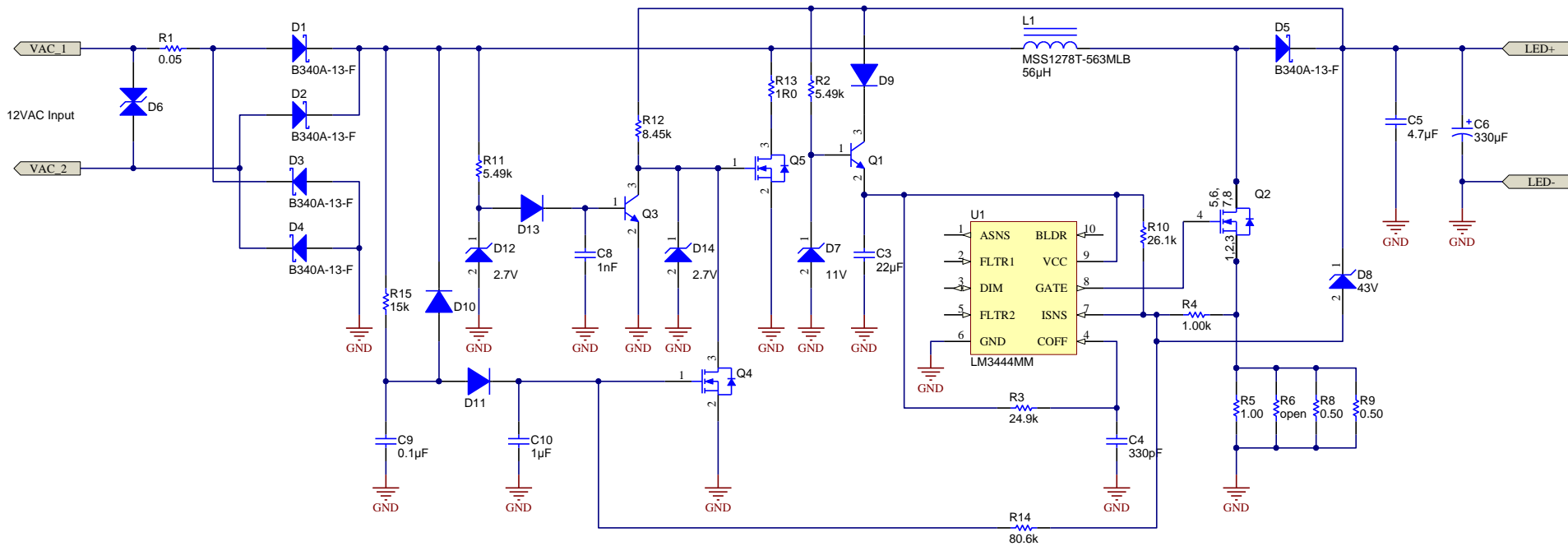
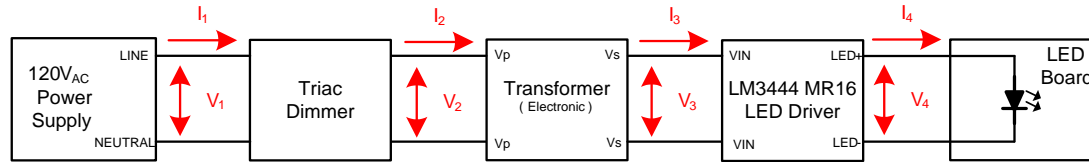


LM3444 (dimmable)



