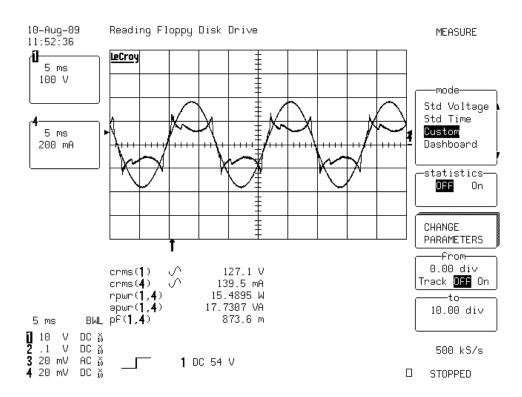
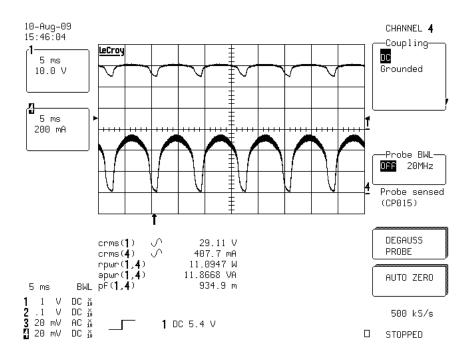


1 Input Power with no dimmer in line (9 LEDs)



Line current and voltage





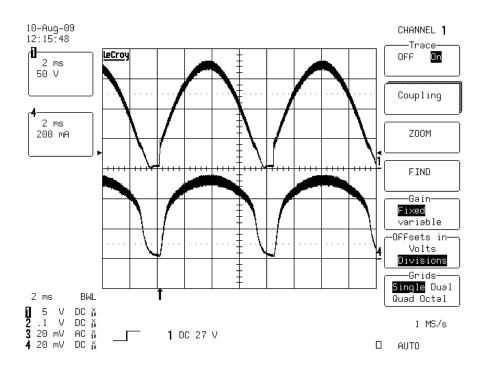
Output LED current and voltage.

Ac measured efficiency 11.1/15.5*100=71% (includes the dimmer)

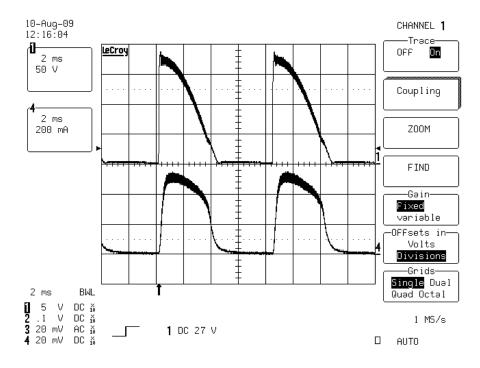
Measured efficiency from DC source .478*29.8/140*.125*100=81%



2 Wave forms

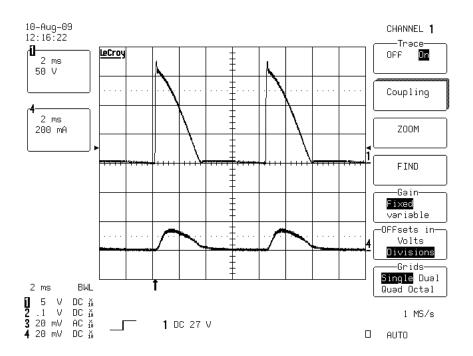


Rectified Input line voltage and output current with no dimming

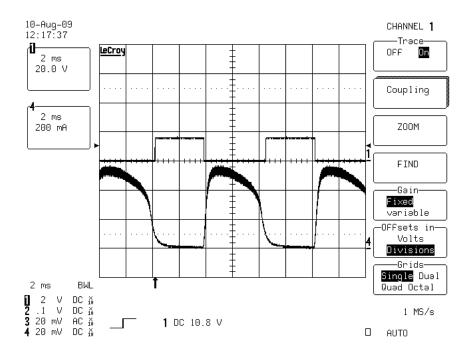


Output LED current (bottom) and rectified line at ½ dimming



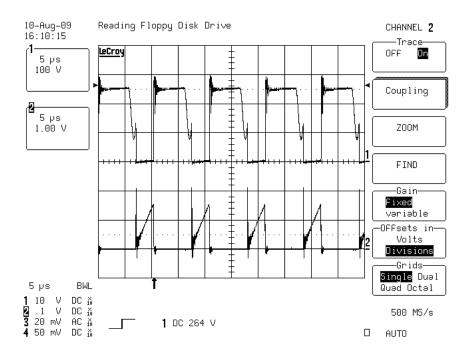


Output LED current (bottom) and rectified line at 3/4 dimming



Dummy load gate drive (upper) and output current





Drain voltage W.R.T. Pgnd TOP. Sense R voltage, BOTTOM. Near the peak of the line voltage.

