

Datasheet for #sbcw24027 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 #sbcw24027 DN (please note that AlN submount numbering is A10UA)

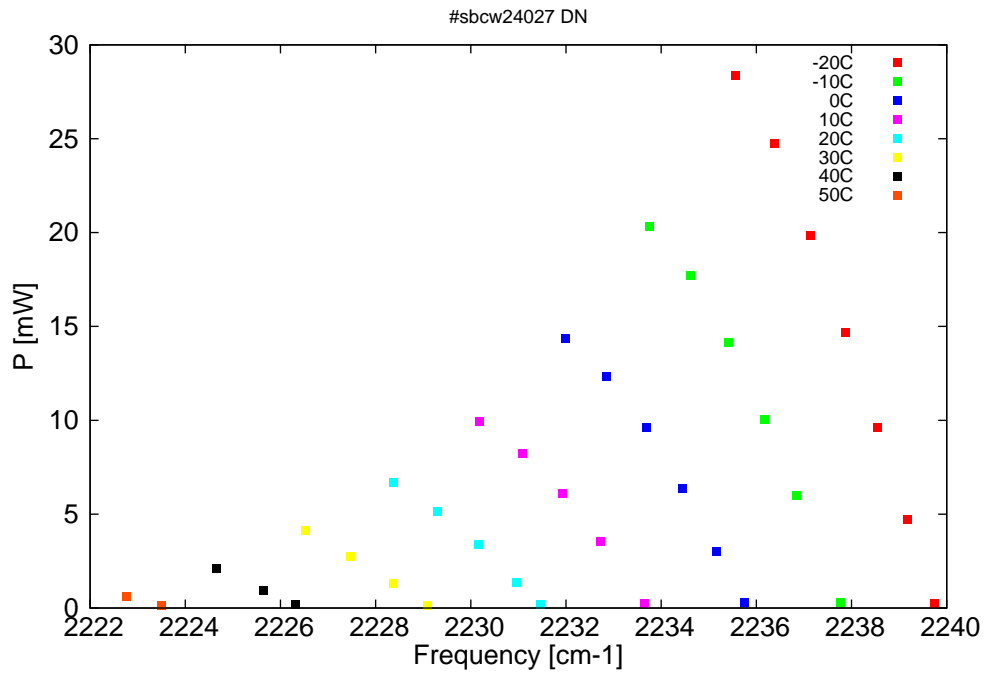


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

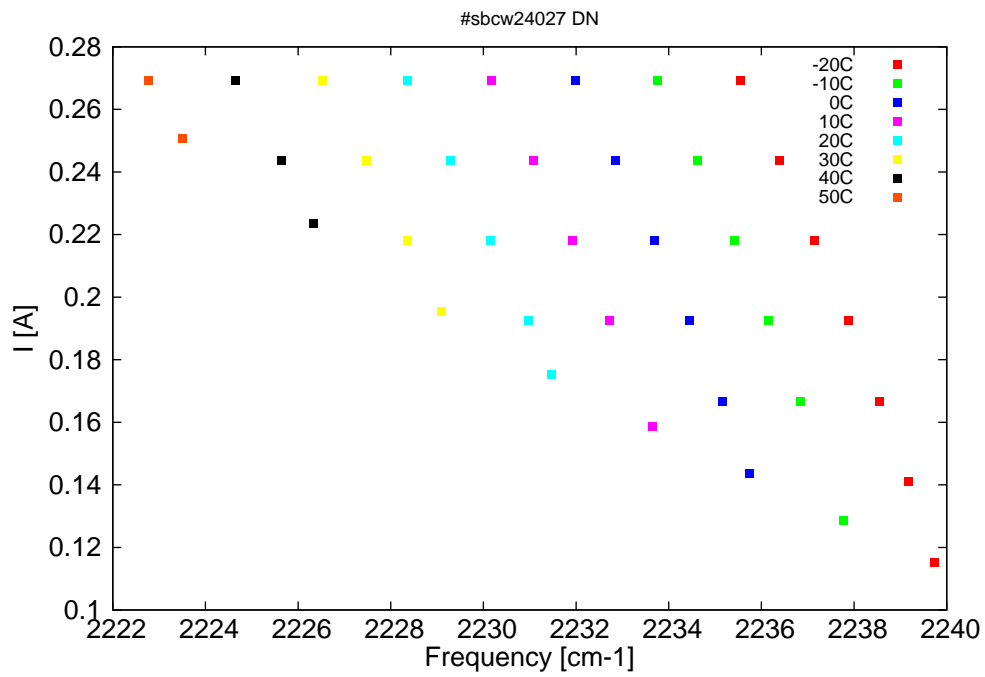


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4464.8	2239.7	0.2	-20	8.82	0.115
4465.9	2239.2	4.7	-20	9.1	0.141
4467.2	2238.5	9.6	-20	9.38	0.167
4468.5	2237.9	14.7	-20	9.65	0.192
4470	2237.1	19.8	-20	9.92	0.218
4471.5	2236.4	24.8	-20	10.19	0.244
4473.2	2235.6	28.4	-20	10.48	0.269
4468.7	2237.8	0.3	-10	8.92	0.129
4470.6	2236.9	6	-10	9.33	0.167
4471.9	2236.2	10.1	-10	9.61	0.192
4473.4	2235.4	14.1	-10	9.88	0.218
4475	2234.6	17.7	-10	10.16	0.244
4476.8	2233.8	20.3	-10	10.45	0.269
4472.8	2235.7	0.3	0	9.05	0.144
4474	2235.2	3	0	9.29	0.167
4475.4	2234.5	6.4	0	9.57	0.192
