



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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PAGE #	TITLE	REV. #	DATE
1	INDEX	A	10/16/02
2	RATINGS, RELIABILITY, OPERATING	A	10/16/02
3	DIMENSIONS	A	10/16/02
LOAD CHARACTERISTICS DATA			
4	NDL-102	A	10/16/02
5	NDL-104	A	10/16/02
6	NDL-106	A	10/16/02
7	NDL-206	A	10/16/02
8	NDL-208	A	10/16/02
9	NDL-210	A	10/16/02
10	NDL-212	A	10/16/02
11	NDL-217	A	10/16/02
12	NDL-201	A	10/16/02
13	NDL-202	A	10/16/02
14	NDL-203	A	10/16/02
15	NDL-204	A	10/16/02
16	NDL-205	A	10/16/02

	DIMENSIONS ARE IN MILLIMETERS	JKL COMPONENTS CORPORATION	
1 PL +/- REF. 2 PL +/- ANGLE +/-		TITLE	
DRAWN BY	APP'D BY	DATE	NDL LOAD CHARACTERISTICS DATA
L. WENGSTROM		F.D. 10/16/02	
- CAD DRAWING -		SCALE	RELEASED DATE
MANUAL REVISIONS NOT PERMITTED		NONE	10/16/02
REV. NO.	DESCRIPTION/ECO NUMBER	APP'D DATE	REVISION DATE
A	RELEASED	10/16/02	REV. NO. A
			SHEET 1 OF 16

MAXIMUM RATINGS

ITEMS	MAXIMUM RATINGS	OPERATING RANGE
Input voltage	6 V dc	3.0 to 5.5 V dc
Operating temperature	-10 to 50°	
Storage temperature	-20 to 70°	

RELIABILITY TEST ITEMS

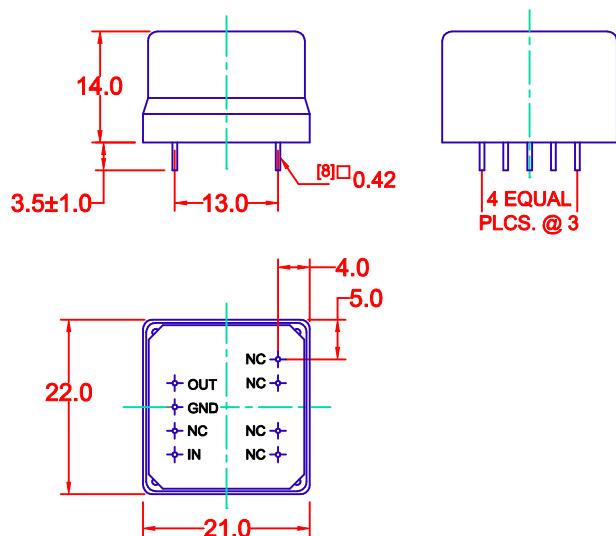
ITEMS	CONDITIONS	NOTES
Temperature shock	-20/70°C for 1 hour each, 10 cycles	1, 2, 3
Soldering heat resistance	260°C 10 seconds	1, 2, 3
Lead strength	1KG 10 seconds	1, 2, 3
Vibration	Frequency = 10 to 55 Hz, amplitude = 1.5mm (1 hour for each direction of X, Y, Z) sweep time = 1 minute/cycle	1, 2, 3

NOTES: 1. The changed values of input current, output voltage and output frequency must be within 10% of their initial values.
 2. No significant change or abnormality in external appearance must occur.
 3. Dimensions must conform to specifications.

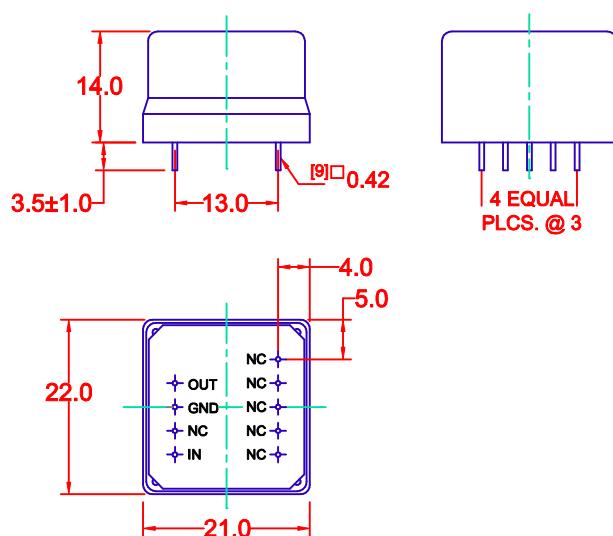
RELIABILITY TEST ITEMS

PART NUMBER	RECOMMENDED ELEMENT AREA (cm ²)	NOMINAL VALUE			
		LOAD AREA (cm ²)	BRIGHTNESS (cd/m ²)	FREQUENCY (Hz)	OUTPUT VOLTAGE (Vrms)
NDL-102	20 to 30	25			
NDL-104	25 to 40	33			
NDL-106	40 to 80	60			
NDL-206	40 to 100	70			
NDL-208	60 to 140	90	80 to 100	500 to 600	80 to 120
NDL-210	70 to 100	85			
NDL-212	80 to 120	100			
NDL-217	100 to 170	135			
NDL-201	10 to 19	15			
NDL-202	19 to 38	28			
NDL-203	25 to 43	34	40 to 60	450 to 550	70 to 90
NDL-204	41 to 70	56			
NDL-205	50 to 83	66			

