

Datasheet for #sbcw21171 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 #sbcw21171 DN

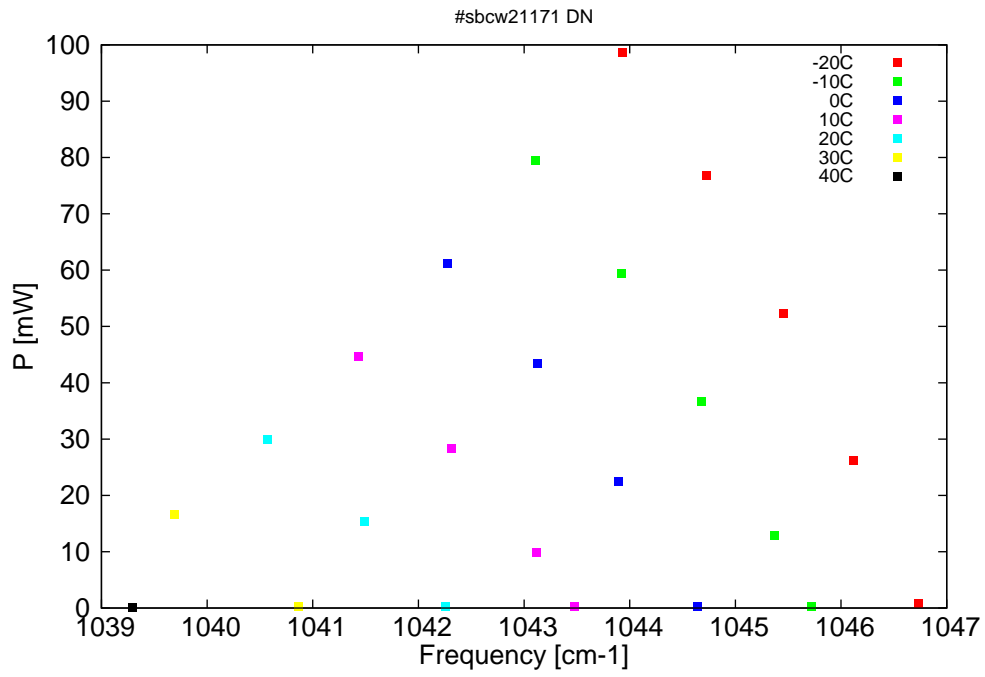


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

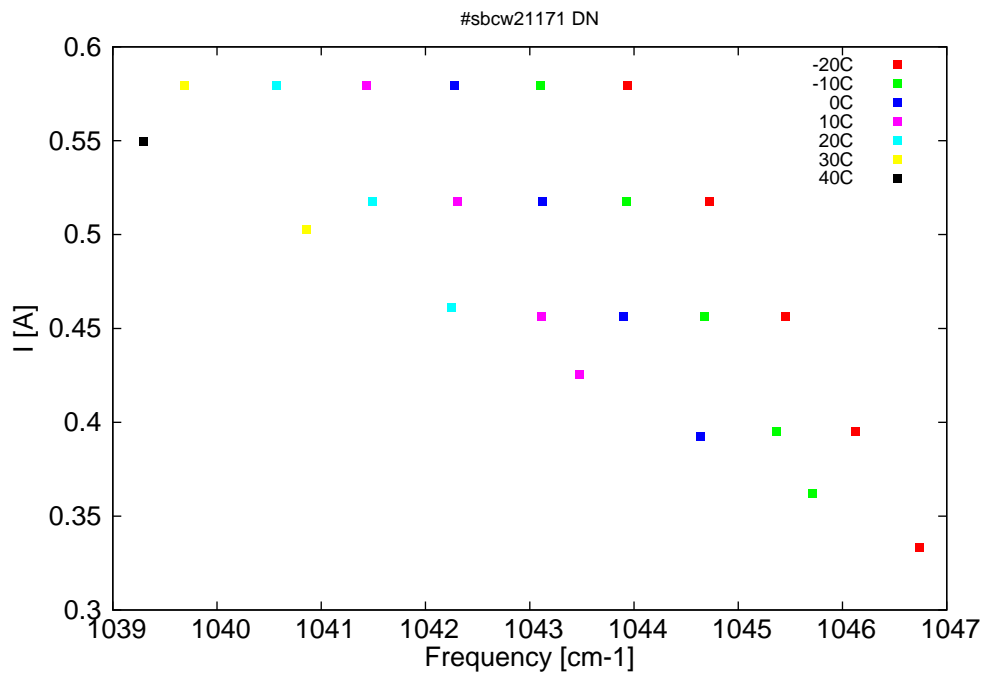


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9553.5	1046.7	0.7	-20	8.88	0.333
9559.1	1046.1	26.2	-20	9.21	0.395
9565.2	1045.5	52.2	-20	9.54	0.456
9571.9	1044.7	76.7	-20	9.85	0.518
9579.1	1043.9	98.7	-20	10.16	0.579
9562.8	1045.7	0.3	-10	8.95	0.362
9566	1045.4	12.8	-10	9.13	0.395
9572.3	1044.7	36.7	-10	9.47	0.456
9579.2	1043.9	59.4	-10	9.79	0.518
9586.8	1043.1	79.4	-10	10.11	0.579
9572.7	1044.6	0.3	0	9.04	0.392
