

Datasheet for #sbcw13259 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 #sbcw13259 DN

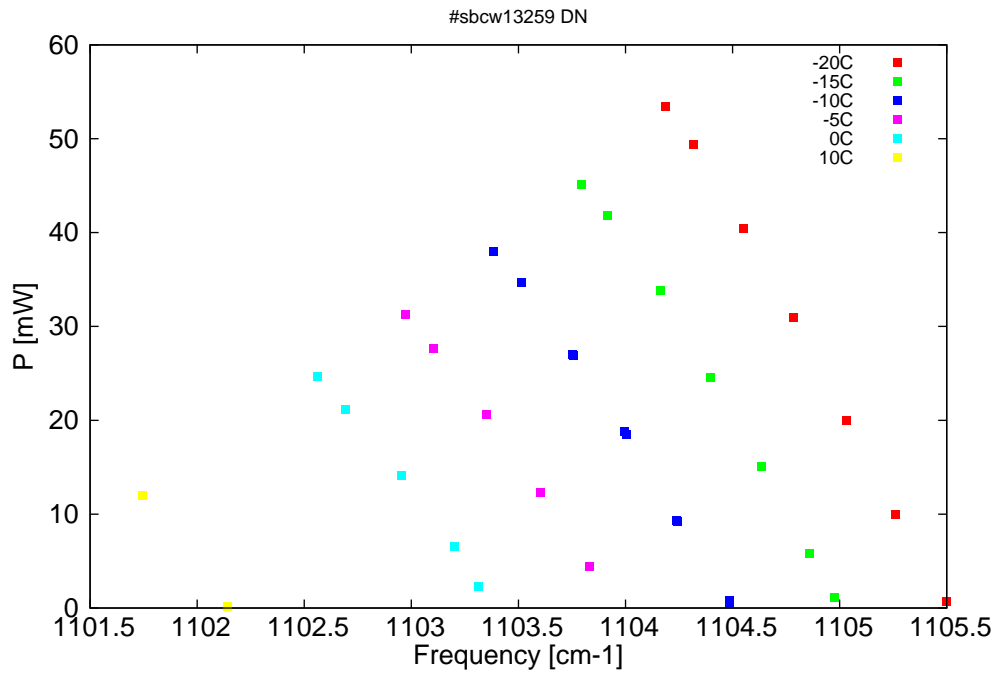


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

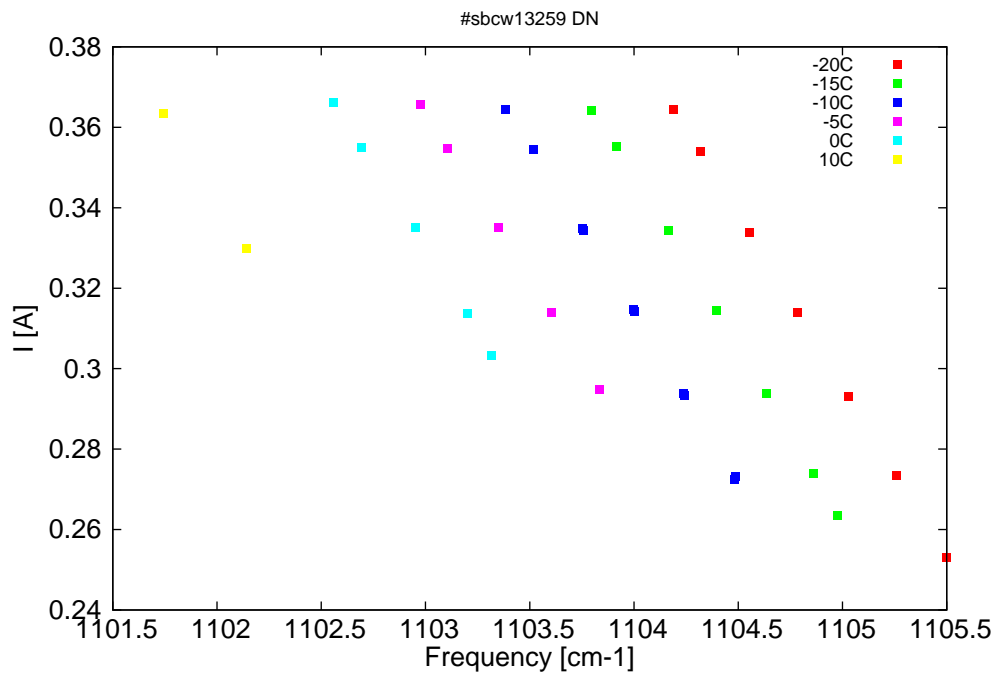


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9045.7	1105.5	0.7	-20	10.46	0.253
9047.6	1105.3	10	-20	10.65	0.273
9049.5	1105	20	-20	10.84	0.293
9051.5	1104.8	31	-20	11.03	0.314
9053.4	1104.6	40.5	-20	11.21	0.334
9055.3	1104.3	49.4	-20	11.38	0.354
9056.4	1104.2	53.4	-20	11.48	0.364
9050	1105	1.1	-15	10.51	0.264
9050.9	1104.9	5.8	-15	10.61	0.274
9052.8	1104.6	15.1	-15	10.79	0.294
9054.7	1104.4	24.6	-15	10.98	0.314
9056.6	1104.2	33.8	-15	11.16	0.334
9058.7	1103.9	41.8	-15	11.34	0.355
9059.7	1103.8	45.1	-15	11.43	0.364
9054	1104.5	0.4	-10	10.55	0.272
9054	1104.5	0.8	-10	10.55	0.273
9056	1104.2	9.2	-10	10.74	0.293
9056	1104.2	9.3	-10	10.75	0.294