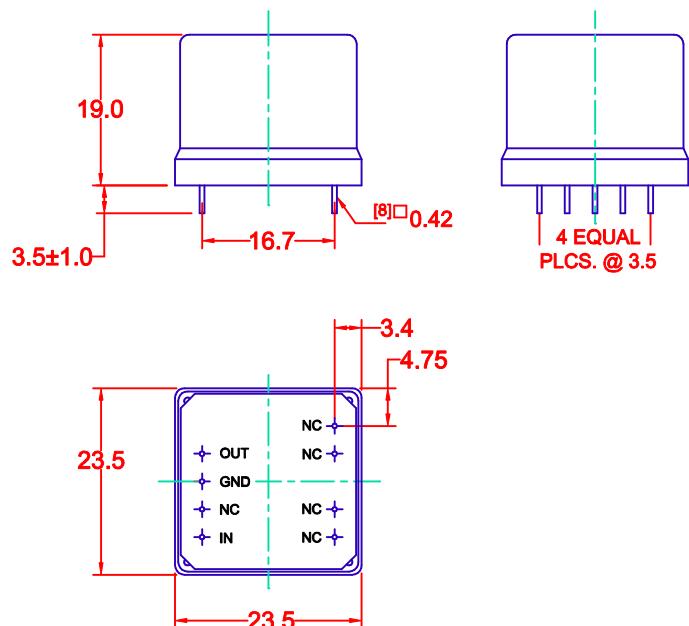
NDL-102, NDL-104



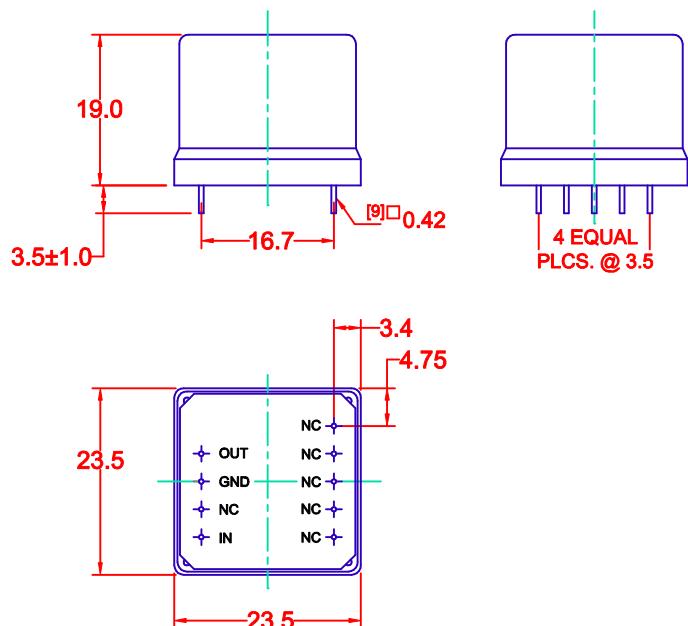
NDL-106



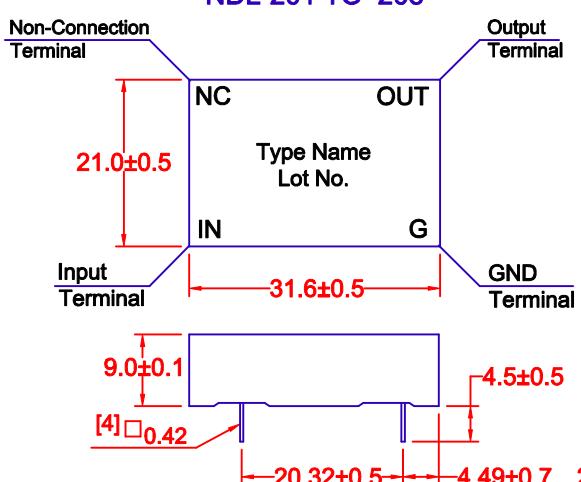
NDL-206, NDL-208, NDL-210, NDL-212



NDL-217



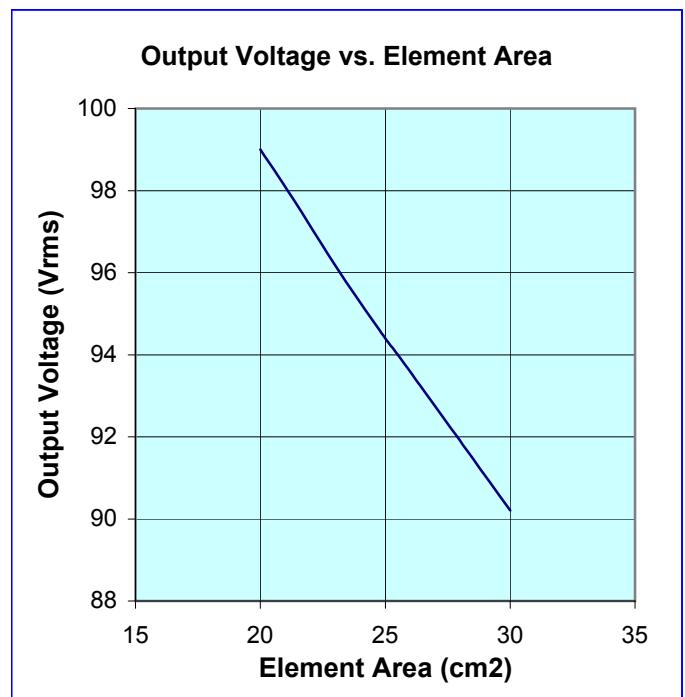
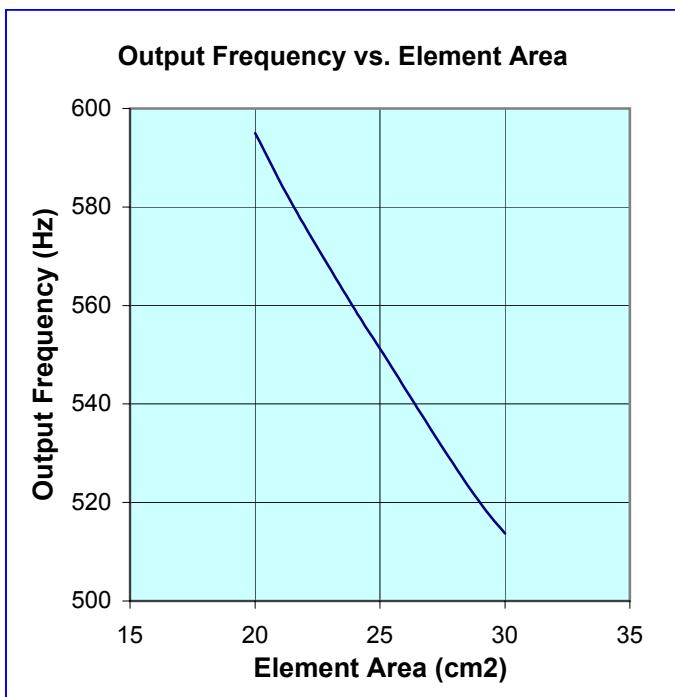
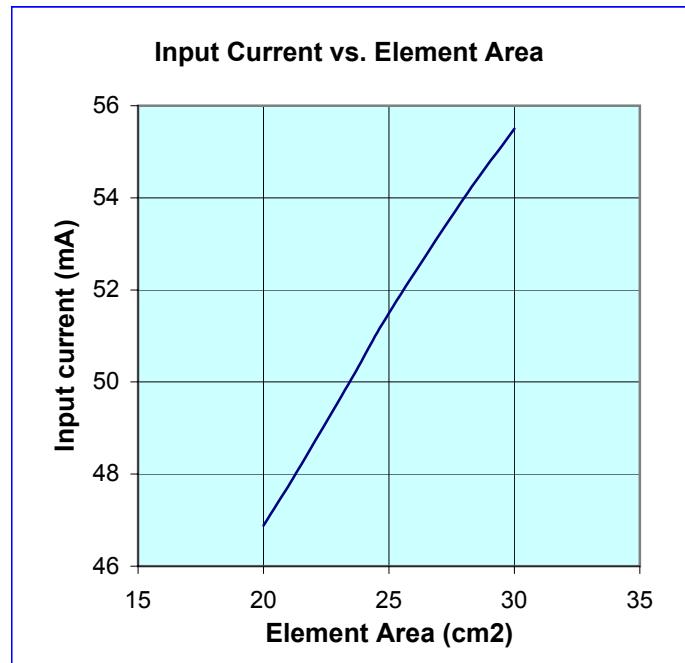
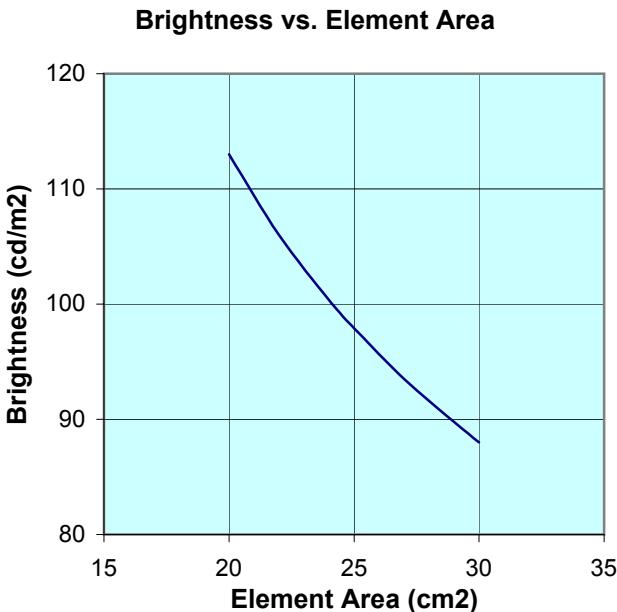
NDL-201 TO 205



P.C.B. DRILLING
ON ALL SERIES
 $\varnothing 1.07\text{mm}$ (0.042")
PTH AFTER PLATING

