

Datasheet for #sbcw23279 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

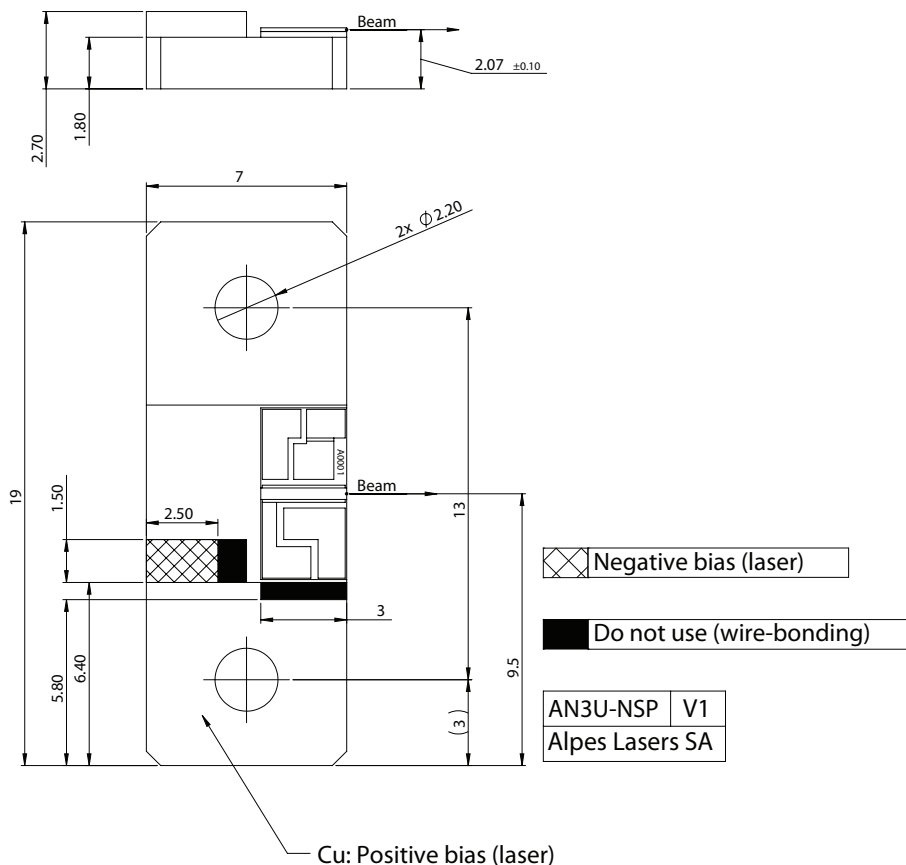


Figure 1: Mechanical and electrical interface for #sbcw23279 DN

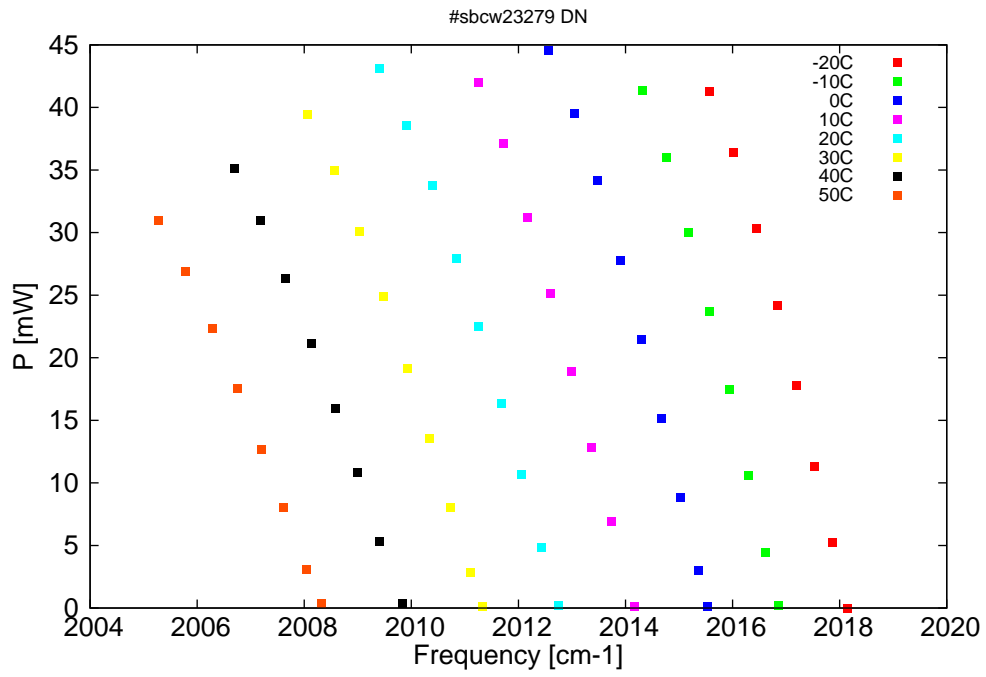


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

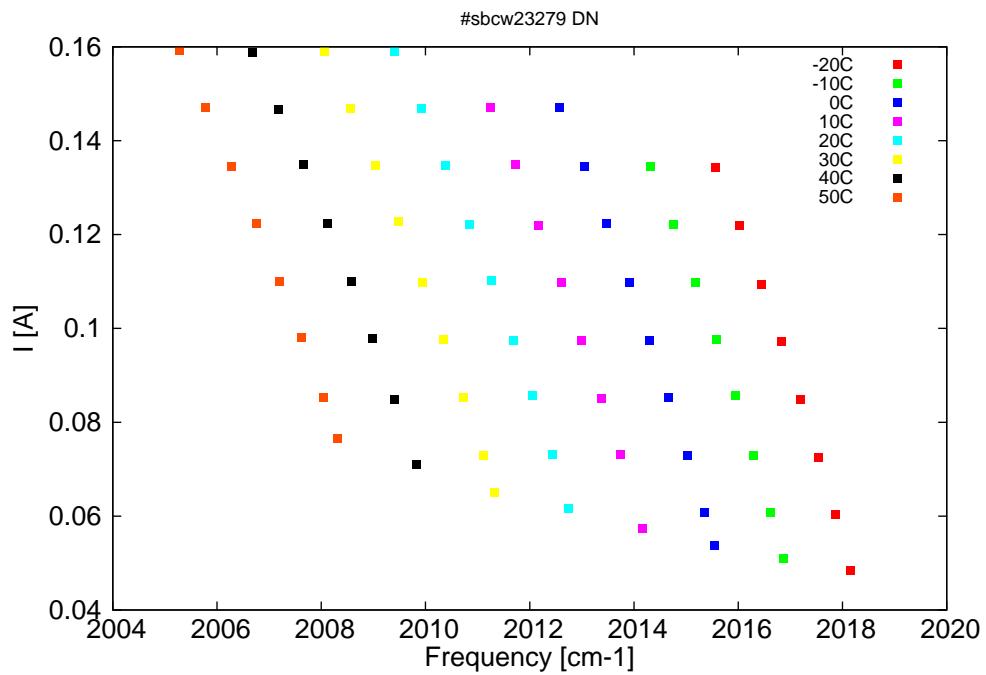


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4955	2018.2	0	-20	11.07	0.048
4955.7	2017.9	5.2	-20	11.43	0.06
4956.5	2017.5	11.3	-20	11.78	0.072
4957.4	2017.2	17.8	-20	12.12	0.085
4958.3	2016.8	24.2	-20	12.44	0.097
4959.2	2016.4	30.4	-20	12.76	0.109
4960.3	2016	36.4	-20	13.1	0.122
4961.4	2015.6	41.3	-20	13.45	0.134
4958.2	2016.9	0.2	-10	11.02	0.051
4958.8	2016.6	4.5	-10	11.3	0.061
4959.6	2016.3	10.6	-10	11.63	0.073
4960.5	2015.9	17.5	-10	11.96	0.086
4961.4	2015.6	23.7	-10	12.27	0.098
4962.3	2015.2	30	-10	12.57	0.11
4963.4	2014.8	36	-10	12.88	0.122
4964.4	2014.3	41.4	-10	13.21	0.135
4961.5	2015.5	0.1	0	10.98	0.054
4961.9	2015.4	3	0	11.16	0.061
