

Datasheet for #sbcw24789 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 #sbcw24789 DN (please note that AlN submount numbering is A0Z5D)

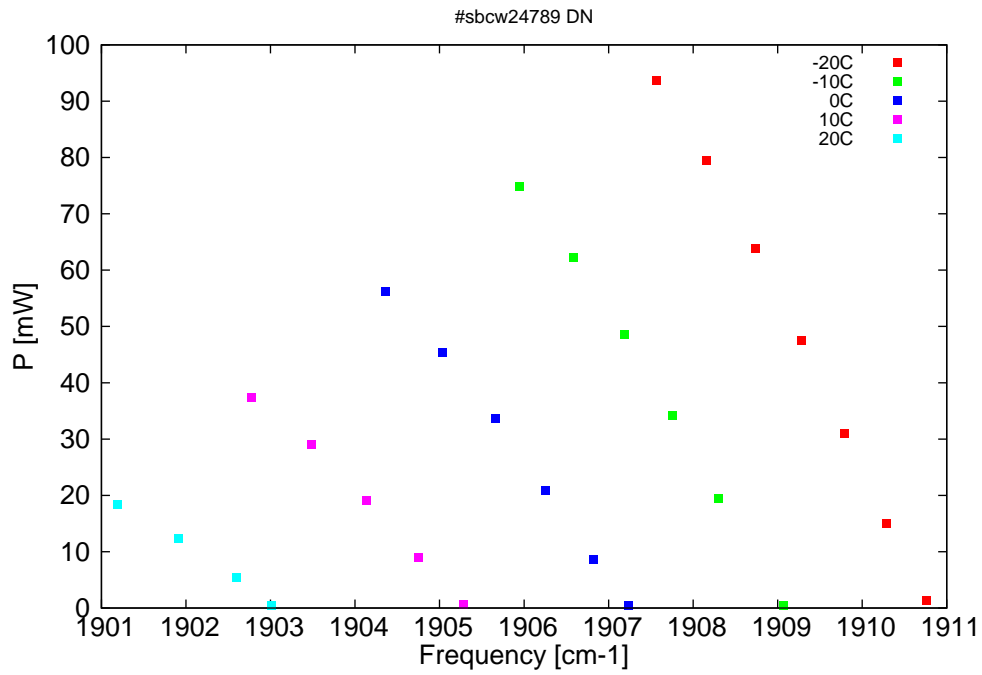


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

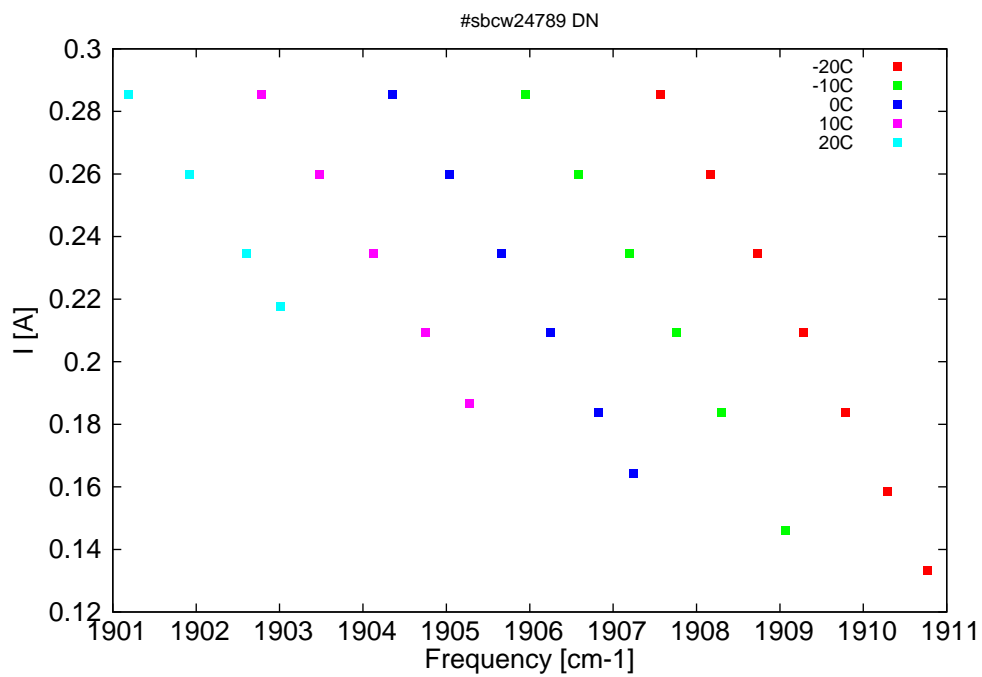


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5233.5	1910.8	1.4	-20	7.8	0.133
5234.8	1910.3	15.1	-20	8.02	0.158
5236.2	1909.8	31	-20	8.24	0.184
5237.6	1909.3	47.5	-20	8.45	0.209
5239.1	1908.7	63.9	-20	8.67	0.235
5240.6	1908.2	79.4	-20	8.89	0.26
5242.3	1907.6	93.6	-20	9.12	0.285
5238.2	1909.1	0.4	-10	7.85	0.146
5240.3	1908.3	19.4	-10	8.18	0.184
5241.8	1907.8	34.2	-10	8.4	0.209
5243.3	1907.2	48.6	-10	8.62	0.235
5245	1906.6	62.2	-10	8.84	0.26