LOAD CHARACTERISTICS DATA

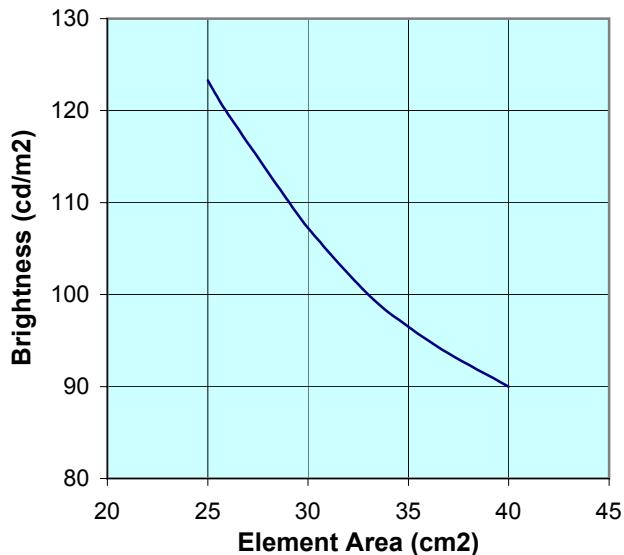
INVERTER: NDL-102



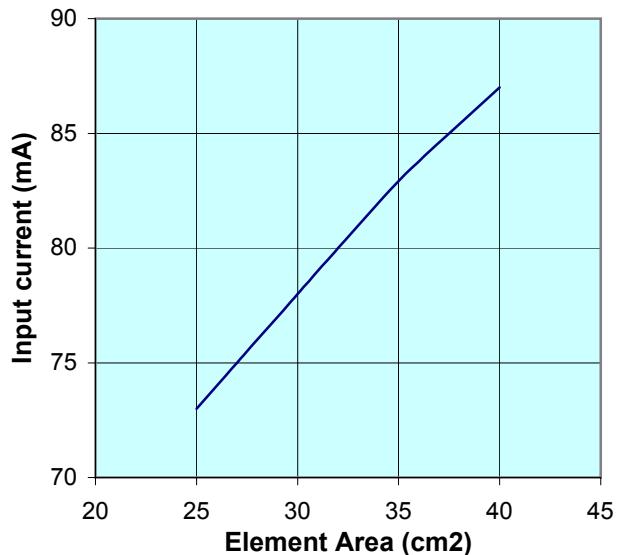
LOAD CHARACTERISTICS DATA

INVERTER: NDL-104

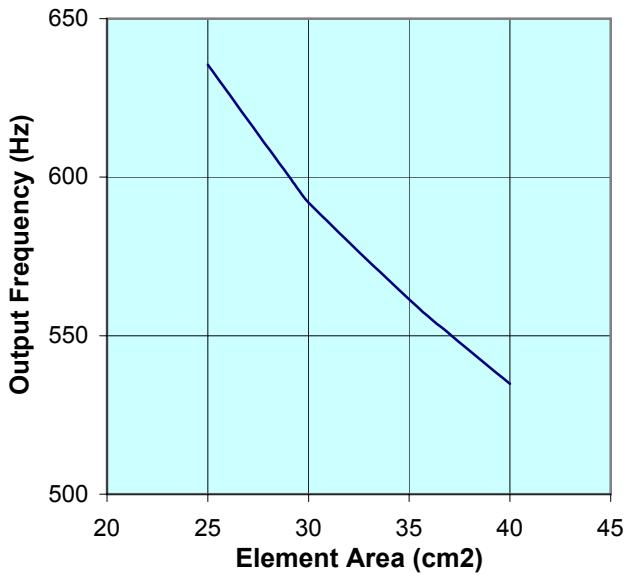
Brightness vs. Element Area



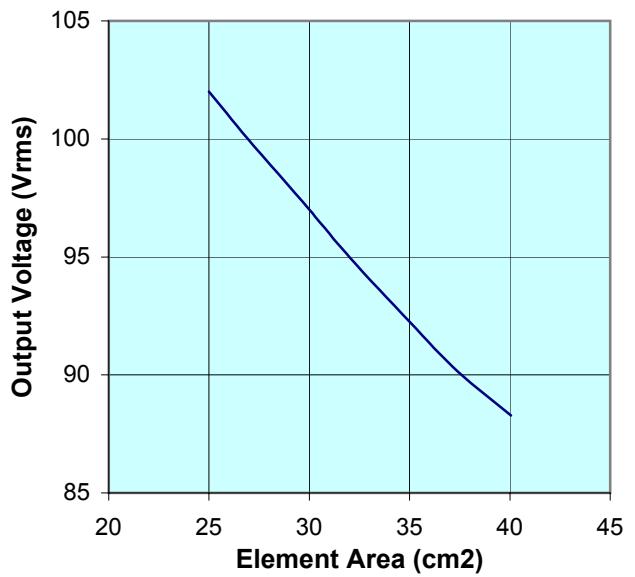
Input Current vs. Element Area



Output Frequency vs. Element Area

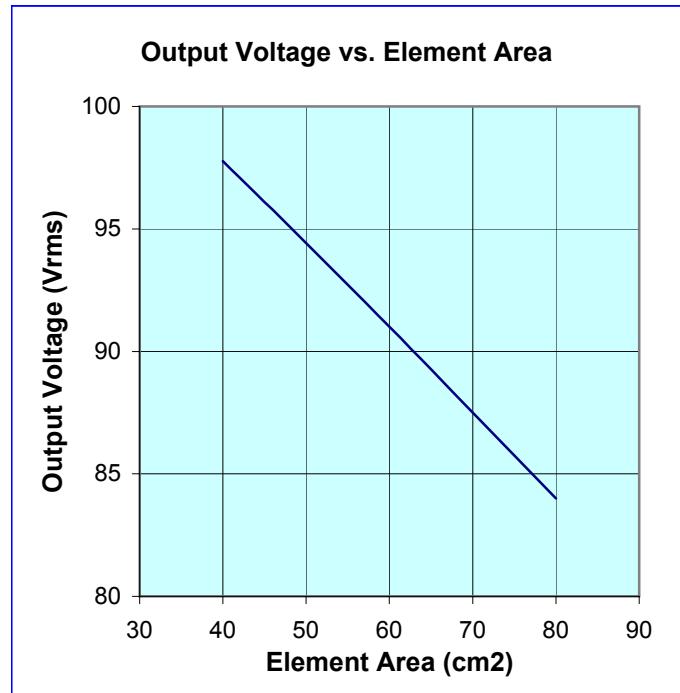
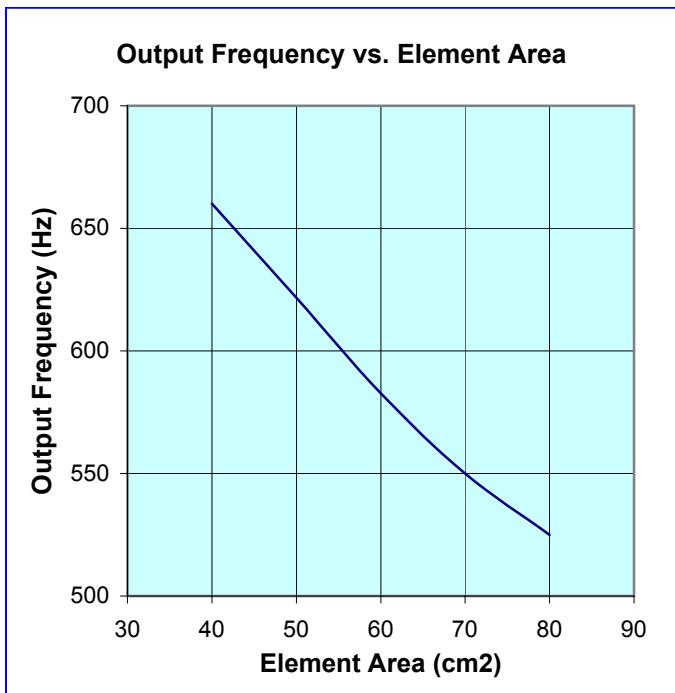
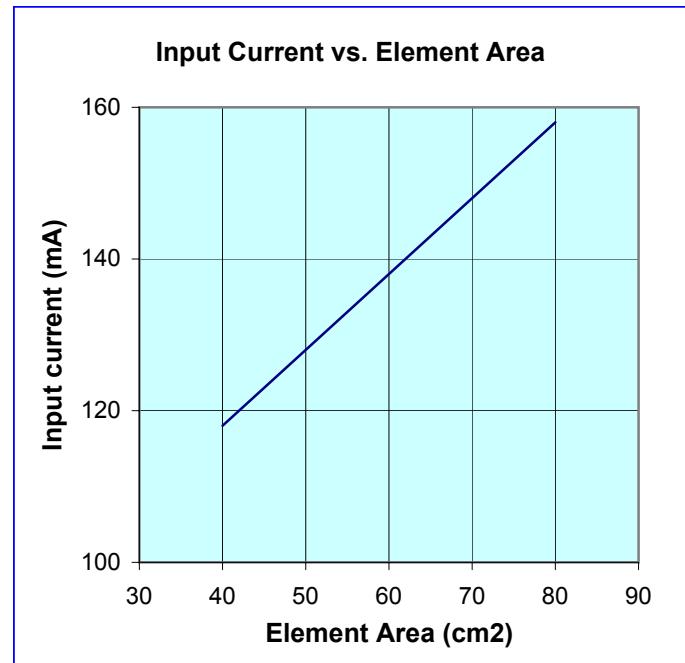
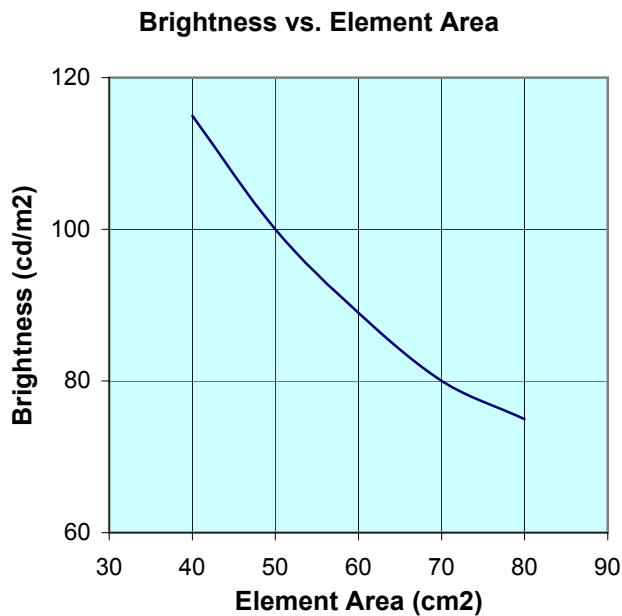


Output Voltage vs. Element Area



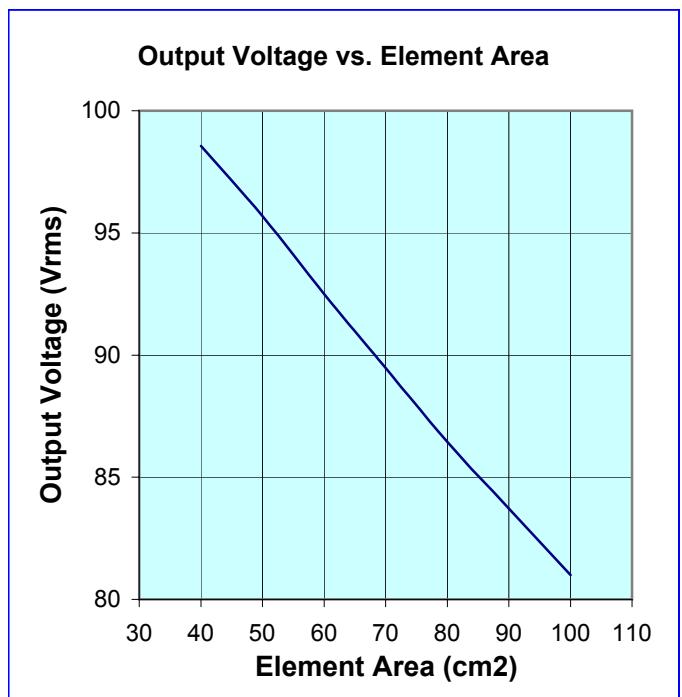
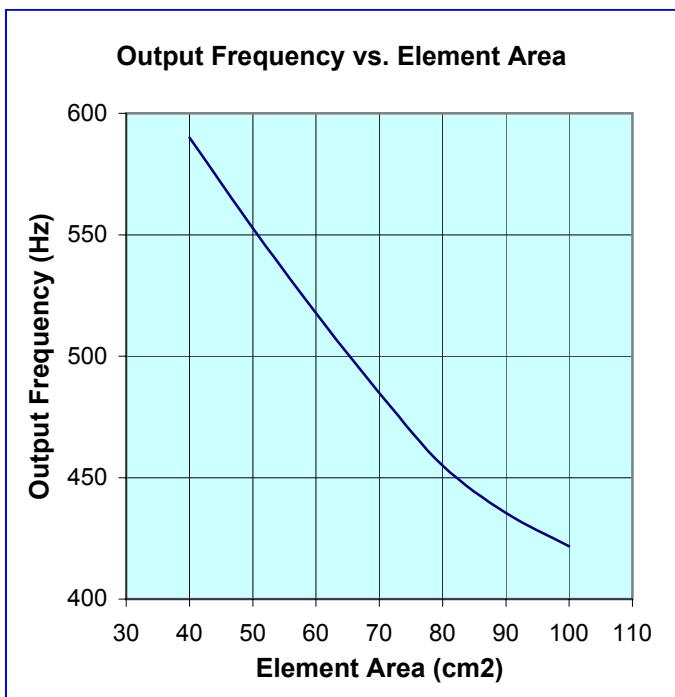
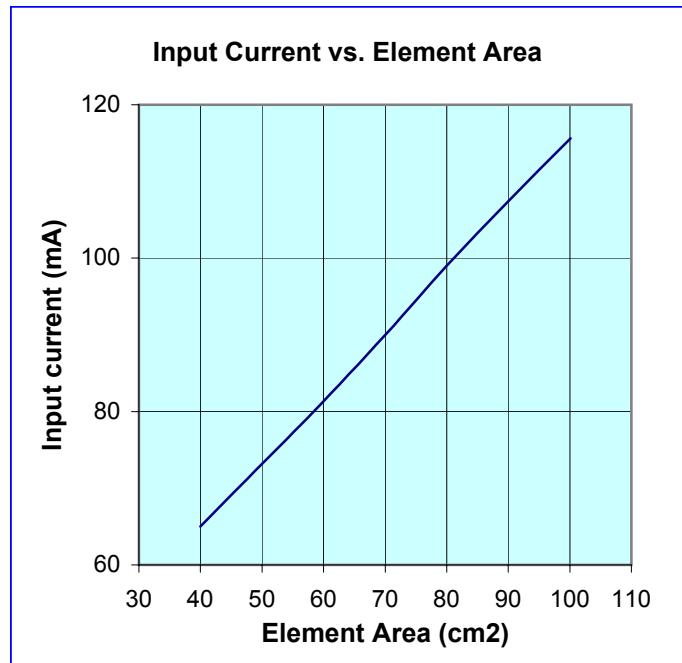
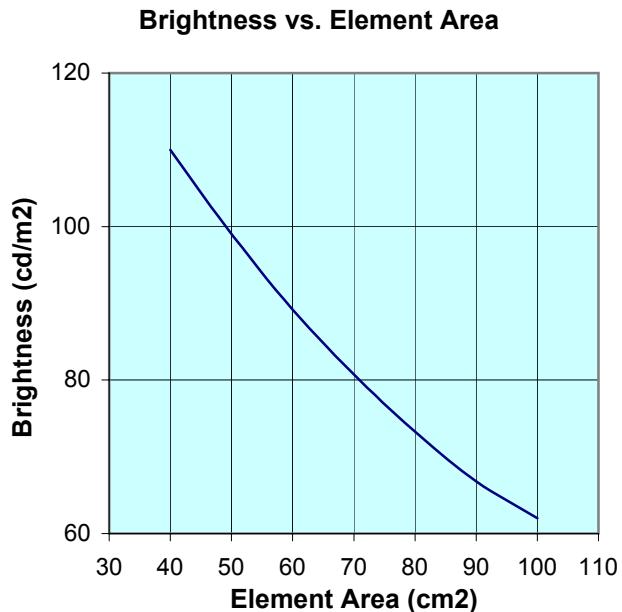
LOAD CHARACTERISTICS DATA

