

Datasheet for #sbcw20375 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 #sbcw20375 DN (please note that AlN submount numbering is A0PFG)

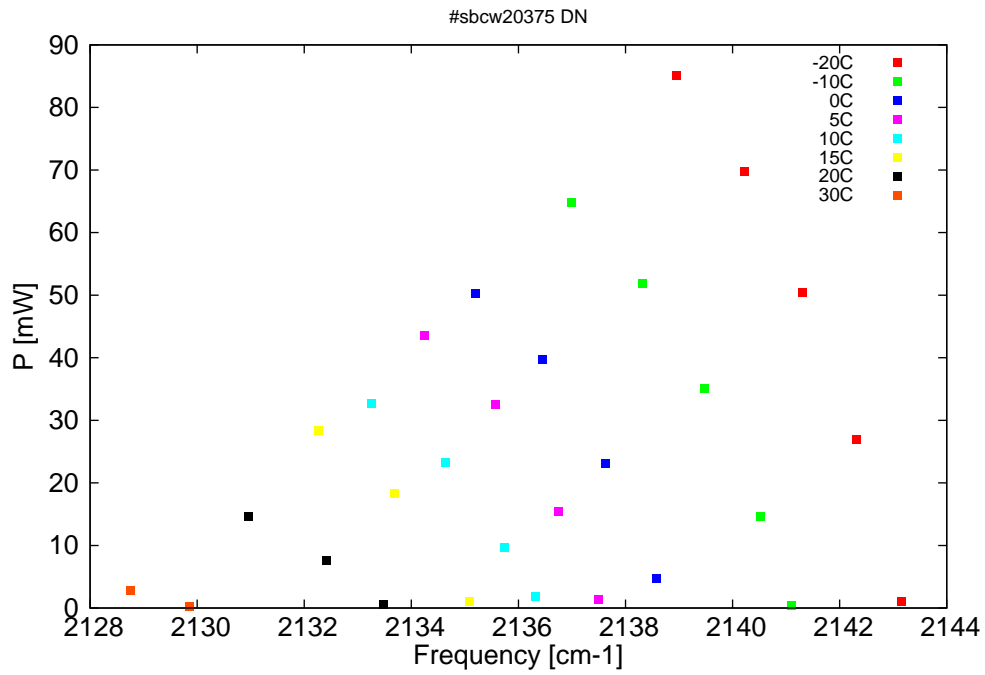


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

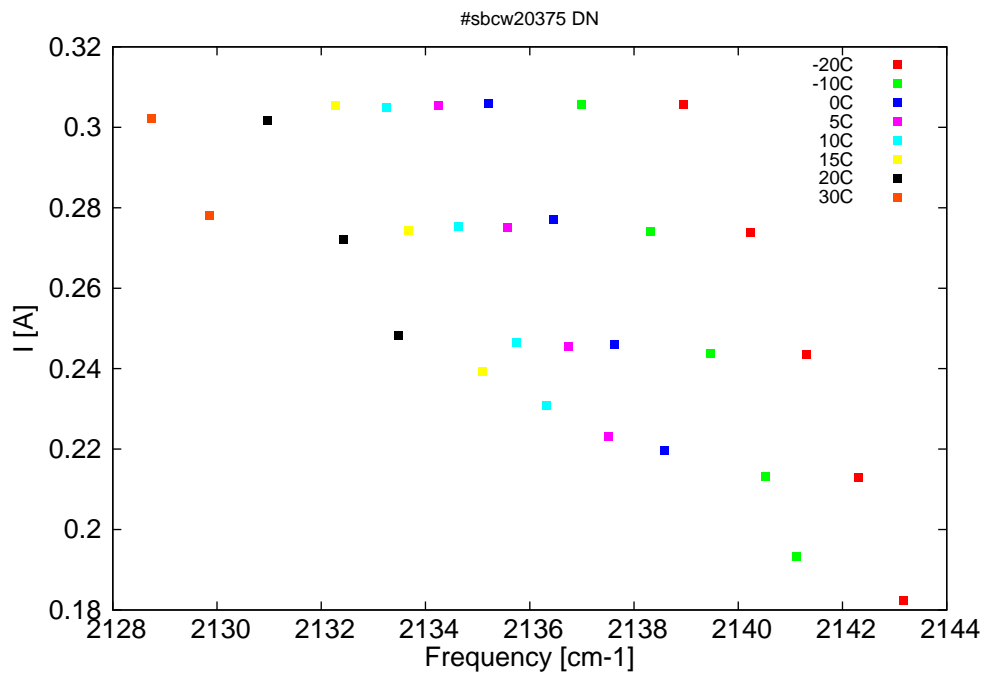


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4666	2143.2	1	-20	11.97	0.182
4667.8	2142.3	26.9	-20	12.11	0.213
4670	2141.3	50.4	-20	12.3	0.244
4672.4	2140.2	69.8	-20	12.52	0.274
4675.2	2139	85.1	-20	12.78	0.306
4670.5	2141.1	0.4	-10	11.95	0.193
4671.7	2140.5	14.6	-10	12.04	0.213
4674.1	2139.5	35.1	-10	12.24	0.244
4676.6	2138.3	51.8	-10	12.46	0.274
4679.5	2137	64.8	-10	12.72	0.306
4676	2138.6	4.7	0	12.26	0.22
4678.1	2137.6	23	0	12.44	0.246
4680.7	2136.4	39.7	0	12.69	0.277
4683.4	2135.2	50.3	0	12.96	0.306