Bench Circuit



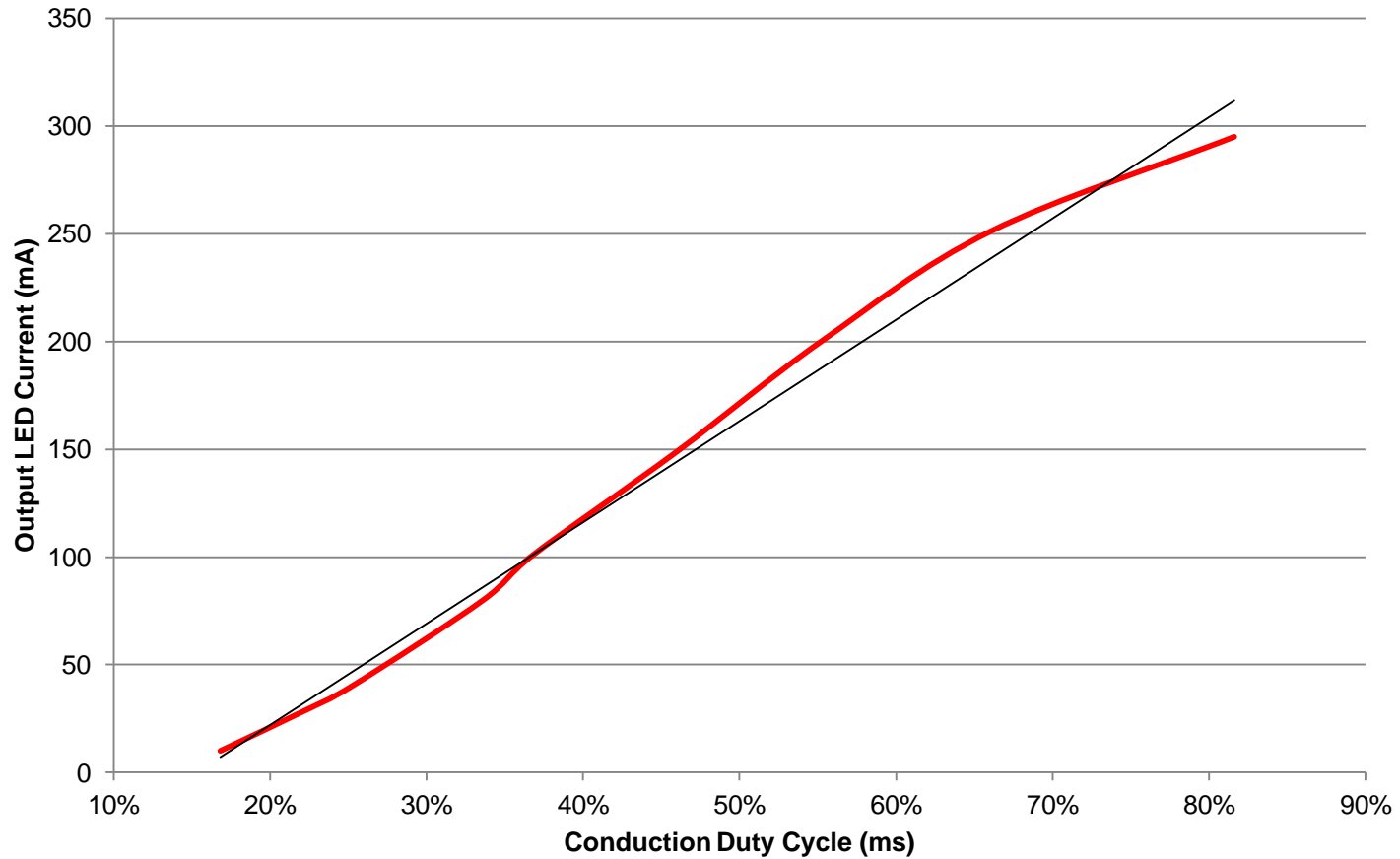
Measurement Results

Input Voltage	Input Current (mA)	Input Voltage (V)	LED Current (mA)	LED Voltage (V)	Efficiency (%)
12V DC	1095	12	282	38.0	81.6
12V AC	12.1		247	37.6	76.7
Osram ET-A60 (220V AC)	15.5		293	38.2	72.2

Remarks:

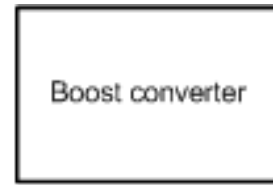
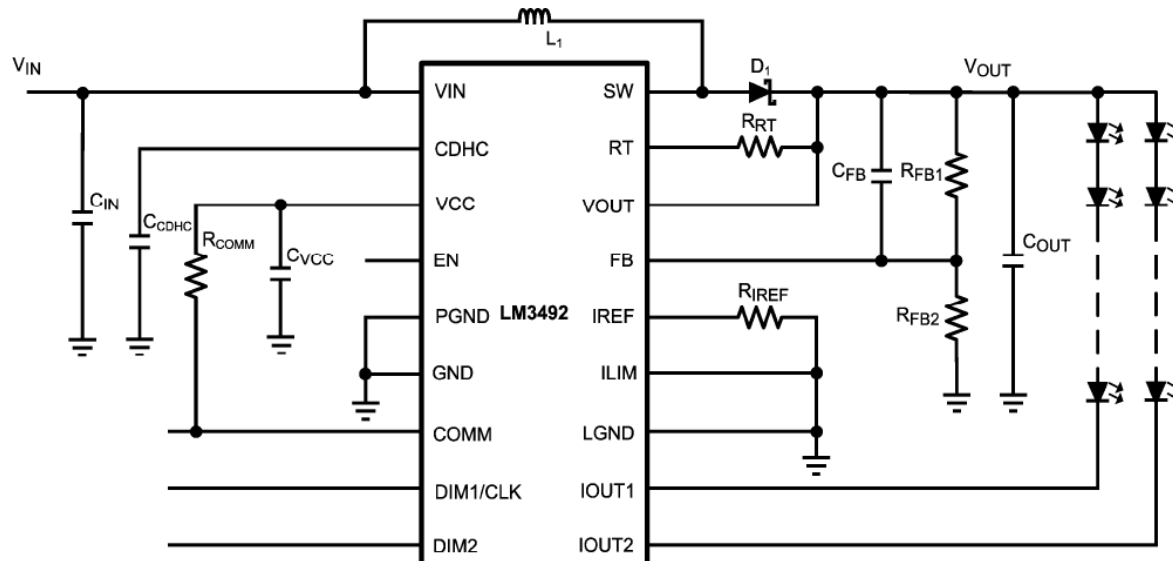
1. 12V DC Power is supplied by Agilent E3634A
2. 50Hz AC Power is supplied by Kikusui PCR 500LA
3. Efficiency is measured by Agilent 34401A
(Measured Power Supply as input, LEDs as output. All system included bridge & LM3492)