INVERTER: NDL-106



LOAD CHARACTERISTICS DATA

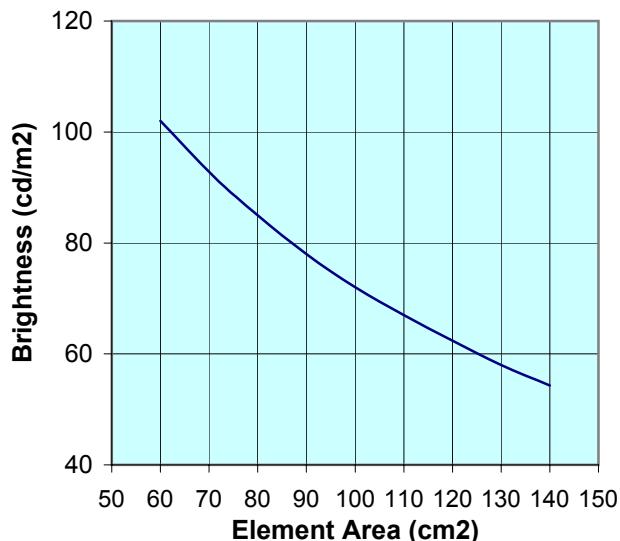
INVERTER: NDL-206



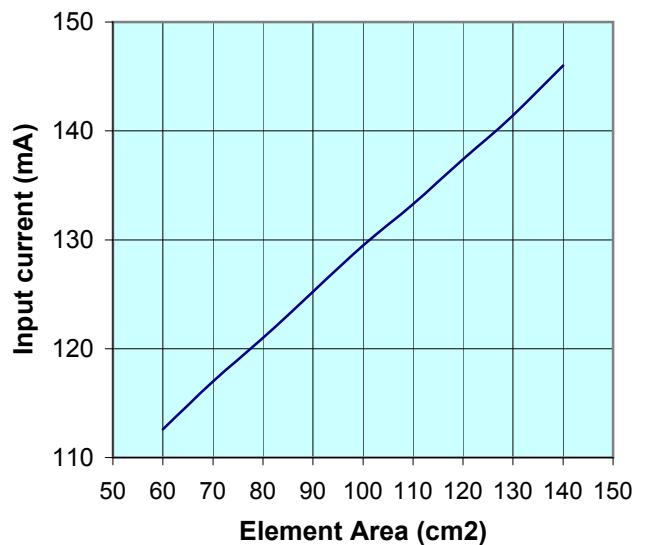
LOAD CHARACTERISTICS DATA

INVERTER: NDL-208

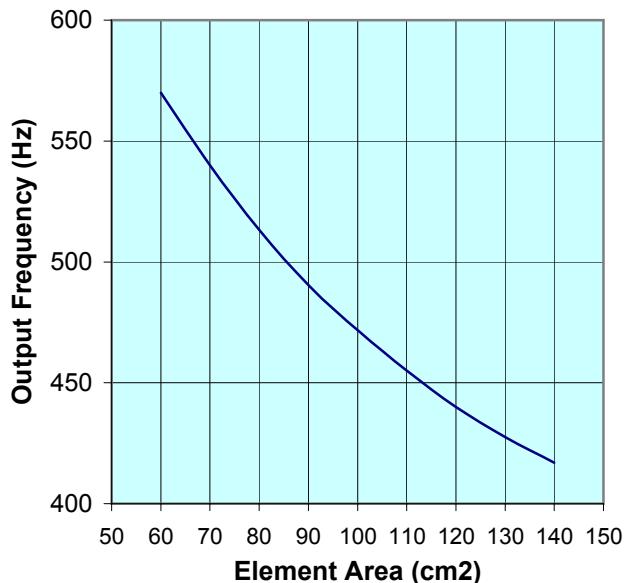
Brightness vs. Element Area



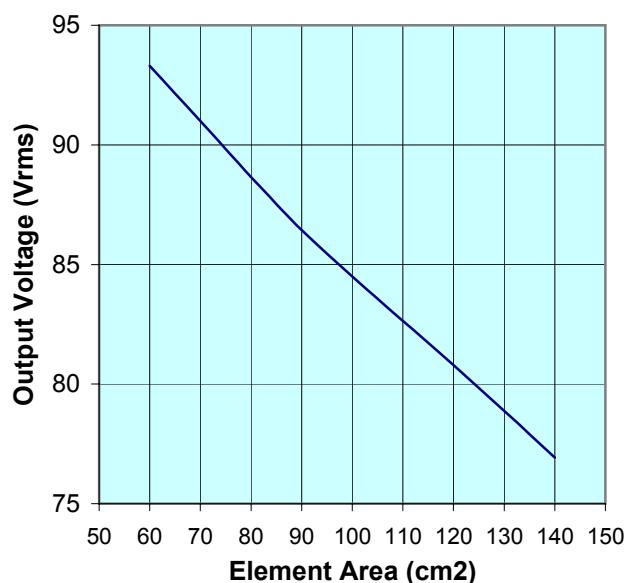
Input Current vs. Element Area



Output Frequency vs. Element Area

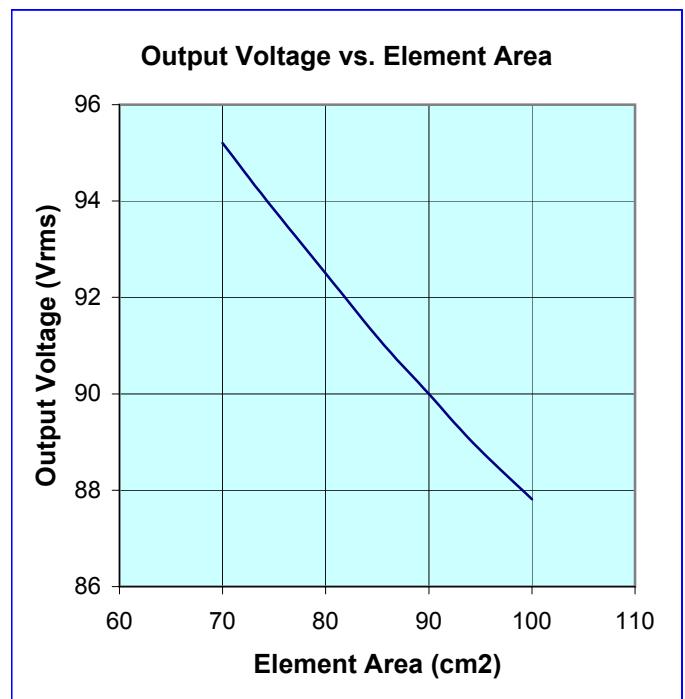
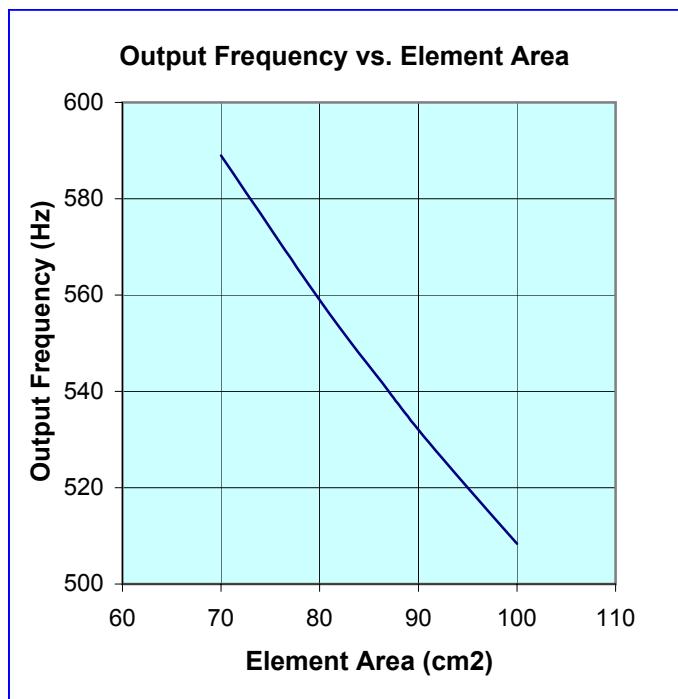
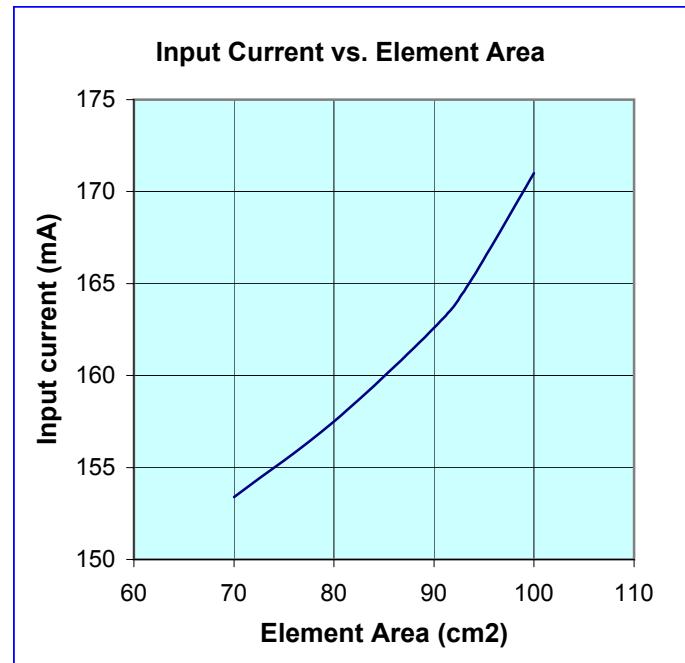
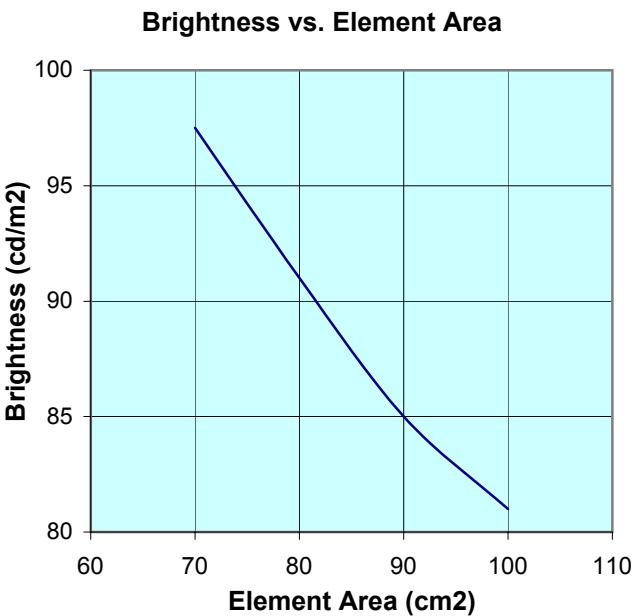


Output Voltage vs. Element Area



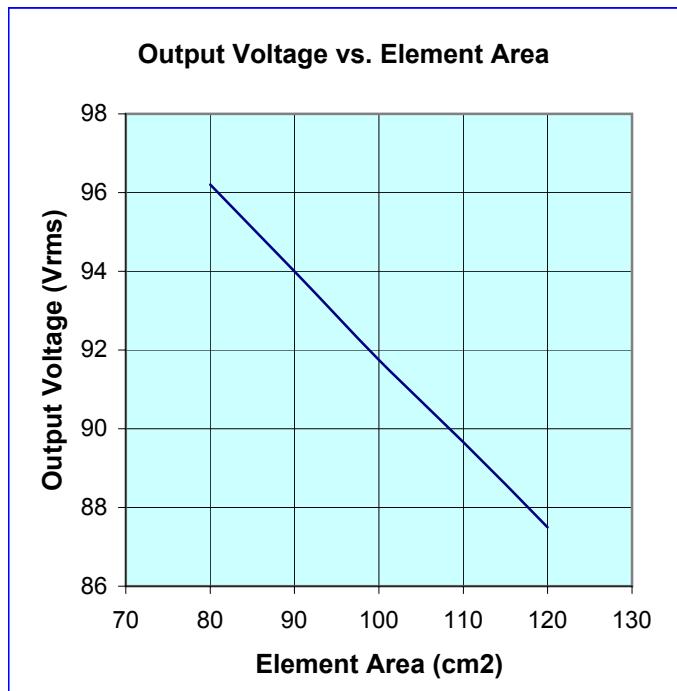
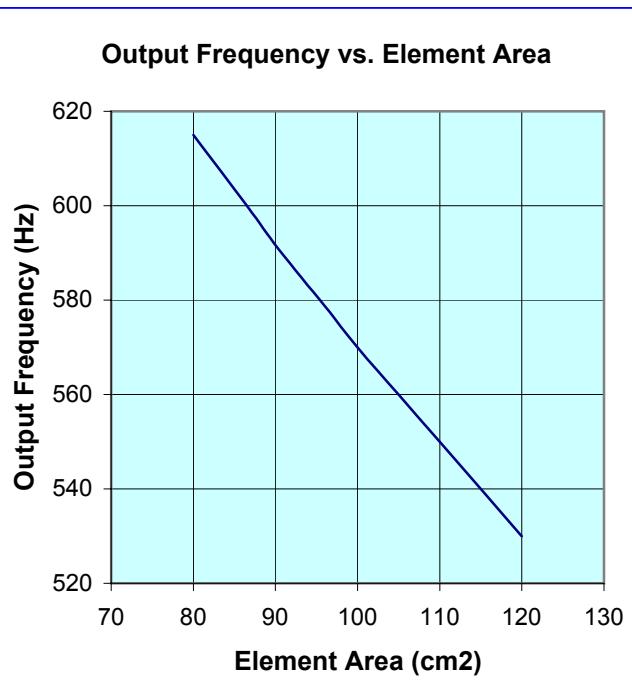
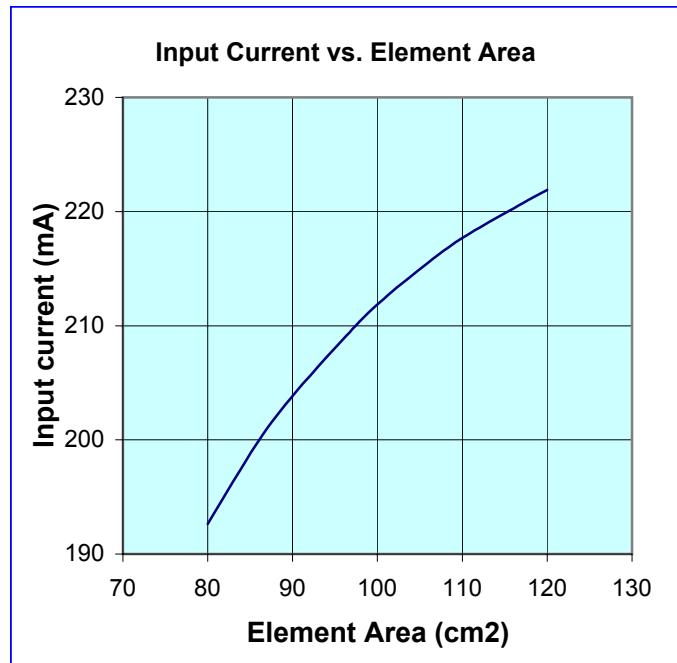
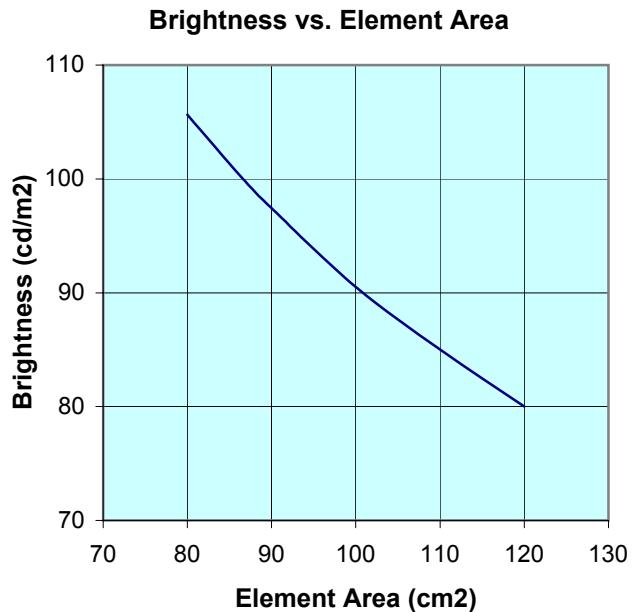
LOAD CHARACTERISTICS DATA

