

Datasheet for #sbcw20690 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 #sbcw20690 DN

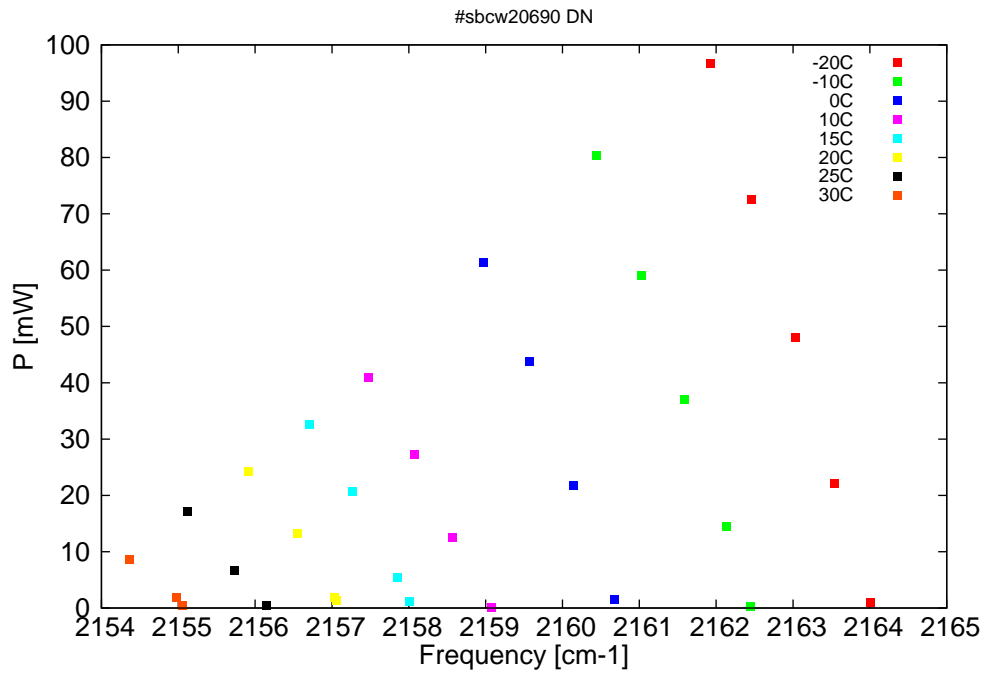


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

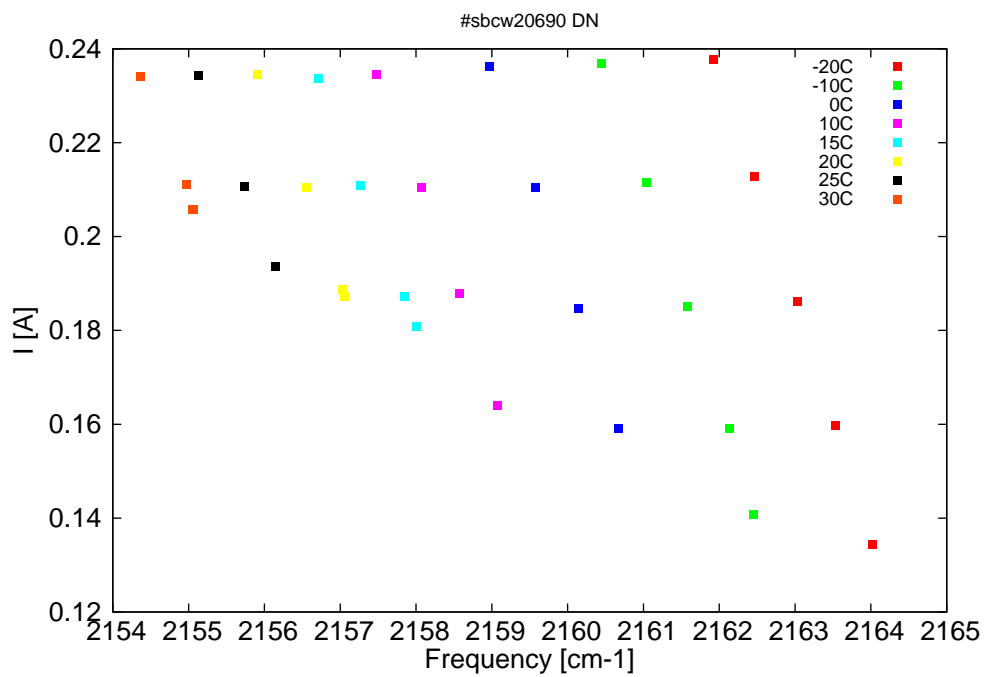


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4621	2164	0.9	-20	12.31	0.134
4622.1	2163.5	22.1	-20	12.46	0.16
4623.1	2163	48.1	-20	12.64	0.186
4624.4	2162.5	72.5	-20	12.83	0.213
4625.5	2161.9	96.7	-20	13	0.238
4624.4	2162.5	0.3	-10	12.26	0.141
4625	2162.1	14.5	-10	12.36	0.159
4626.2	2161.6	37	-10	12.53	0.185
4627.4	2161	59.1	-10	12.71	0.211
4628.7	2160.4	80.3	-10	12.89	0.237
4628.2	2160.7	1.4	0	12.28	0.159
4629.3	2160.1	21.8	0	12.44	0.185
4630.5	2159.6	43.9	0	12.61	0.211
4631.8	2159	61.3	0	12.79	0.236
4631.6	2159.1	0.1	10	12.27	0.164
4632.7	2158.6	12.5	10	12.39	0.188
