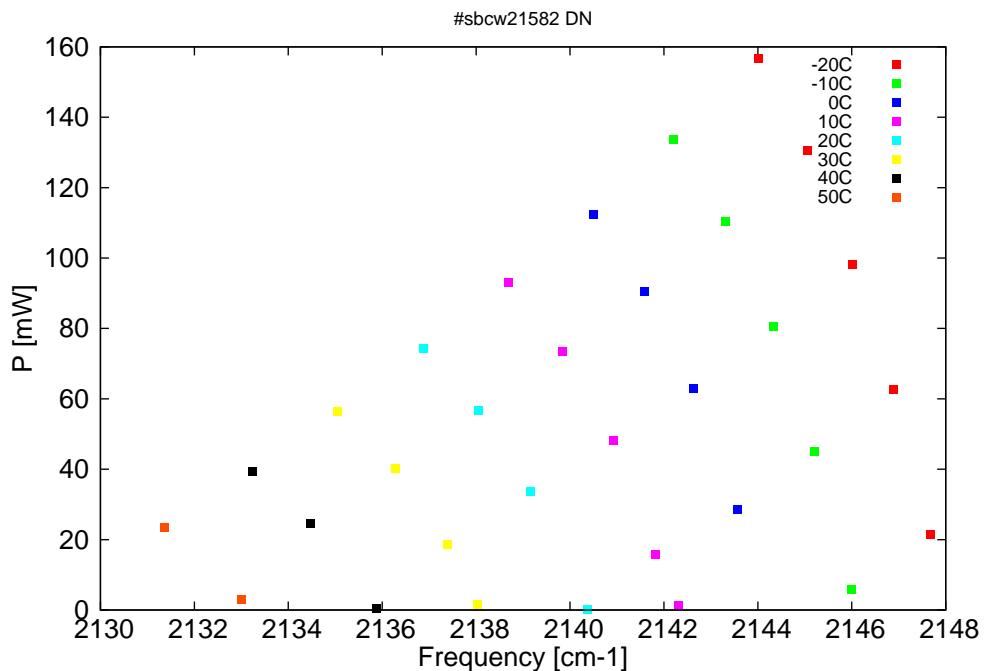


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

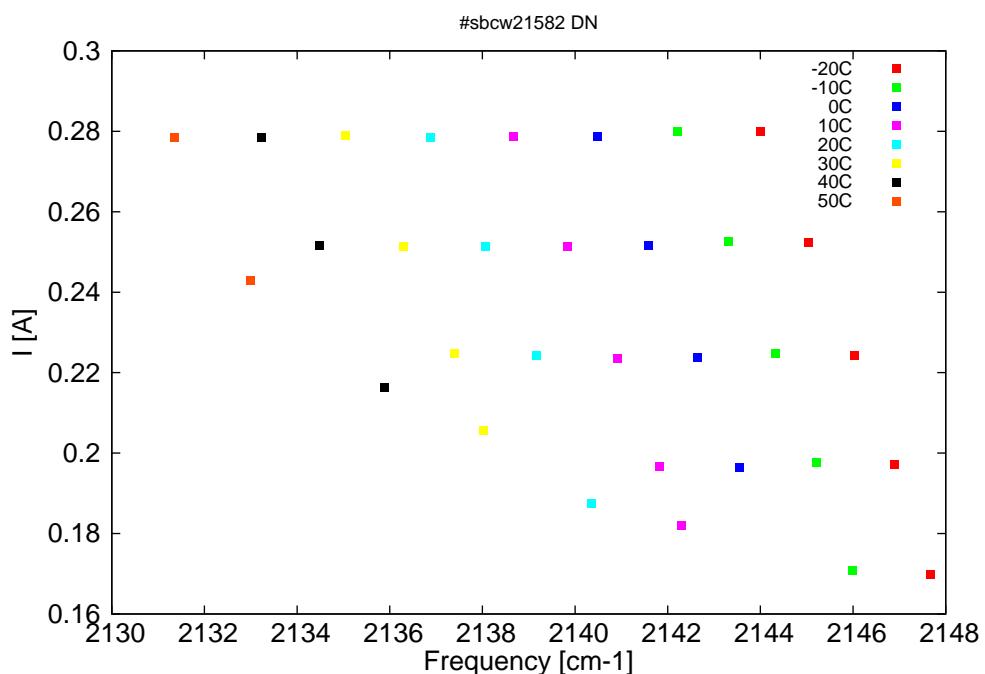


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4656.2	2147.7	21.4	-20	11.48	0.17
4657.9	2146.9	62.6	-20	11.61	0.197
4659.8	2146	98	-20	11.78	0.224
4661.9	2145	130.5	-20	11.99	0.252
4664.2	2144	156.7	-20	12.22	0.28
4659.8	2146	5.7	-10	11.42	0.171
4661.5	2145.2	45.1	-10	11.54	0.198
4663.5	2144.3	80.6	-10	11.7	0.225
4665.7	2143.3	110.4	-10	11.9	0.253
4668.1	2142.2	133.8	-10	12.14	0.28
4665.1	2143.6	28.5	0	11.47	0.196
4667.1	2142.6	63	0	11.62	0.224
4669.4	2141.6	90.5	0	11.82	0.252
4671.8	2140.5	112.3	0	12.05	0.279
4667.9	2142.3	1.3	10	11.37	0.182
4668.9	2141.8	15.7	10	11.42	0.197
4670.9	2140.9	48.2	10	11.56	0.224