INVERTER: NDL-210



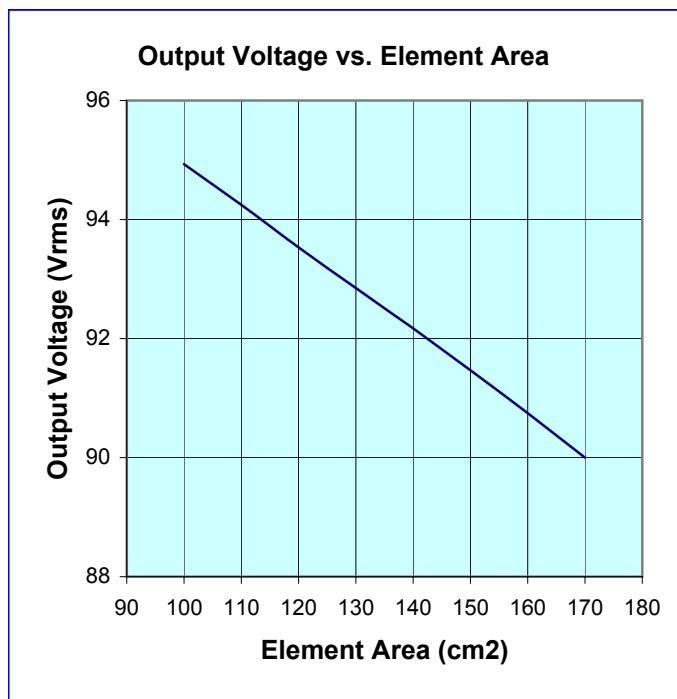
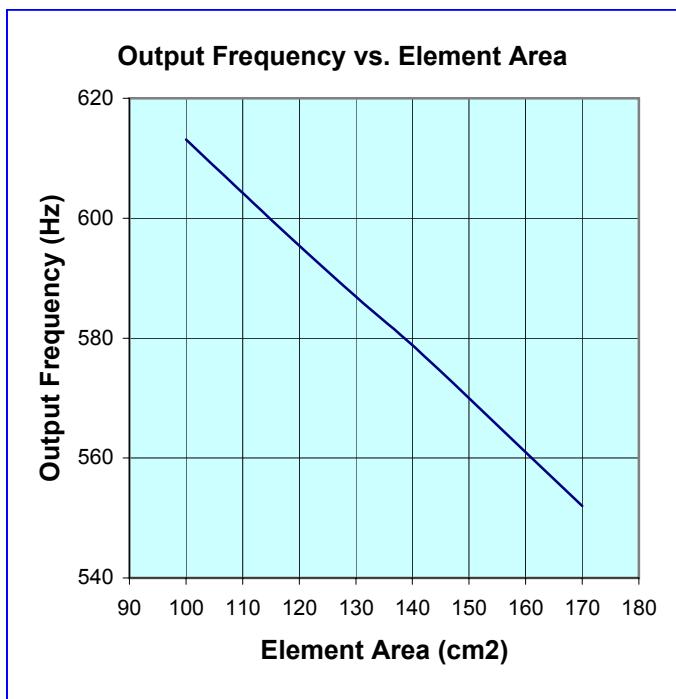
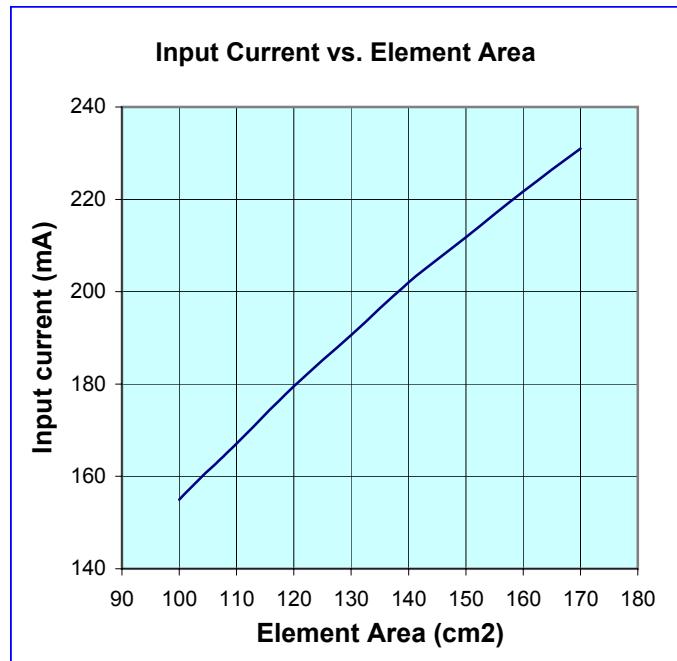
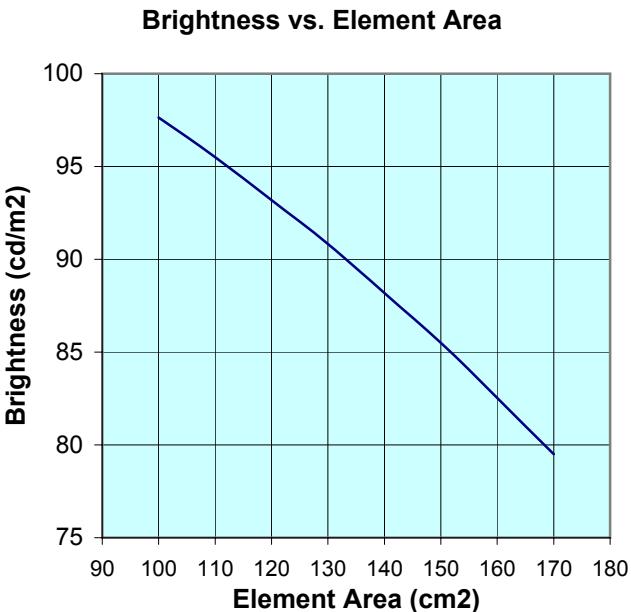
LOAD CHARACTERISTICS DATA