9579.5	1043.9	22.5	0	9.4	0.456
9586.6	1043.1	43.4	0	9.73	0.518
9594.4	1042.3	61.1	0	10.06	0.579
9583.3	1043.5	0.3	10	9.16	0.426
9586.7	1043.1	9.8	10	9.33	0.456
9594.1	1042.3	28.4	10	9.68	0.518
9602.1	1041.4	44.6	10	10.02	0.579
9594.6	1042.3	0.3	20	9.3	0.461
9601.6	1041.5	15.3	20	9.62	0.518
9610.1	1040.6	29.9	20	9.98	0.579
9607.4	1040.9	0.3	30	9.49	0.503
9618.2	1039.7	16.6	30	9.94	0.579
9621.9	1039.3	0.2	40	9.72	0.55

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

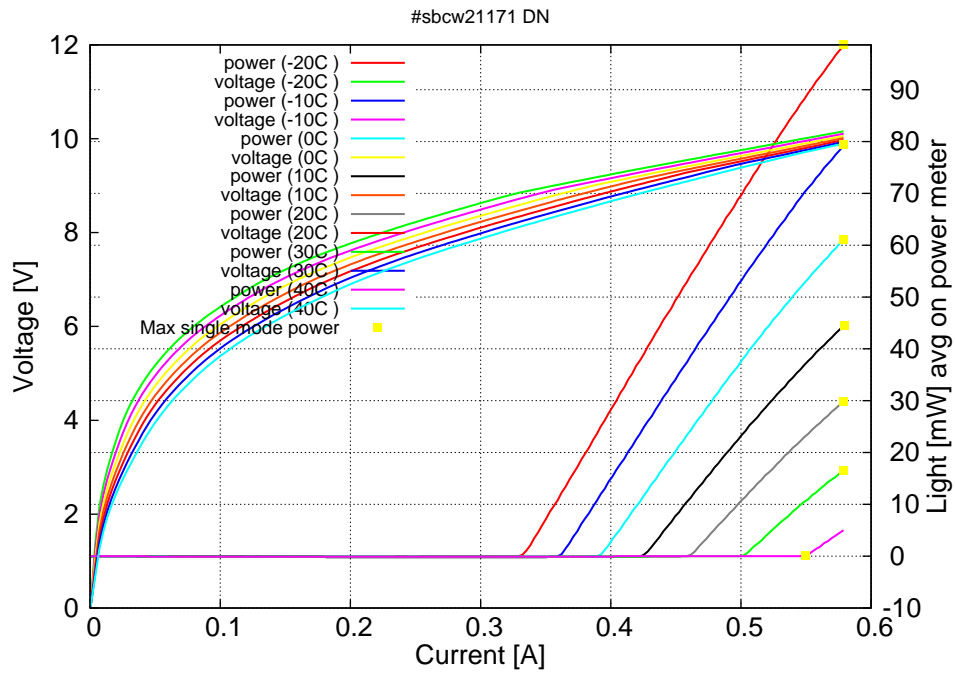


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.33A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.58A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