4962.7	2015	8.9	0	11.49	0.073
4963.6	2014.7	15.2	0	11.81	0.085
4964.5	2014.3	21.4	0	12.1	0.098
4965.5	2013.9	27.8	0	12.4	0.11
4966.5	2013.5	34.1	0	12.7	0.122
4967.6	2013	39.6	0	13	0.135
4968.8	2012.6	44.6	0	13.32	0.147
4964.8	2014.2	0.1	10	10.96	0.057
4965.9	2013.7	6.9	10	11.37	0.073
4966.8	2013.4	12.9	10	11.67	0.085
4967.7	2013	18.9	10	11.96	0.098
4968.7	2012.6	25.1	10	12.25	0.11
4969.7	2012.2	31.2	10	12.53	0.122
4970.9	2011.7	37.1	10	12.83	0.135
4972	2011.3	42	10	13.12	0.147
4968.3	2012.8	0.2	20	10.97	0.062
4969.1	2012.4	4.8	20	11.26	0.073
4970	2012.1	10.7	20	11.55	0.086
4971	2011.7	16.3	20	11.83	0.098
4972	2011.3	22.5	20	12.13	0.11
4973	2010.8	28	20	12.39	0.122
4974.1	2010.4	33.7	20	12.67	0.135
4975.3	2009.9	38.6	20	12.95	0.147
4976.6	2009.4	43.1	20	13.24	0.159
4971.8	2011.3	0.1	30	10.97	0.065
4972.4	2011.1	2.9	30	11.15	0.073
4973.3	2010.7	8	30	11.44	0.085
4974.3	2010.3	13.5	30	11.72	0.098
4975.3	2009.9	19.1	30	11.99	0.11
4976.4	2009.5	24.9	30	12.27	0.123
4977.5	2009	30.1	30	12.53	0.135

