

Datasheet for #sbcw20455 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 #sbcw20455 DN (please note that AlN submount numbering is A0RNT)

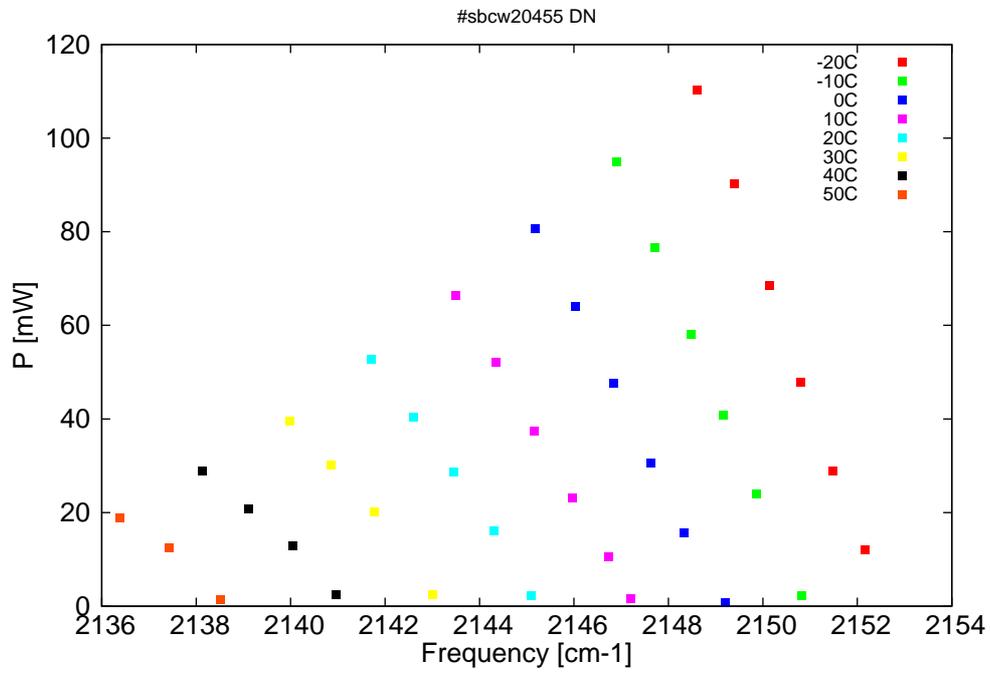


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

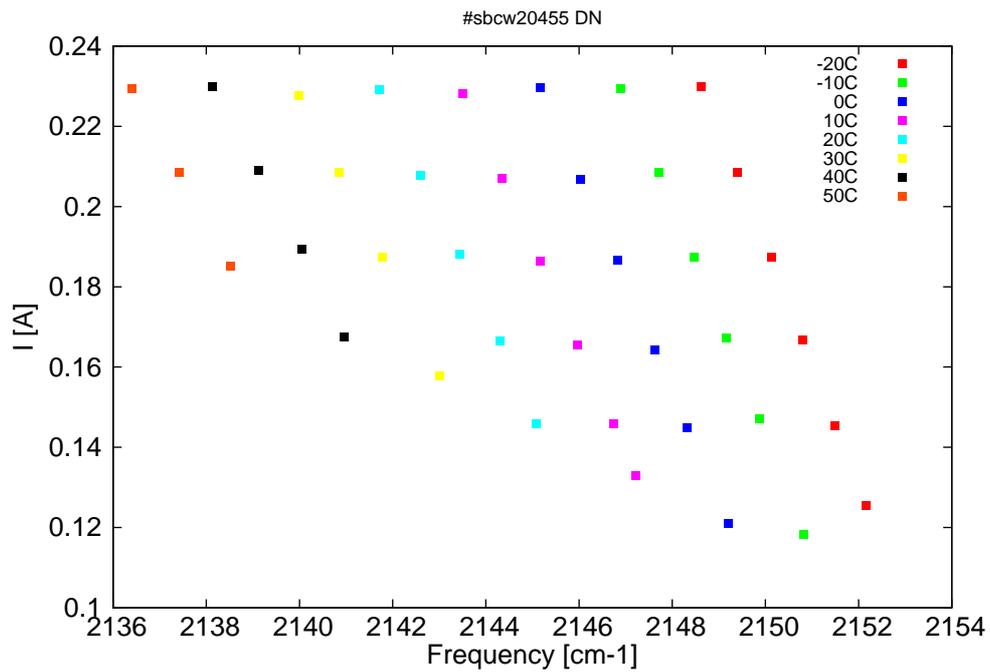


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4646.5	2152.2	12.1	-20	11.25	0.125
4648	2151.5	28.8	-20	11.42	0.145
4649.4	2150.8	47.8	-20	11.61	0.167
4650.9	2150.1	68.4	-20	11.81	0.187
4652.5	2149.4	90.2	-20	12.01	0.209
4654.2	2148.6	110.3	-20	12.23	0.23
4649.4	2150.8	2.3	-10	11.16	0.118
4651.4	2149.9	24	-10	11.38	0.147
4653	2149.2	40.8	-10	11.56	0.167
4654.5	2148.5	58.1	-10	11.76	0.187
4656.1	2147.7	76.6	-10	11.97	0.208
4657.9	2146.9	94.9	-10	12.19	0.23
4652.9	2149.2	0.8	0	11.16	0.121
4654.8	2148.3	15.7	0	11.32	0.145
4656.3	2147.6	30.6	0	11.49	0.164
4658	2146.8	47.6	0	11.71	0.187
4659.8	2146	64	0	11.92	0.207
4661.6	2145.2	80.7	0	12.15	0.23
4657.2	2147.2	1.7	10	11.2	0.133