Output Current Linearity

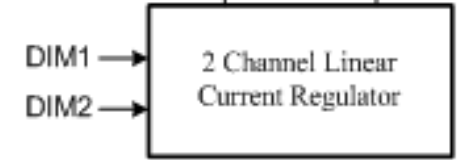


LM3492 (Boost + 2 ch. linear LED driver)

- Integrated boost power switch
- Integrated 2 ch. linear current regulator
- Automatic voltage headroom control
- Wide input voltage range 4.5V-6V

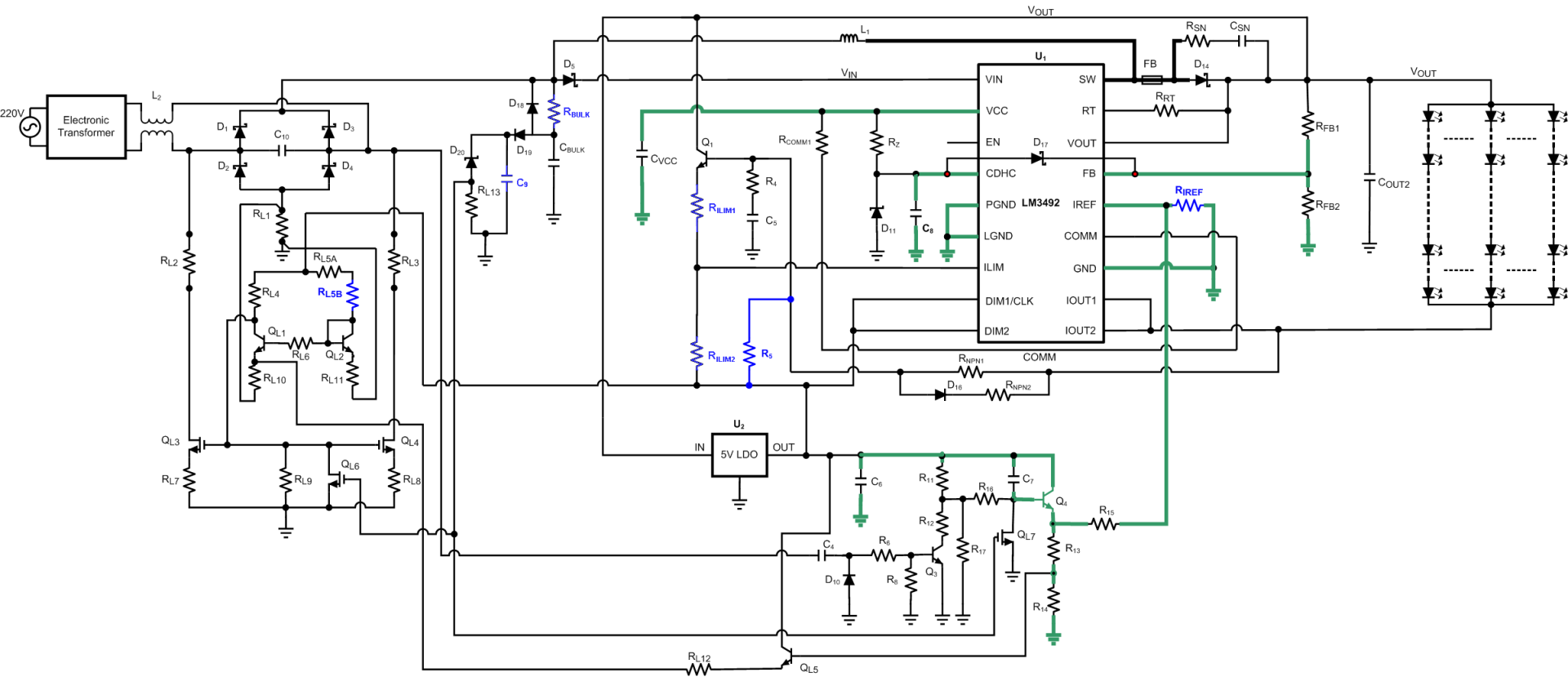


Boost converter provide the output voltage to power LED strings



Individual dimmable current regulator control LED current and brightness

LM3492 (dimmable)



Green color route (quiet ground “GND” related) should be kept short.