5246.7	1905.9	74.9	-10	9.07	0.285
5243.2	1907.2	0.4	0	7.95	0.164
5244.3	1906.8	8.6	0	8.12	0.184
5245.9	1906.3	21	0	8.34	0.209
5247.5	1905.7	33.6	0	8.56	0.235
5249.2	1905	45.3	0	8.79	0.26
5251.1	1904.4	56.2	0	9.02	0.285
5248.6	1905.3	0.6	10	8.09	0.187
5250	1904.8	8.9	10	8.28	0.209
5251.7	1904.1	19.1	10	8.5	0.235
5253.5	1903.5	29	10	8.74	0.26
5255.5	1902.8	37.5	10	8.97	0.285
5254.8	1903	0.5	20	8.31	0.218
5256	1902.6	5.3	20	8.45	0.235
5257.9	1901.9	12.4	20	8.68	0.26
5259.9	1901.2	18.3	20	8.92	0.285

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

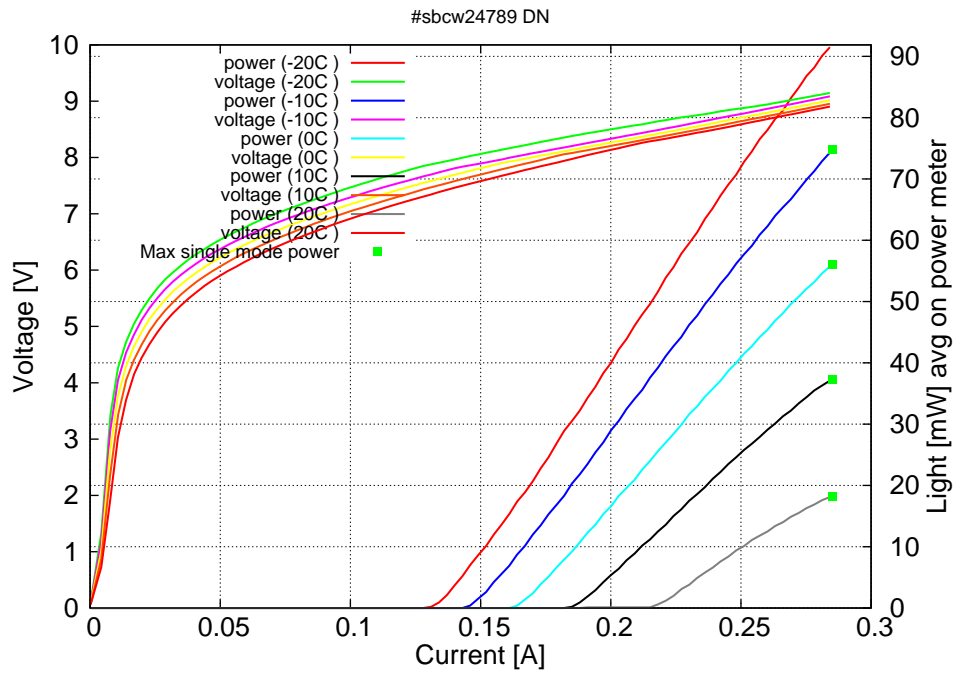


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=7.7V$ (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

