

Efficiency of Magnetic Neon Transformers

June 4, 2008

Standard Transformers (single voltage rated):

Output Current	Input Voltage	Power Factor		Output Voltage Rating									
				3000	4000	5000	6000	7500	9000	10500	12000	15000	
30 mA	120 V	Normal	Efficiency	0.686	0.662	0.688	0.680	0.714	0.726	0.759	0.757	0.767	
60 mA				0.703	0.735	0.747	0.729	0.759	0.773		0.789	0.798	
30 mA	277 V			0.679	0.692	0.709	0.727	0.745	0.751	0.776	0.808		
60 mA				0.737	0.737	0.751	0.770	0.785		0.797	0.830		
30 mA	120 V			High	Efficiency	0.638	0.660	0.678	0.729	0.755	0.764	0.766	0.777
60 mA						0.744	0.744	0.735	0.759	0.772		0.783	0.812
30 mA	277 V	0.776	#DIV/0!										
60 mA						0.752	0.733	0.766					

Universal Transformers:

Universal transformers are designed for servicemen to replace several transformer voltage ratings. For instance, a 15000 volt, 30 mA universal transformer can replace a 10500 volt, 12000 volt, and a 15000 volt transformer of the same current rating; a 9000 volt, 30 mA universal transformer can replace any 30 mA transformer rated 9000 volt or less.

The 20 mA rated transformers below are classified as “energy saver” transformers – some effort has been made to increase transformer efficiency, but most of the energy savings results from the lower output current.

Input Voltage/Current			Output Voltage Rating											
			15000			9000			15000			9000		
Tubing Length			26 ft.	35 ft.	45 ft.	1 ft.	13 ft.	26 ft.	33 ft.	47 ft.	60 ft.	10 ft.	21 ft.	33 ft.
120 V	20 mA	Efficiency	0.742	0.783	0.808	0.191	0.687	0.801						
	30 mA		0.699	0.754	0.790	0.138	0.601	0.743	0.716	0.787	0.833	0.525	0.706	0.784
277 V	30 mA		0.715	0.770	0.806	0.151	0.625	0.762	0.733	0.796	0.830	0.541	0.710	0.782
347 V	30 mA		0.686	0.745	0.781	0.146	0.626	0.769	0.738	0.801	0.834	0.523	0.704	0.782