4658.2	2146.7	10.5	10	11.28	0.146
4659.9	2146	23.1	10	11.46	0.165
4661.7	2145.2	37.3	10	11.66	0.186
4663.4	2144.4	52.1	10	11.87	0.207
4665.3	2143.5	66.4	10	12.1	0.228
4661.8	2145.1	2.3	20	11.27	0.146
4663.5	2144.3	16.2	20	11.43	0.166
4665.4	2143.4	28.8	20	11.64	0.188
4667.2	2142.6	40.5	20	11.84	0.208
4669.2	2141.7	52.7	20	12.07	0.229
4666.3	2143	2.5	30	11.34	0.158
4669	2141.8	20.2	30	11.59	0.187
4671	2140.9	30.3	30	11.8	0.208
4672.9	2140	39.6	30	12.01	0.228
4670.8	2141	2.4	40	11.42	0.168
4672.8	2140	13	40	11.57	0.189
4674.8	2139.1	20.8	40	11.76	0.209
4677	2138.1	28.9	40	11.99	0.23
4676.1	2138.5	1.5	50	11.55	0.185
4678.5	2137.4	12.4	50	11.74	0.208
4680.8	2136.4	18.9	50	11.95	0.229

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

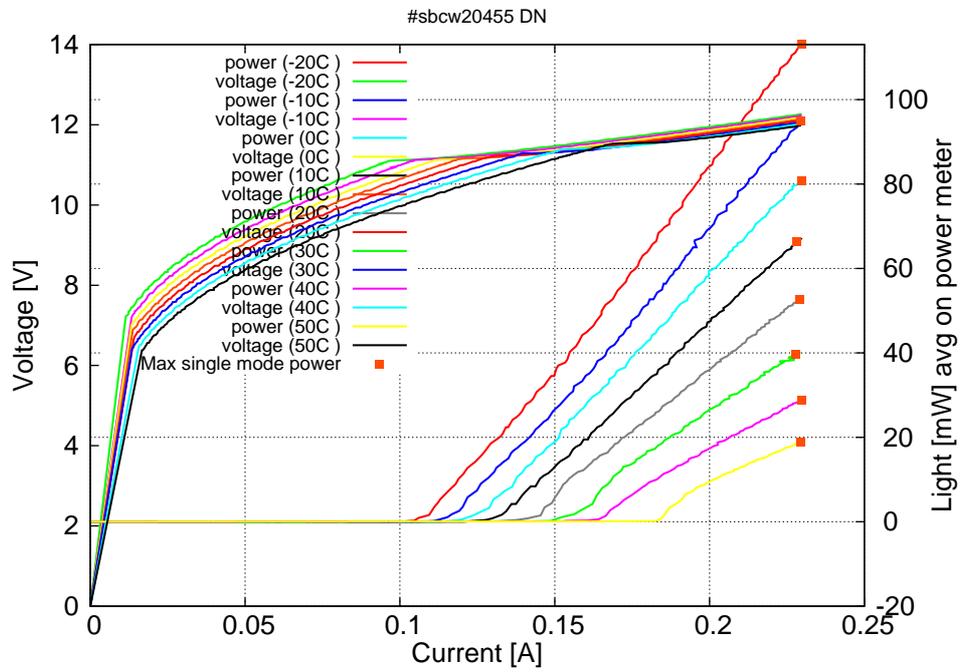


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=11.1V$ (2-wires measurements). Maximum operation current: 0.23A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

