

Datasheet for #sbcw10279 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 #sbcw10279 DN

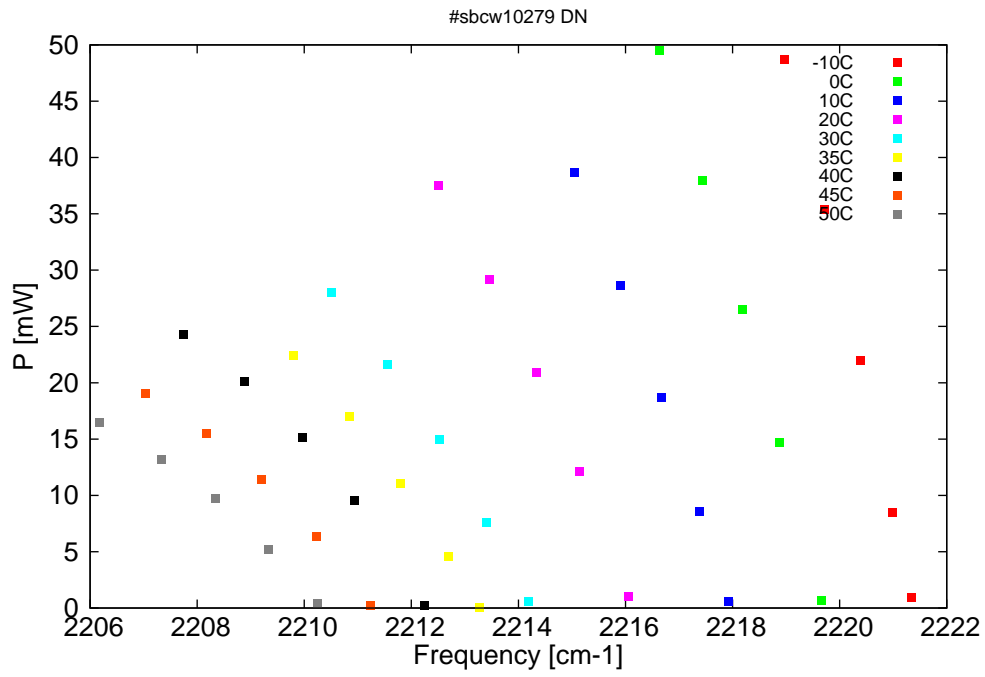


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

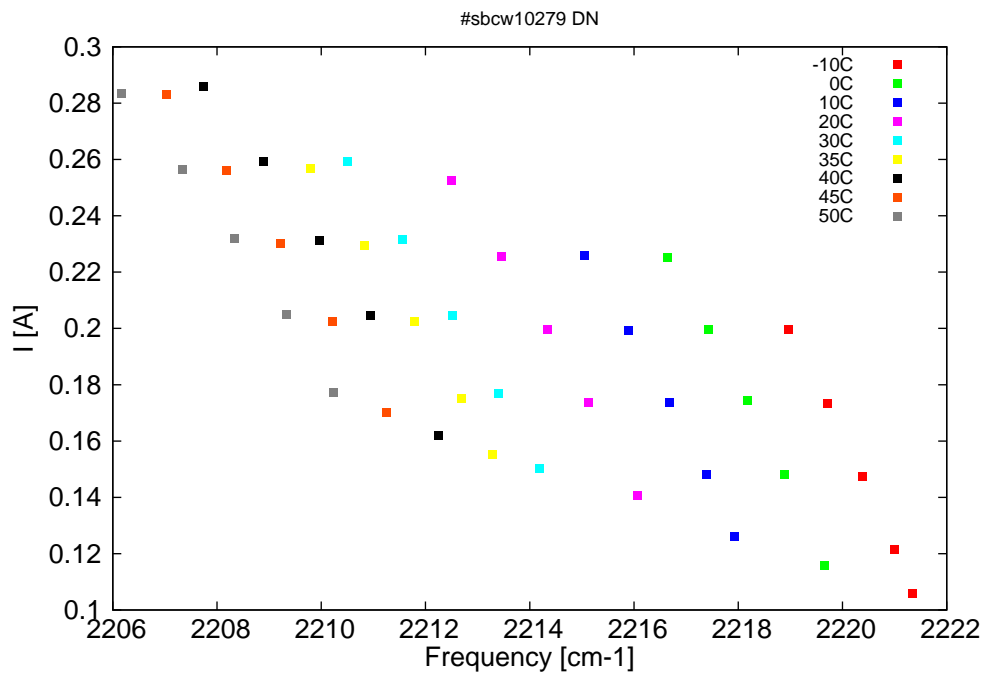


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4501.8	2221.3	0.9	-10	8.35	0.106
4502.5	2221	8.5	-10	8.52	0.122
4503.7	2220.4	22	-10	8.77	0.147
4505.1	2219.7	35.4	-10	9.03	0.173
4506.6	2219	48.7	-10	9.29	0.2
4505.2	2219.7	0.7	0	8.42	0.116
4506.8	2218.9	14.7	0	8.75	0.148
4508.2	2218.2	26.5	0	9.01	0.174
4509.7	2217.4	38	0	9.26	0.2
4511.3	2216.6	49.5	0	9.51	0.225
4508.7	2217.9	0.6	10	8.49	0.126
4509.8	2217.4	8.6	10	8.7	0.148
4511.3	2216.7	18.7	10	8.96	0.174
4512.8	2215.9	28.6	10	9.22	0.199
4514.6	2215	38.7	10	9.49	0.226
4512.5	2216.1	1	20	8.6	0.141
4514.4	2215.1	12.2	20	8.93	0.174
4516	2214.3	20.9	20	9.19	0.199
4517.8	2213.5	29.2	20	9.46	0.226
4519.8	2212.5	37.5	20	9.74	0.253
4516.3	2214.2	0.5	30	8.63	0.15
4517.9	2213.4	7.6	30	8.96	0.177
4519.7	2212.5	15	30	9.25	0.205
