

Datasheet for #sbcw27321 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw27321 DN (please note that AlN submount numbering is A0UDN)

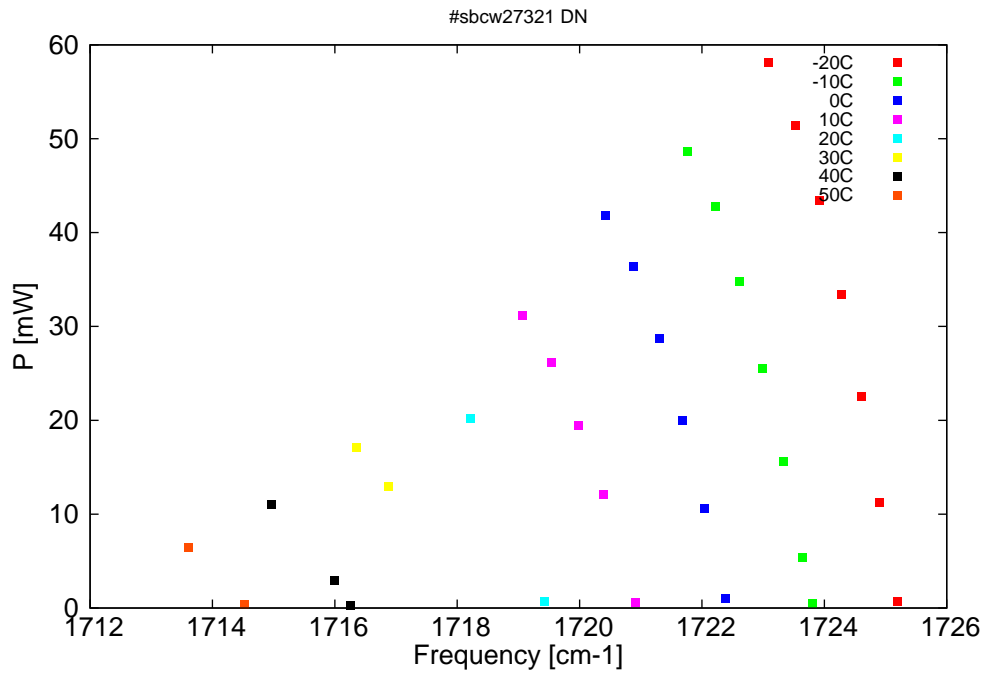


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

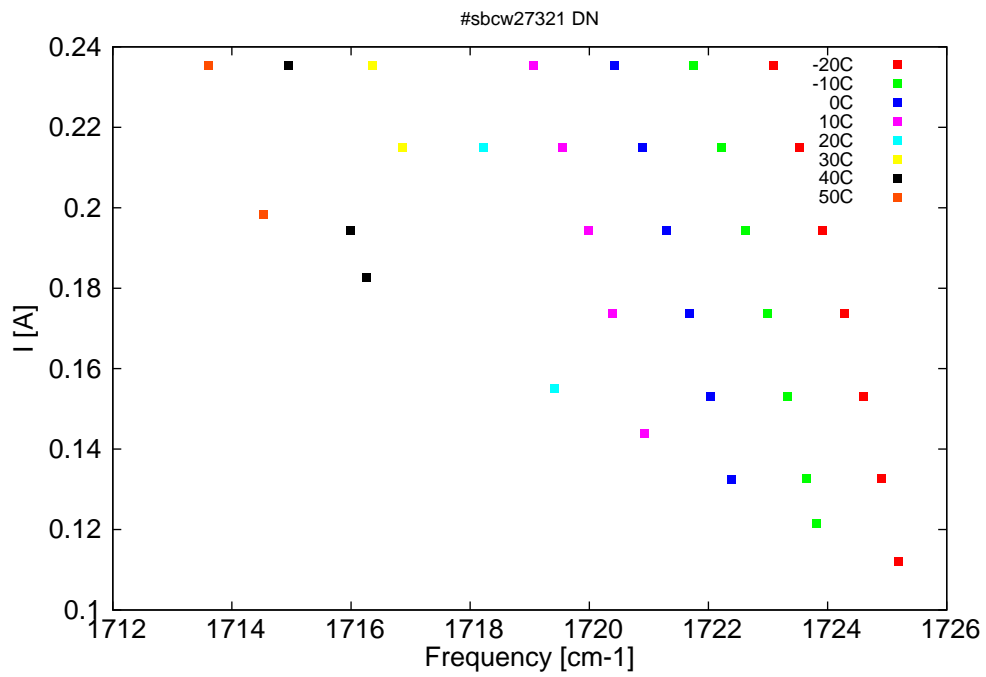


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5796.4	1725.2	0.7	-20	7.62	0.112
5797.4	1724.9	11.3	-20	7.86	0.133
5798.4	1724.6	22.5	-20	8.11	0.153
5799.5	1724.3	33.4	-20	8.35	0.174
5800.7	1723.9	43.5	-20	8.61	0.194
5802.1	1723.5	51.4	-20	8.88	0.215
5803.5	1723.1	58.2	-20	9.18	0.235
5801.1	1723.8	0.4	-10	7.68	0.122
5801.7	1723.6	5.4	-10	7.8	0.133
5802.7	1723.3	15.6	-10	8.05	0.153
5803.9	1723	25.5	-10	8.29	0.174
5805.1	1722.6	34.8	-10	8.54	0.194
5806.5	1722.2	42.8	-10	8.81	0.215
5808	1721.8	48.7	-10	9.09	0.235
5805.9	1722.4	1	0	7.76	0.133