INVERTER: NDL-212



LOAD CHARACTERISTICS DATA

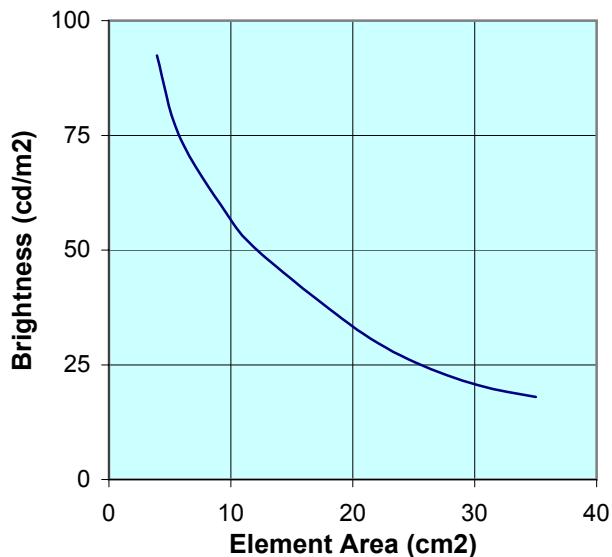
INVERTER: NDL-217



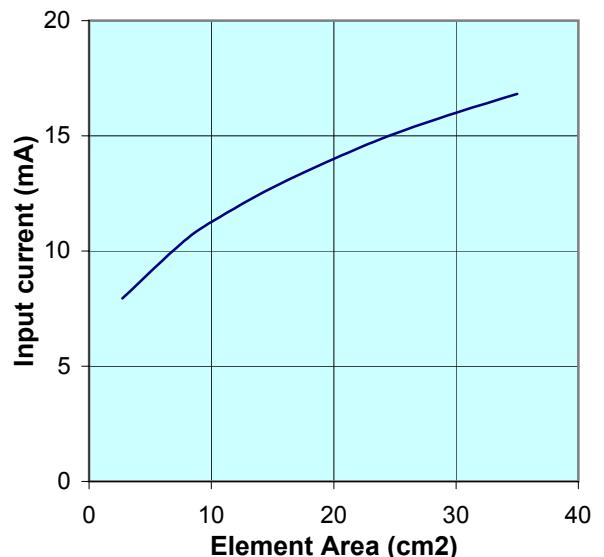
LOAD CHARACTERISTICS DATA

INVERTER: NDL-201

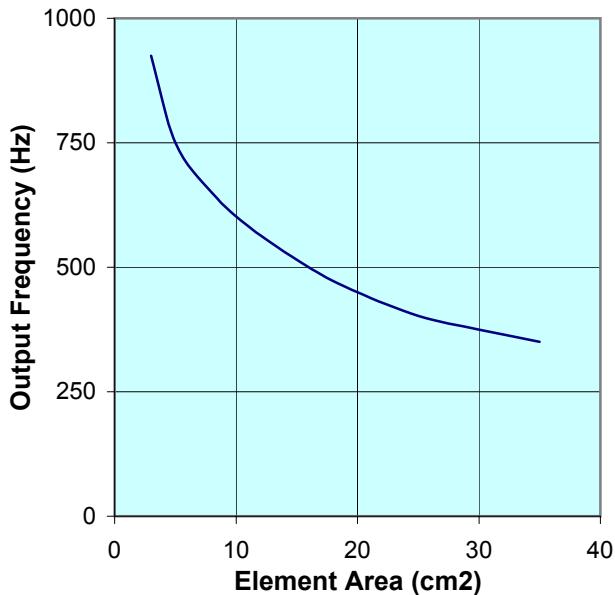
Brightness vs. Element Area



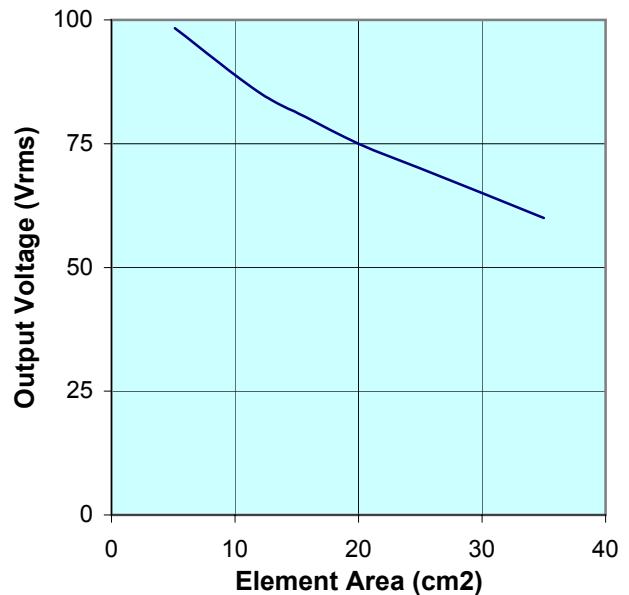
Input Current vs. Element Area



Output Frequency vs. Element Area

