

Datasheet for #sbcw20749 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 #sbcw20749 DN (please note that AlN submount numbering is A0NYA)

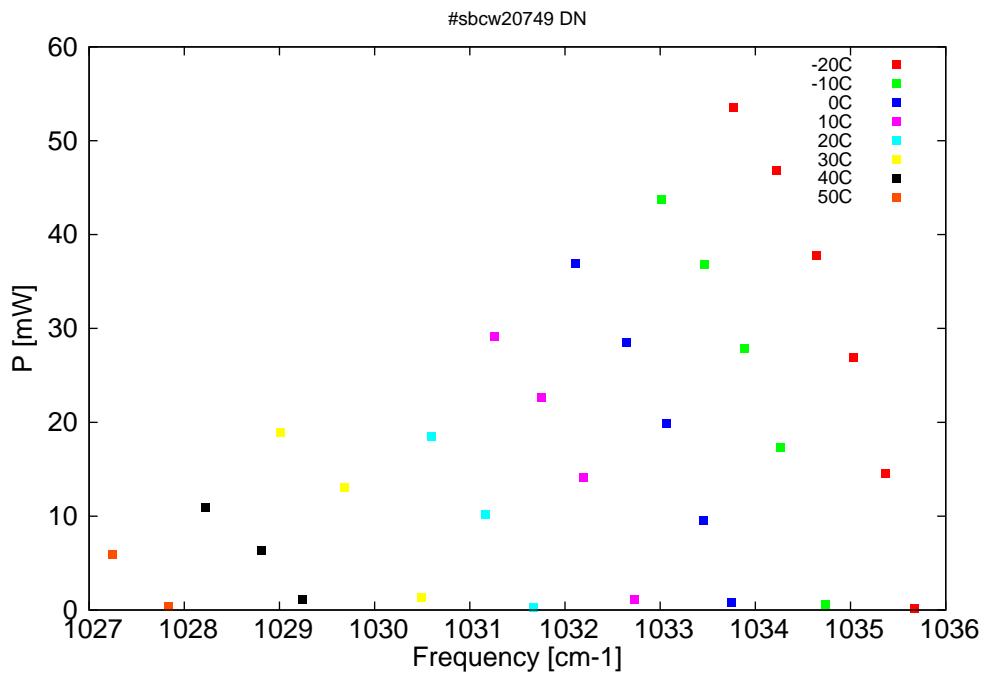


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

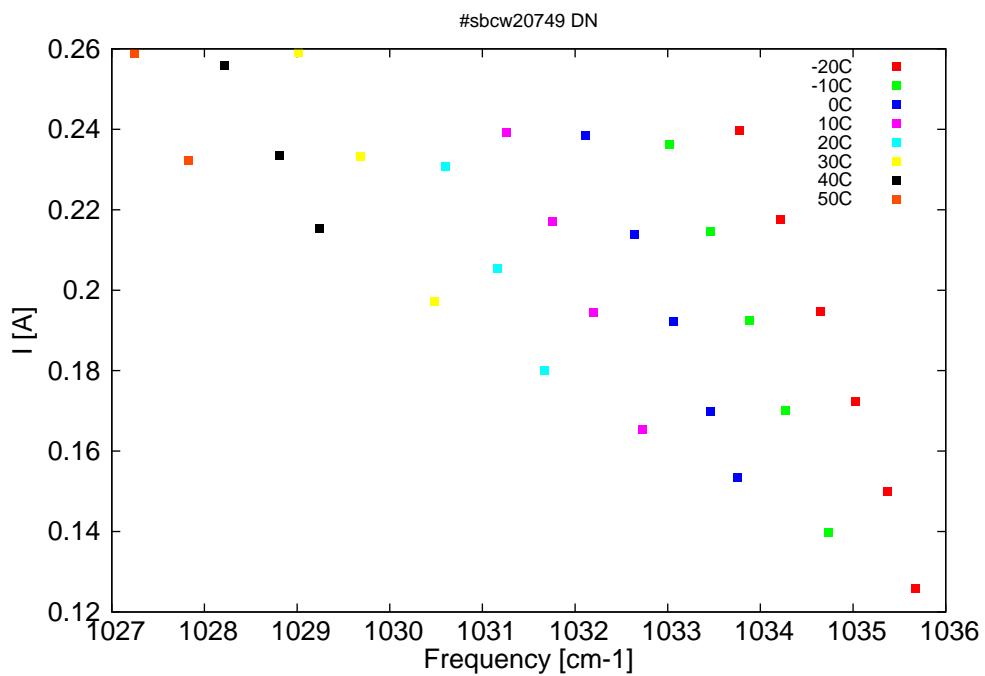


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9655.5	1035.7	0.1	-20	9.42	0.126
9658.4	1035.4	14.5	-20	9.81	0.15
9661.6	1035	26.9	-20	10.2	0.172
9665.2	1034.6	37.7	-20	10.61	0.195
9669.1	1034.2	46.8	-20	11.02	0.218
9673.3	1033.8	53.5	-20	11.42	0.24
9664.3	1034.7	0.6	-10	9.52	0.14
9668.7	1034.3	17.3	-10	10.06	0.17
9672.2	1033.9	27.9	-10	10.45	0.192
9676.2	1033.5	36.8	-10	10.84	0.215
9680.4	1033	43.7	-10	11.24	0.236
9673.5	1033.7	0.8	0	9.67	0.153
9676.2	1033.5	9.6	0	9.97	0.17
9679.9	1033.1	19.8	0	10.36	0.192
