

Datasheet for #sbcw20460 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 #sbcw20460 DN

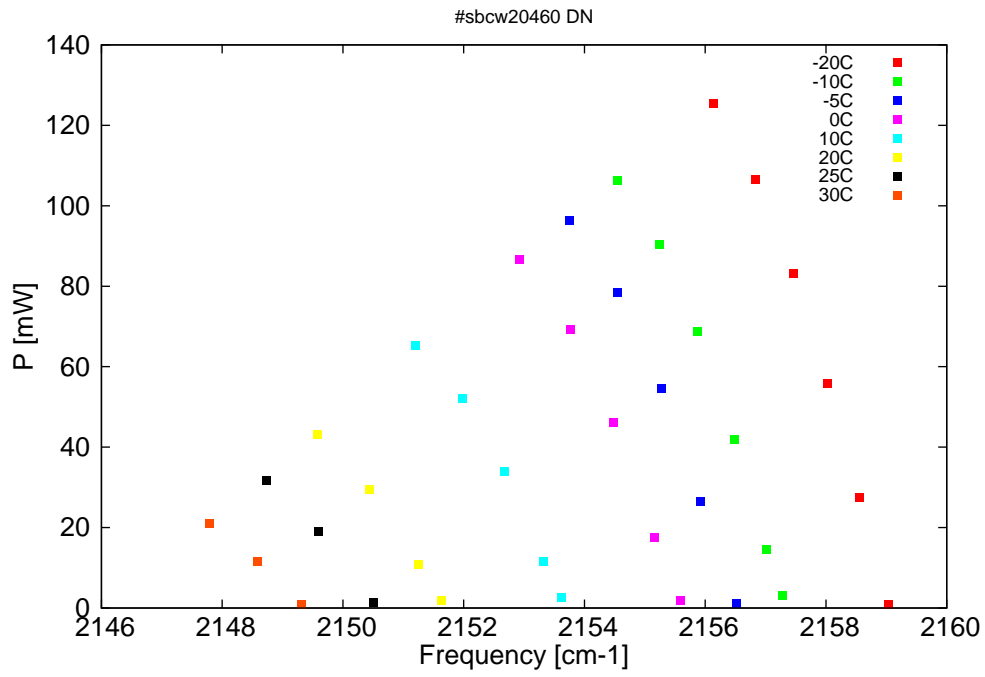


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

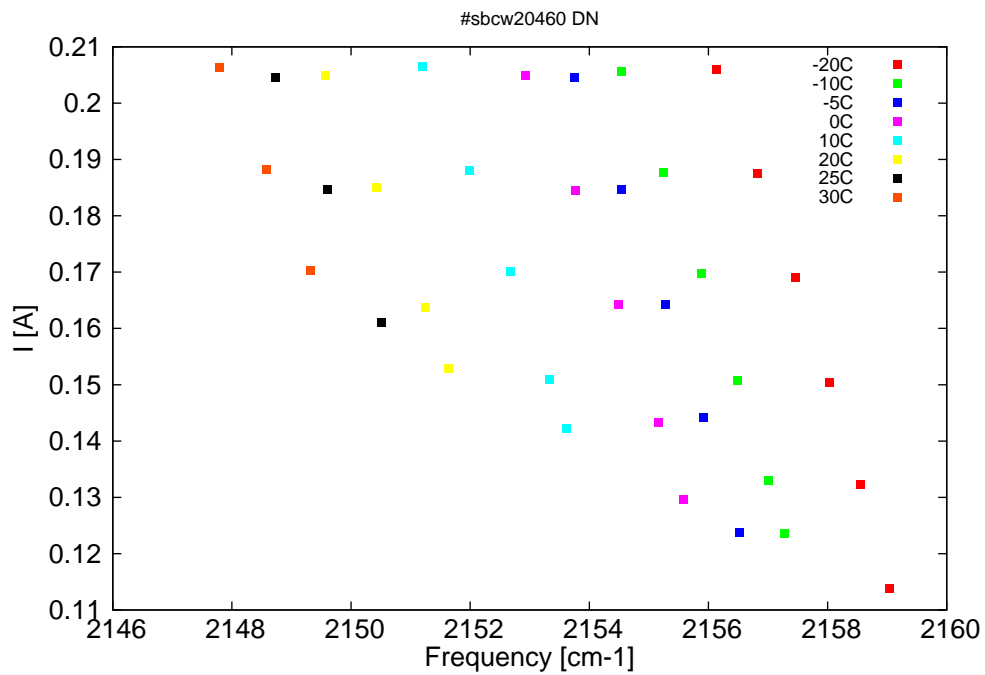


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4631.7	2159	0.9	-20	12.45	0.114
4632.7	2158.6	27.6	-20	12.65	0.132
4633.9	2158	55.7	-20	12.87	0.15
4635.1	2157.5	83.2	-20	13.13	0.169
4636.4	2156.8	106.6	-20	13.42	0.188
4637.9	2156.1	125.5	-20	13.76	0.206
4635.5	2157.3	3.1	-10	12.56	0.124
4636	2157	14.4	-10	12.66	0.133
4637.2	2156.5	41.9	-10	12.88	0.151
4638.5	2155.9	68.7	-10	13.15	0.17
4639.9	2155.2	90.5	-10	13.43	0.188
4641.4	2154.5	106.4	-10	13.76	0.206
4637.1	2156.5	1	-5	12.54	0.124
4638.4	2155.9	26.4	-5	12.77	0.144
4639.8	2155.3	54.6	-5	13.04	0.164
4641.4	2154.5	78.5	-5	13.36	0.185
4643.1	2153.8	96.3	-5	13.71	0.205
4639.1	2155.6	1.9	0	12.61	0.13