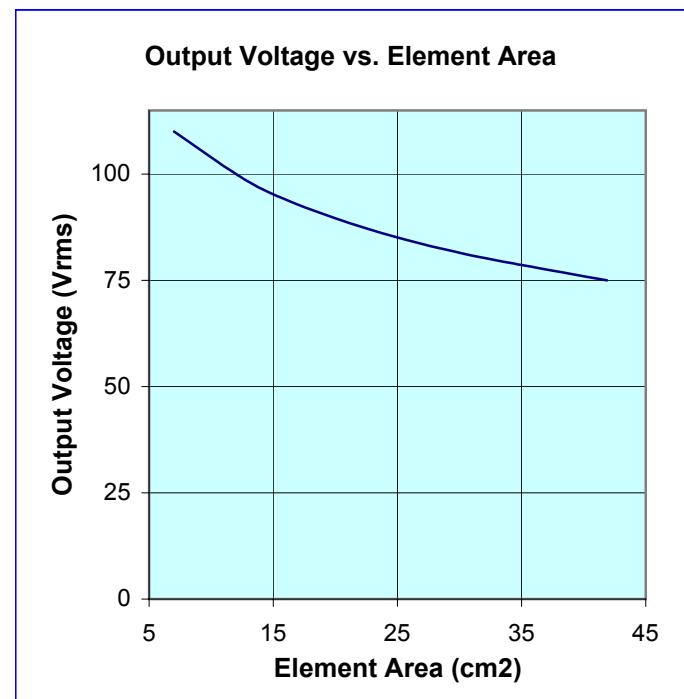
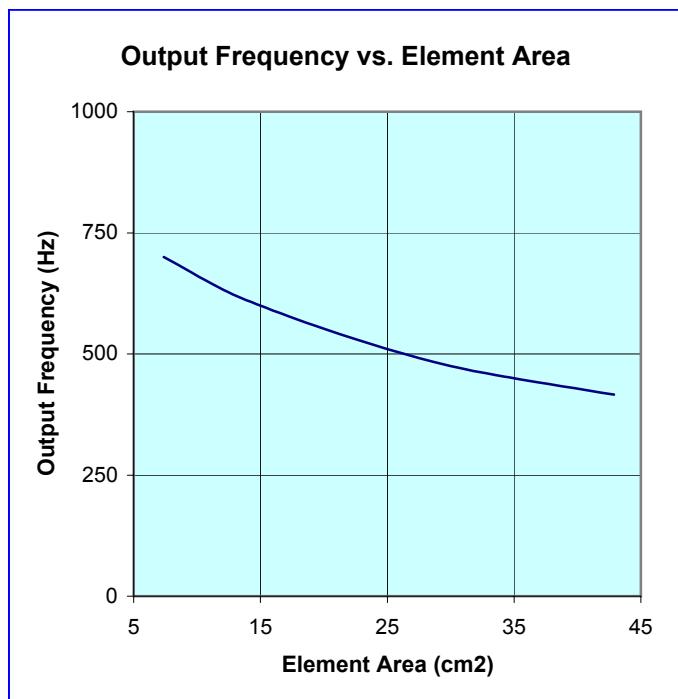
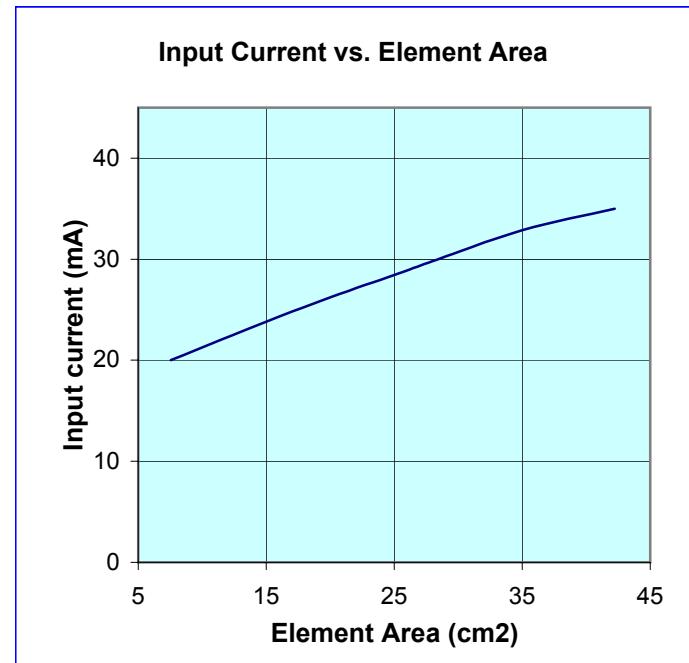
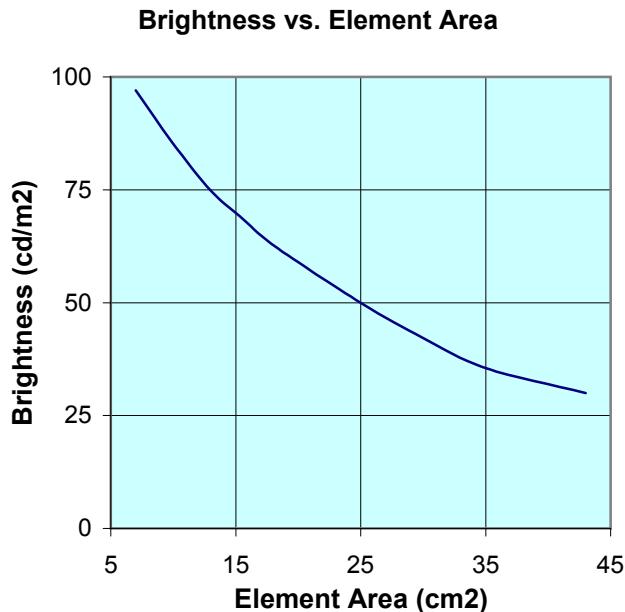


Output Voltage vs. Element Area



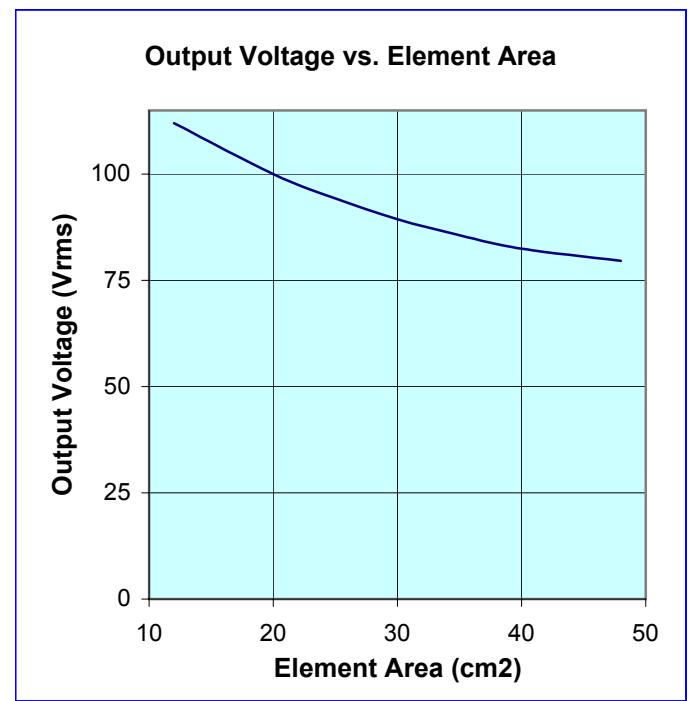
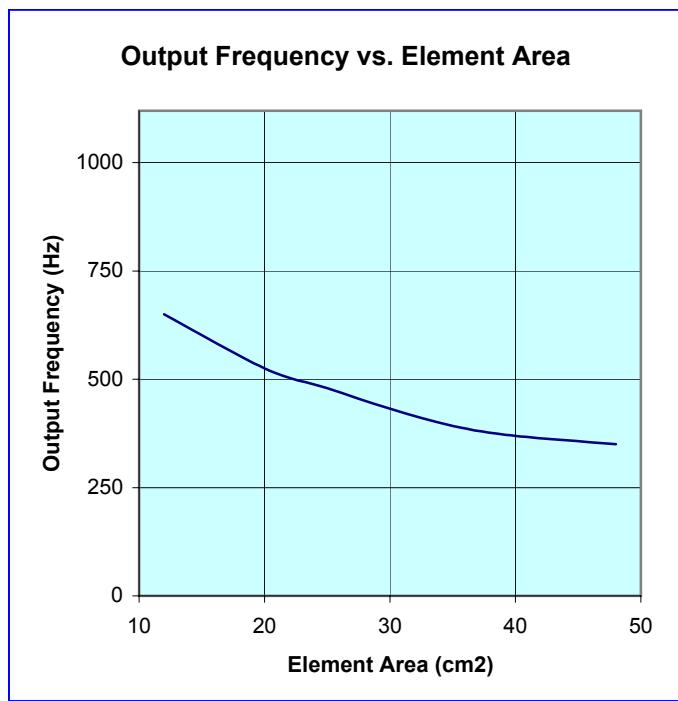
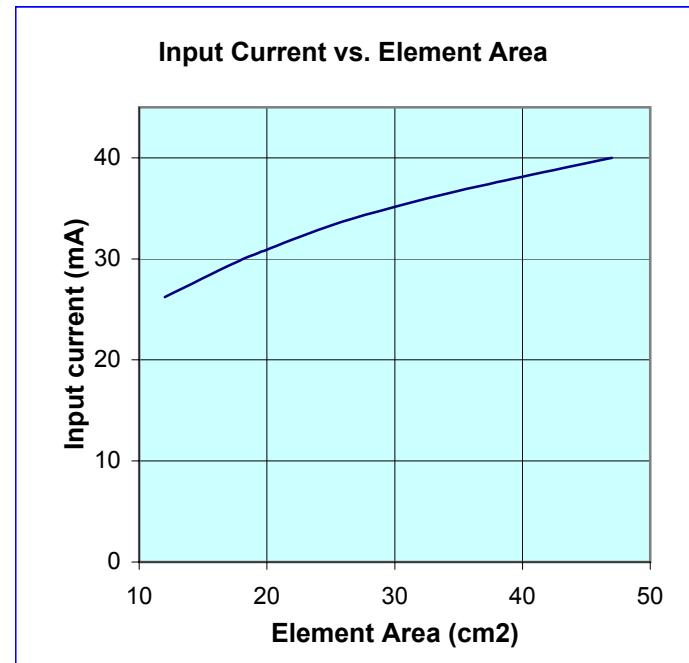
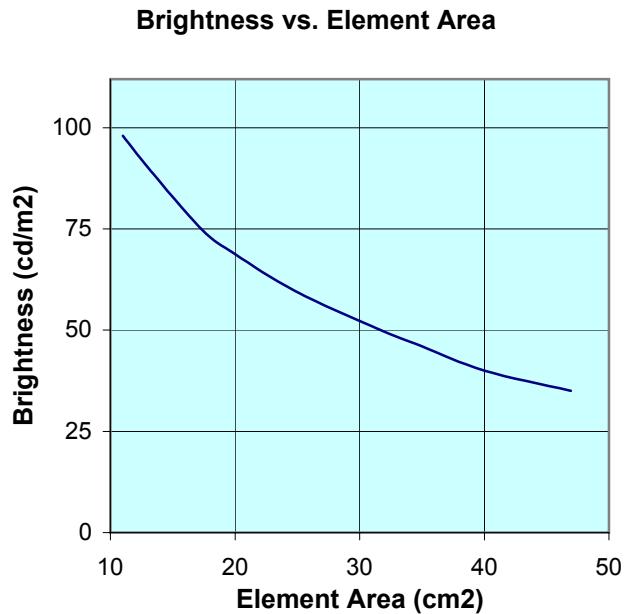
LOAD CHARACTERISTICS DATA