5807.1	1722	10.6	0	8	0.153
5808.3	1721.7	20	0	8.24	0.174
5809.6	1721.3	28.7	0	8.49	0.194
5811	1720.9	36.3	0	8.75	0.215
5812.5	1720.4	41.9	0	9.03	0.235
5810.8	1720.9	0.6	10	7.83	0.144
5812.6	1720.4	12.1	10	8.18	0.174
5814	1720	19.5	10	8.43	0.194
5815.5	1719.5	26.2	10	8.69	0.215
5817.1	1719.1	31.1	10	8.97	0.235
5815.9	1719.4	0.7	20	7.93	0.155
5820	1718.2	20.2	20	8.65	0.215
5824.6	1716.9	13	30	8.61	0.215
5826.3	1716.4	17.1	30	8.87	0.235
5826.6	1716.3	0.3	40	8.17	0.183
5827.5	1716	2.9	40	8.31	0.194
5831	1715	11.1	40	8.83	0.235
5832.5	1714.5	0.3	50	8.32	0.198
5835.6	1713.6	6.5	50	8.79	0.235

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

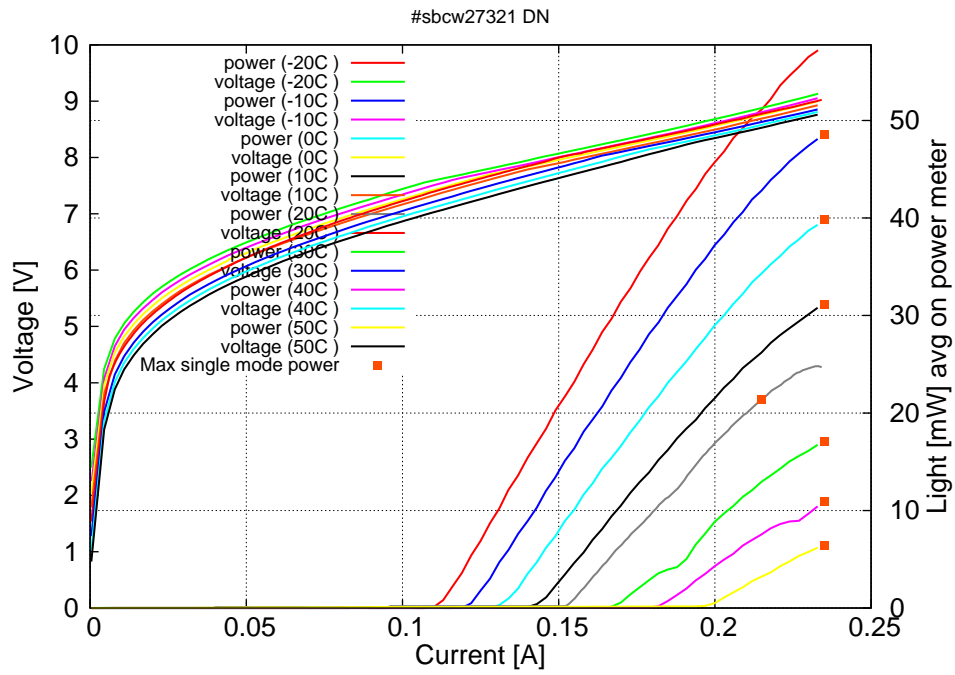


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.235A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