4673.3	2139.8	73.4	10	11.76	0.251
4675.8	2138.7	93	10	11.98	0.279
4672.1	2140.4	0.1	20	11.37	0.188
4674.7	2139.2	33.7	20	11.52	0.224
4677.1	2138.1	56.7	20	11.7	0.251
4679.7	2136.9	74.4	20	11.91	0.279
4677.2	2138	1.5	30	11.42	0.206
4678.6	2137.4	18.7	30	11.49	0.225
4681	2136.3	40.3	30	11.65	0.251
4683.8	2135	56.3	30	11.86	0.279
4681.9	2135.9	0.6	40	11.46	0.216
4685	2134.5	24.7	40	11.62	0.252
4687.7	2133.2	39.5	40	11.82	0.279
4688.2	2133	3	50	11.56	0.243
4691.8	2131.4	23.5	50	11.77	0.278

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

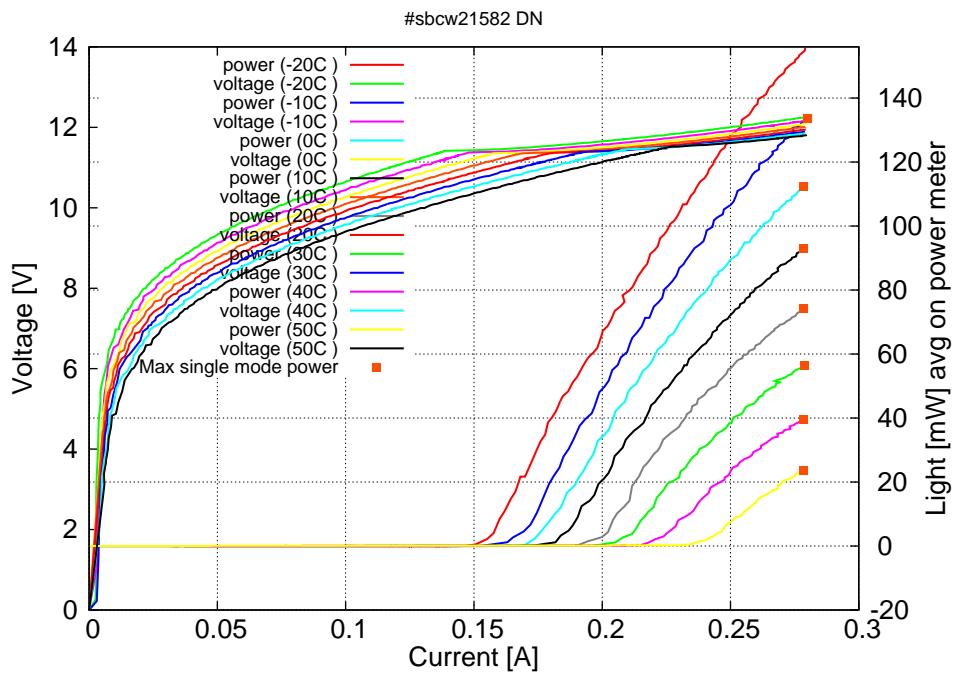


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=11.4V$ (2-wires measurements). Maximum operation current: 0.28A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