INVERTER: NDL-202



LOAD CHARACTERISTICS DATA

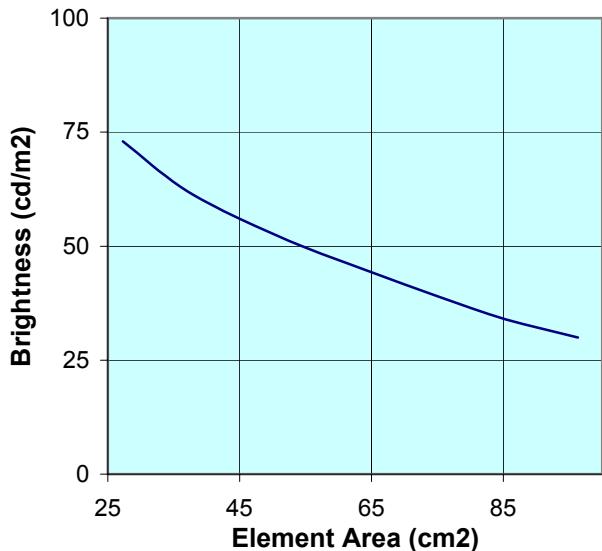
INVERTER: NDL-203



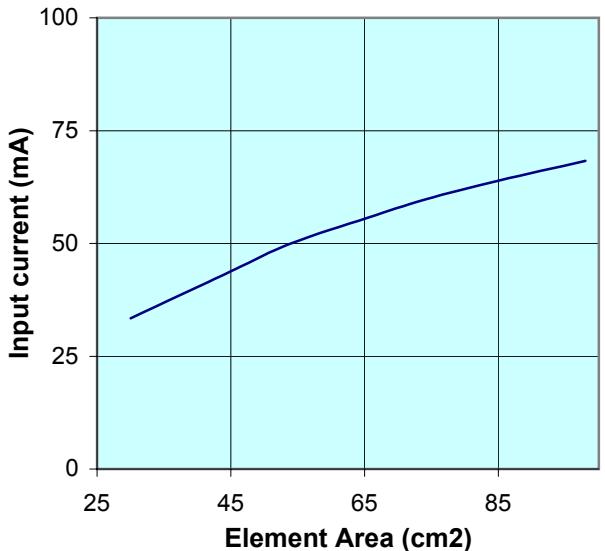
LOAD CHARACTERISTICS DATA

INVERTER: NDL-204

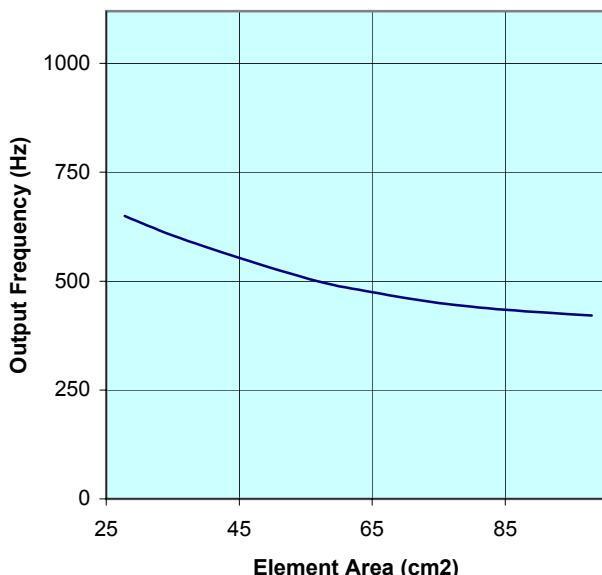
Brightness vs. Element Area



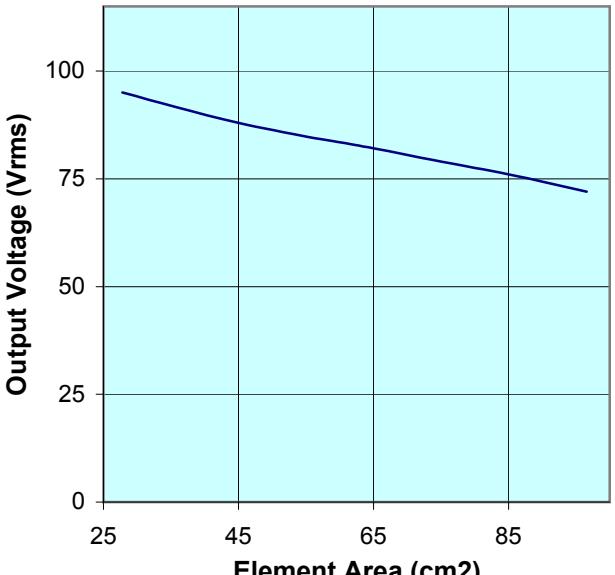
Input Current vs. Element Area



Output Frequency vs. Element Area



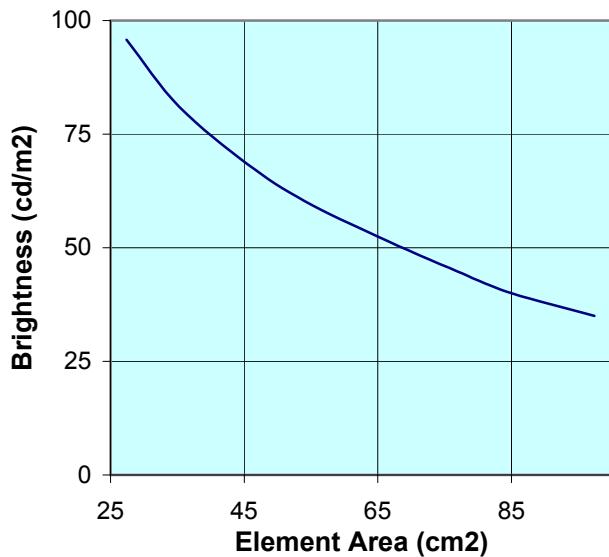
Output Voltage vs. Element Area



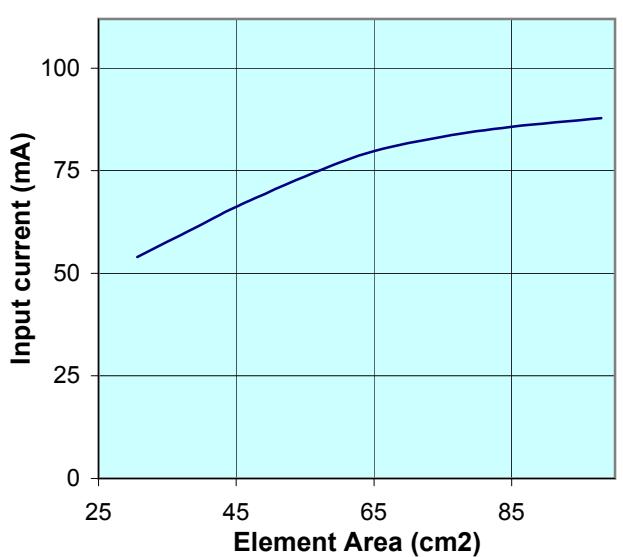
LOAD CHARACTERISTICS DATA

INVERTER: NDL-205

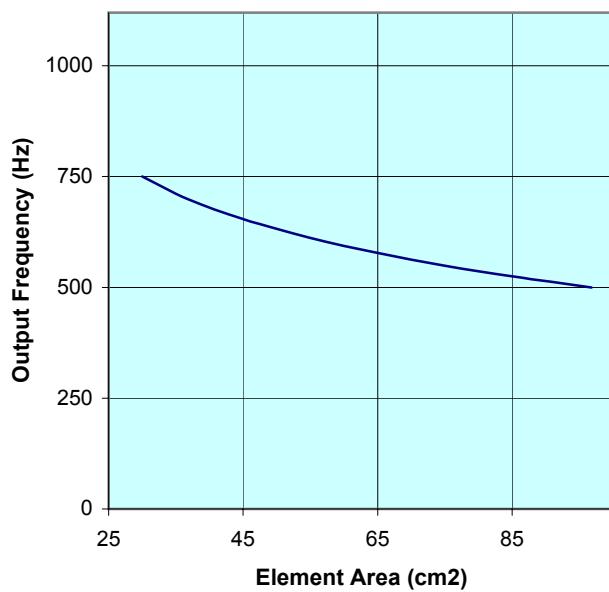
Brightness vs. Element Area



Input Current vs. Element Area



Output Frequency vs. Element Area



Output Voltage vs. Element Area