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4978.7	2008.6	35	30	12.8	0.147
4979.9	2008.1	39.5	30	13.06	0.159
4975.5	2009.8	0.4	40	11.01	0.071
4976.6	2009.4	5.3	40	11.33	0.085
4977.6	2009	10.8	40	11.61	0.098
4978.6	2008.6	16	40	11.88	0.11
4979.8	2008.1	21.2	40	12.14	0.122
4980.9	2007.7	26.4	40	12.41	0.135
4982.1	2007.2	30.9	40	12.65	0.147
4983.3	2006.7	35.2	40	12.91	0.159
4979.3	2008.3	0.4	50	11.05	0.076
4980	2008	3.1	50	11.24	0.085
4981	2007.6	8.1	50	11.52	0.098
4982.1	2007.2	12.6	50	11.77	0.11
4983.2	2006.8	17.6	50	12.02	0.122
4984.3	2006.3	22.4	50	12.28	0.135
4985.6	2005.8	26.9	50	12.53	0.147
4986.8	2005.3	31	50	12.78	0.159

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

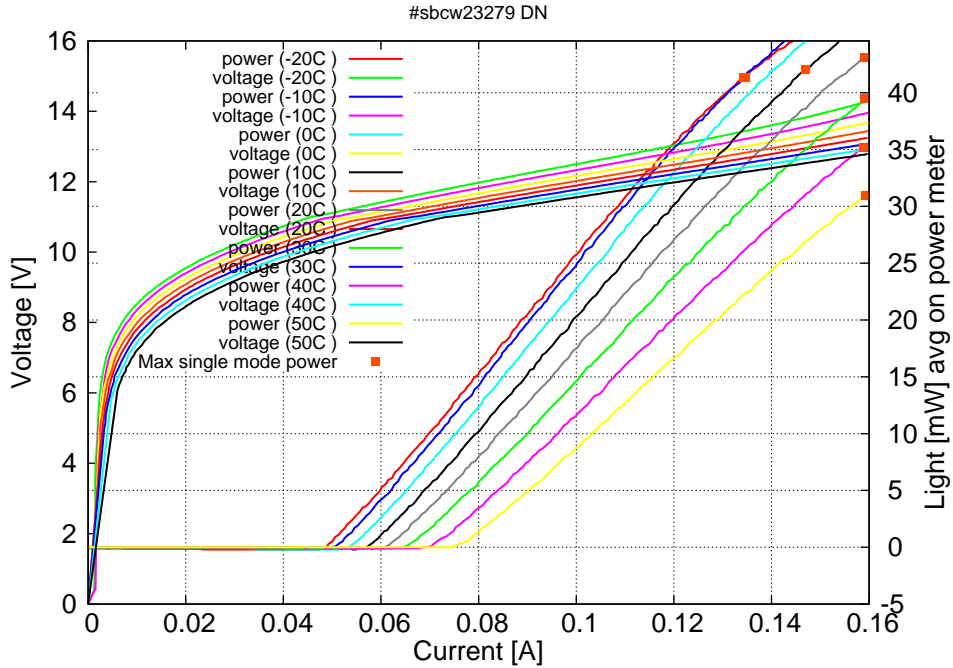


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=11.1V$ (2-wires measurements). Maximum operation current: 0.135A between -20C and -10C, 0.15A between 0C and 10C, 0.16A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