3 Dummy load operation

Q4 switches R22 across the rectified line during the time the LED current is zero. This loads the dimmer only when the TRIAC is off. This seems to be important for constant TRIAC firing at light loads and keeps the light from flickering

4 Output current versus Number of LEDs

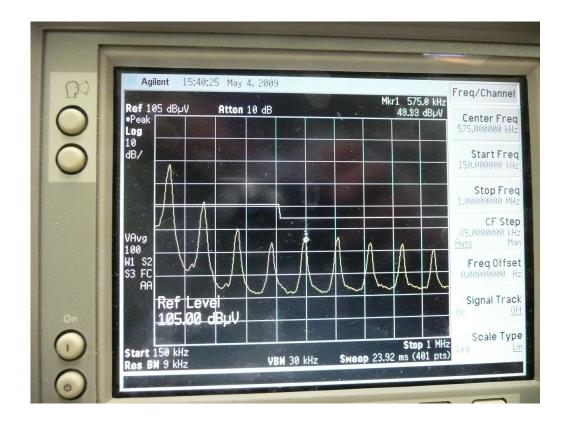
number of LEDs	V out	I out	P out
10	32.21	0.371	11.94991
9	29.03	0.374	10.85722
8	25.84	0.377	9.74168
7	22.56	0.382	8.61792
6	19.48	0.408	7.94784



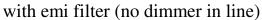
5 Conducted EMI

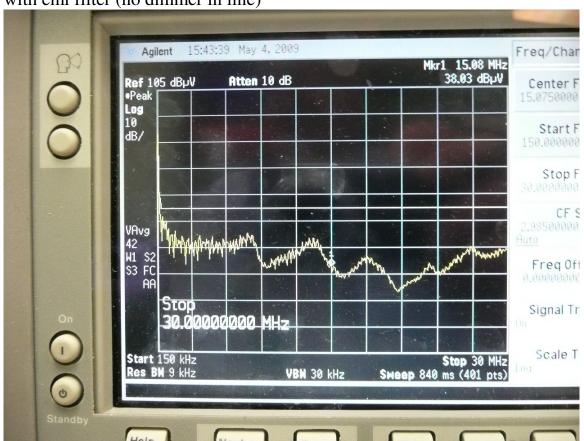
All taken with a LISN in line

No dimmer in line

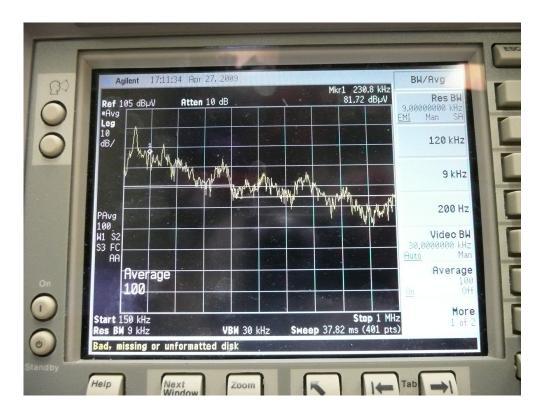












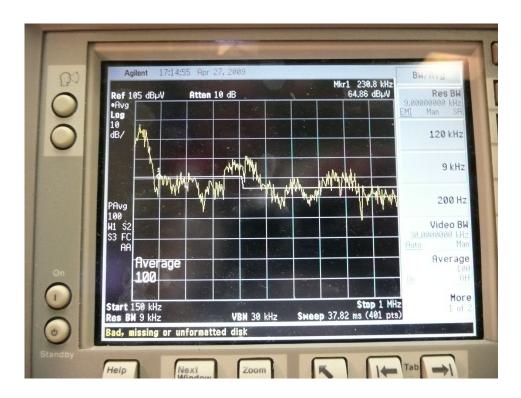
w/ emi filter and dimmer in line





60 watt light bulb





60w light bulb with dimmer in line

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