4521.7	2211.6	21.6	30	9.53	0.231
4523.8	2210.5	28	30	9.82	0.259
4518.2	2213.3	0	35	8.74	0.155
4519.4	2212.7	4.6	35	8.93	0.175
4521.2	2211.8	11	35	9.21	0.202
4523.2	2210.8	17	35	9.49	0.23
4525.3	2209.8	22.4	35	9.78	0.257
4520.3	2212.3	0.2	40	8.81	0.162
4523	2210.9	9.6	40	9.22	0.204
4525	2210	15.1	40	9.5	0.231
4527.2	2208.9	20.1	40	9.79	0.259
4529.5	2207.7	24.3	40	10.09	0.286
4522.3	2211.2	0.2	45	8.87	0.17
4524.4	2210.2	6.3	45	9.18	0.202
4526.5	2209.2	11.4	45	9.47	0.23
4528.6	2208.2	15.5	45	9.75	0.256
4531	2207	19.1	45	10.05	0.283
4524.4	2210.2	0.4	50	8.93	0.177
4526.3	2209.3	5.2	50	9.2	0.205
4528.3	2208.3	9.7	50	9.48	0.232
4530.3	2207.3	13.2	50	9.74	0.256
4532.7	2206.2	16.5	50	10.04	0.283

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

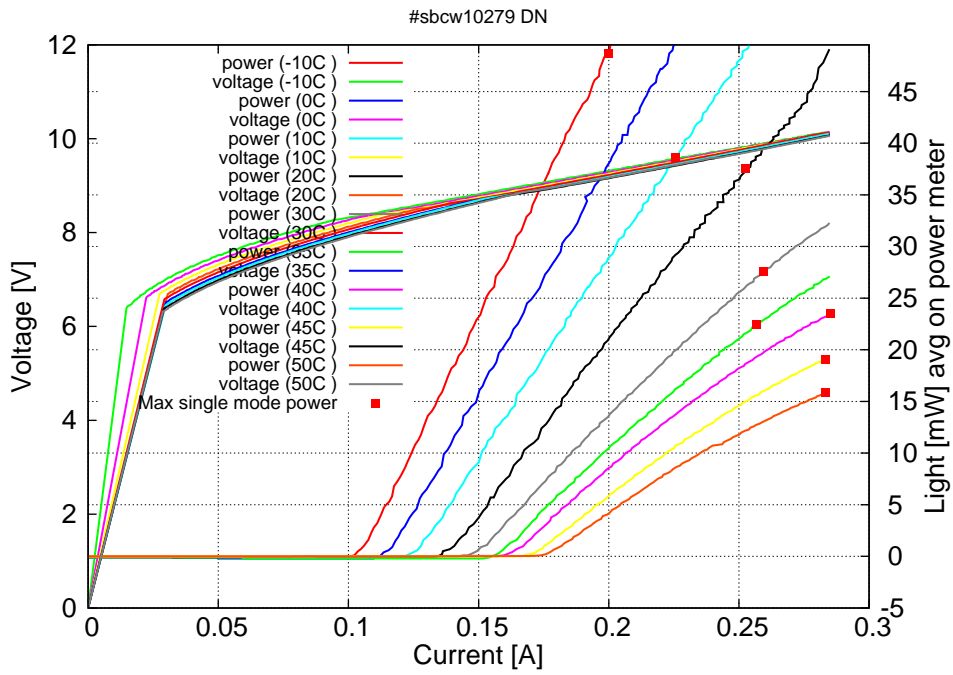


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.10A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.20A at -10C, 0.225A between 0C and 10C, 0.26A between 20C and 35C, 0.285A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