9683.9	1032.6	28.5	0	10.73	0.214
9688.9	1032.1	36.9	0	11.18	0.239
9683.1	1032.7	1.1	10	9.8	0.165
9688.1	1032.2	14.2	10	10.3	0.195
9692.2	1031.8	22.6	10	10.69	0.217
9696.9	1031.3	29.1	10	11.09	0.239
9693.1	1031.7	0.3	20	9.98	0.18
9697.8	1031.2	10.2	20	10.41	0.205
9703.1	1030.6	18.4	20	10.86	0.231
9704.1	1030.5	1.3	30	10.17	0.197
9711.8	1029.7	13	30	10.8	0.233
9718	1029	18.9	30	11.26	0.259
9715.9	1029.2	1.1	40	10.39	0.215
9720	1028.8	6.3	40	10.7	0.233
9725.5	1028.2	10.9	40	11.1	0.256
9729.2	1027.8	0.4	50	10.66	0.232
9734.8	1027.2	5.9	50	11.05	0.259

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

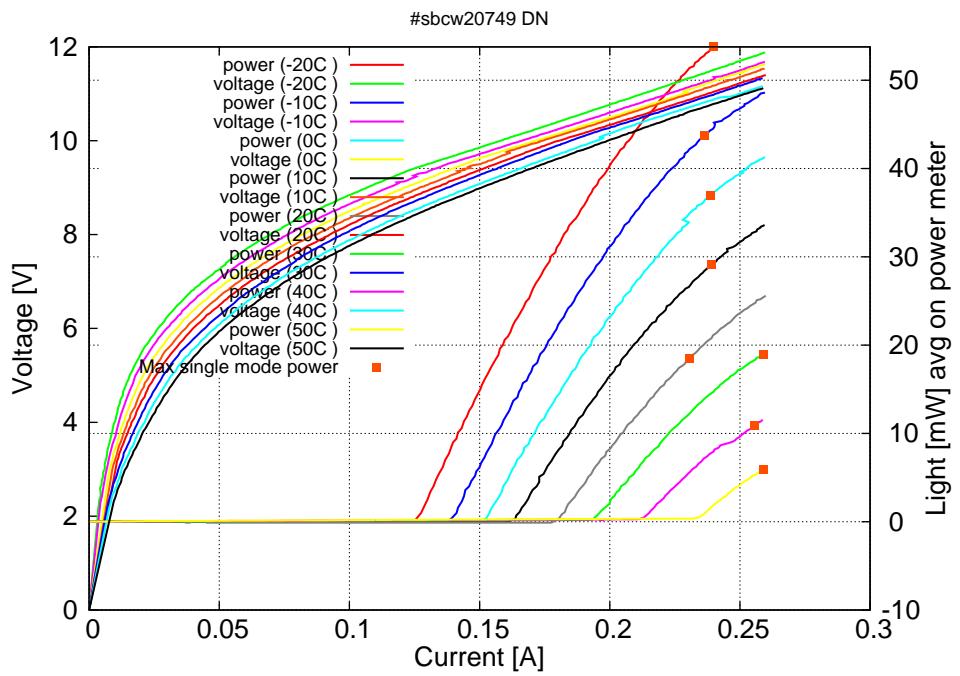


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and 20C, 0.26A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