4633.8	2158.1	27.2	10	12.54	0.21
4635	2157.5	40.9	10	12.7	0.234
4633.9	2158	1.2	15	12.32	0.181
4634.2	2157.9	5.4	15	12.36	0.187
4635.5	2157.3	20.6	15	12.5	0.211
4636.7	2156.7	32.6	15	12.66	0.234
4635.9	2157.1	1.3	20	12.33	0.187
4636	2157	1.9	20	12.34	0.189
4637	2156.6	13.3	20	12.47	0.21
4638.4	2155.9	24.3	20	12.64	0.235
4637.9	2156.2	0.4	25	12.35	0.194
4638.8	2155.7	6.6	25	12.44	0.211
4640.1	2155.1	17.1	25	12.61	0.234
4640.3	2155.1	0.5	30	12.41	0.206
4640.2	2155.1	0.5	30	12.4	0.206
4640.4	2155	1.9	30	12.43	0.211
4641.7	2154.4	8.7	30	12.59	0.234

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

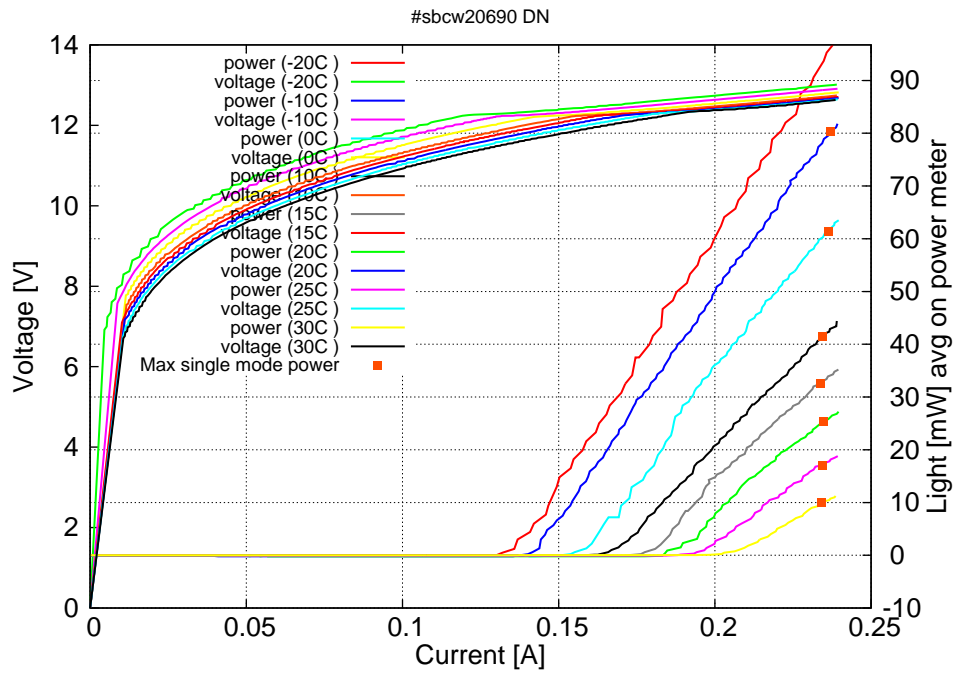


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=12.3V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and -10C, 0.235A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