4640	2155.2	17.5	0	12.77	0.143
4641.5	2154.5	46.2	0	13.05	0.164
4643	2153.8	69.3	0	13.36	0.184
4644.8	2152.9	86.7	0	13.72	0.205
4643.3	2153.6	2.6	10	12.79	0.142
4644	2153.3	11.6	10	12.9	0.151
4645.4	2152.7	34	10	13.15	0.17
4646.9	2152	52.1	10	13.44	0.188
4648.6	2151.2	65.4	10	13.76	0.207
4647.6	2151.6	1.8	20	12.95	0.153
4648.5	2151.2	11	20	13.09	0.164
4650.2	2150.4	29.5	20	13.4	0.185
4652.1	2149.6	43.1	20	13.73	0.205
4650.1	2150.5	1.5	25	13.09	0.161
4652	2149.6	19.1	25	13.41	0.185
4653.9	2148.7	31.7	25	13.74	0.205
4652.6	2149.3	0.9	30	13.26	0.17
4654.2	2148.6	11.6	30	13.51	0.188
4656	2147.8	20.9	30	13.8	0.206

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

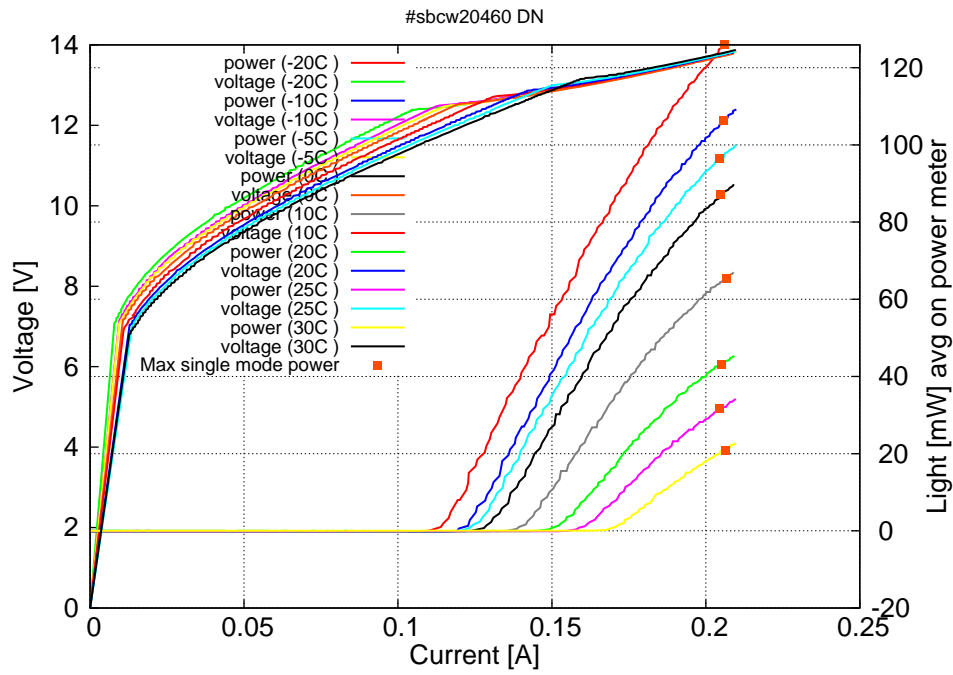


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=12.4V$ (2-wires measurements). Maximum operation current: 0.21A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