4678.4	2137.5	1.3	5	12.24	0.223
4680	2136.7	15.4	5	12.39	0.245
4682.6	2135.6	32.5	5	12.63	0.275
4685.5	2134.2	43.5	5	12.91	0.305
4680.9	2136.3	1.8	10	12.26	0.231
4682.2	2135.8	9.6	10	12.36	0.246
4684.7	2134.6	23.2	10	12.6	0.275
4687.7	2133.3	32.6	10	12.88	0.305
4683.7	2135.1	1.1	15	12.29	0.239
4686.7	2133.7	18.3	15	12.56	0.274
4689.8	2132.3	28.4	15	12.85	0.305
4687.2	2133.5	0.6	20	12.15	0.248
4689.5	2132.4	7.6	20	12.31	0.272
4692.7	2131	14.6	20	12.57	0.302
4695.1	2129.9	0.3	30	12.39	0.278
4697.6	2128.8	2.8	30	12.58	0.302

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

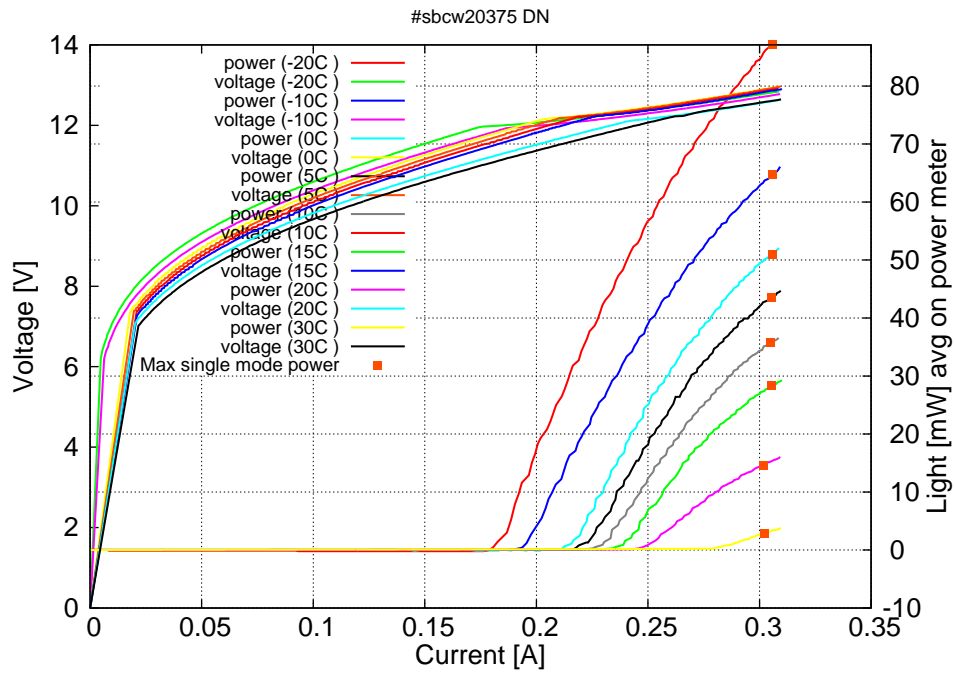


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=12.0V$ (2-wires measurements). Maximum operation current: 0.31A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