9057.9	1104	18.5	-10	10.93	0.314
9058	1104	18.8	-10	10.94	0.315
9060	1103.8	26.9	-10	11.12	0.334
9060	1103.8	27	-10	11.12	0.335
9061.9	1103.5	34.6	-10	11.29	0.354
9063	1103.4	37.9	-10	11.38	0.364
9059.3	1103.8	4.5	-5	10.7	0.295
9061.2	1103.6	12.3	-5	10.88	0.314
9063.3	1103.4	20.6	-5	11.07	0.335
9065.3	1103.1	27.7	-5	11.24	0.355
9066.4	1103	31.3	-5	11.33	0.366
9063.6	1103.3	2.3	0	10.74	0.303
9064.5	1103.2	6.5	0	10.83	0.314
9066.6	1103	14.1	0	11.02	0.335
9068.7	1102.7	21.1	0	11.2	0.355
9069.8	1102.6	24.6	0	11.29	0.366
9073.2	1102.1	0.2	10	10.88	0.33
9076.5	1101.7	12	10	11.16	0.363

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

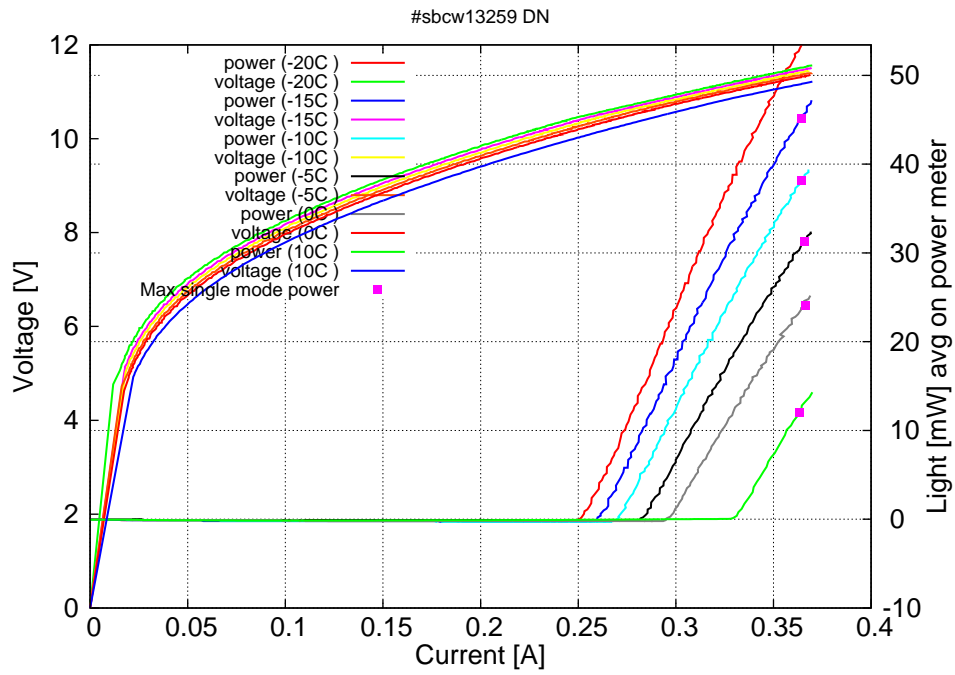


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.25A$ / $V_{th}=10.4V$ (2-wires measurements). Maximum operation current: 0.37A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