4476.9	2233.7	9.6	0	9.85	0.218
4478.6	2232.9	12.3	0	10.13	0.244
4480.3	2232	14.4	0	10.42	0.269
4477	2233.6	0.2	10	9.17	0.159
4478.9	2232.7	3.6	10	9.53	0.192
4480.4	2231.9	6.1	10	9.81	0.218
4482.1	2231.1	8.3	10	10.1	0.244
4483.9	2230.2	10	10	10.39	0.269
4481.4	2231.5	0.2	20	9.32	0.175
4482.4	2231	1.4	20	9.5	0.192
4484	2230.2	3.4	20	9.78	0.218
4485.7	2229.3	5.1	20	10.06	0.244
4487.6	2228.4	6.7	20	10.35	0.269
4486.1	2229.1	0.2	30	9.51	0.195
4487.6	2228.4	1.3	30	9.75	0.218
4489.4	2227.5	2.7	30	10.03	0.244
4491.3	2226.5	4.1	30	10.31	0.269
4491.7	2226.3	0.2	40	9.8	0.224
4493.1	2225.6	0.9	40	10.01	0.244
4495.1	2224.7	2.1	40	10.28	0.269
4497.4	2223.5	0.1	50	10.08	0.251
4498.9	2222.8	0.6	50	10.26	0.269

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

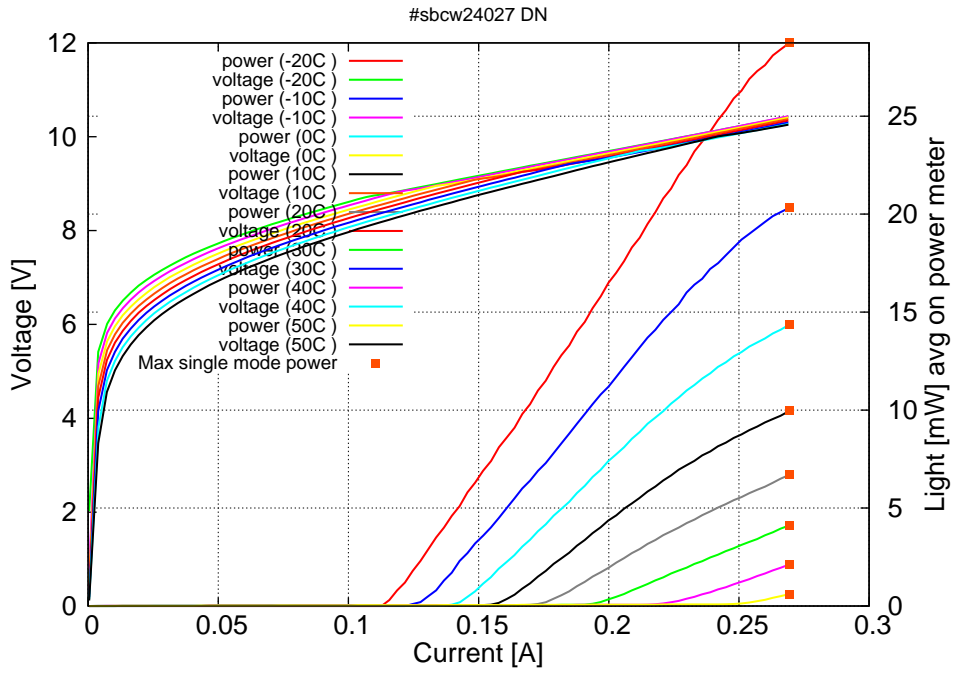


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