“FB” net needs to be quiet, keep it away from the “SW” net.

Mind the kelvin sense connection of “RL1”.

LM3492 (dimmable)

**Performance
with 12VAC**

Specs	LM3492 BOOST 6 LEDs	Units
V_{IN}	12	VAC
P_{IN}	6.9	W
V_{OUT}	18.54	VDC
I_{LED}	0.295	A
P_{OUT}	5.47	W
Efficiency	79.2	%

Specs	LM3492 BOOST 6 LEDs	Units
V_{IN}	220	VAC
P_{IN}	7.28	W
V_{OUT}	18.42	VDC
I_{LED}	0.278	A
P_{OUT}	5.12	W
Efficiency	70.3	%

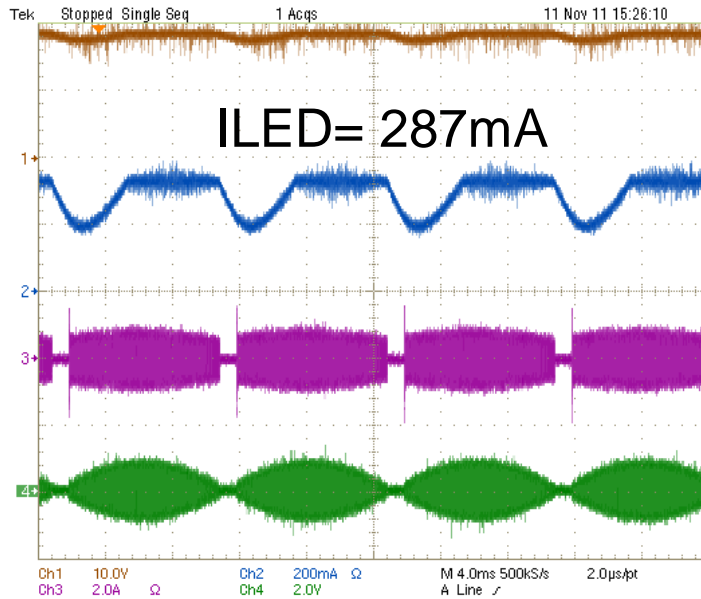
**Performance with electronic
transformer (Philips ETK50)**

**Performance with electronic
transformer (RIO RT50M)**

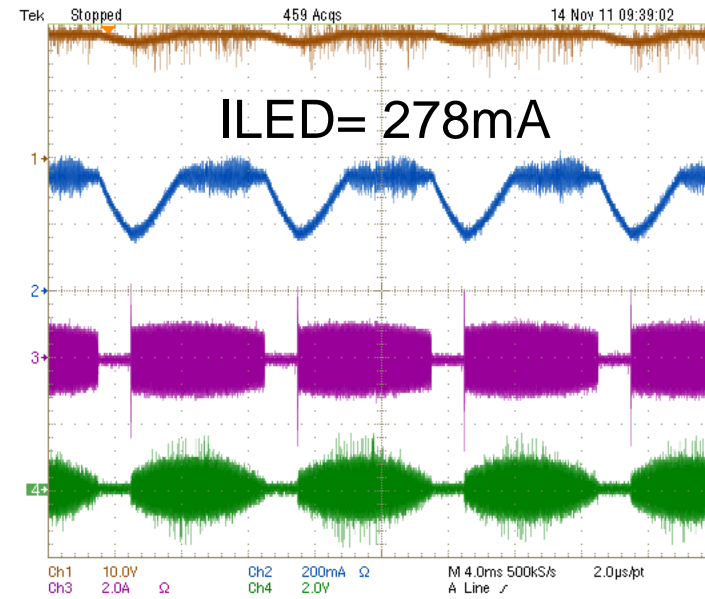
Specs	LM3492 BOOST 6 LEDs	Units
V_{IN}	220	VAC
P_{IN}	7.27	W
V_{OUT}	18.45	VDC
I_{LED}	0.287	A
P_{OUT}	5.3	W
Efficiency	72.8	%

LM3492 (dimmable)

Electronic Transformer Waveform (RIO RT50M)



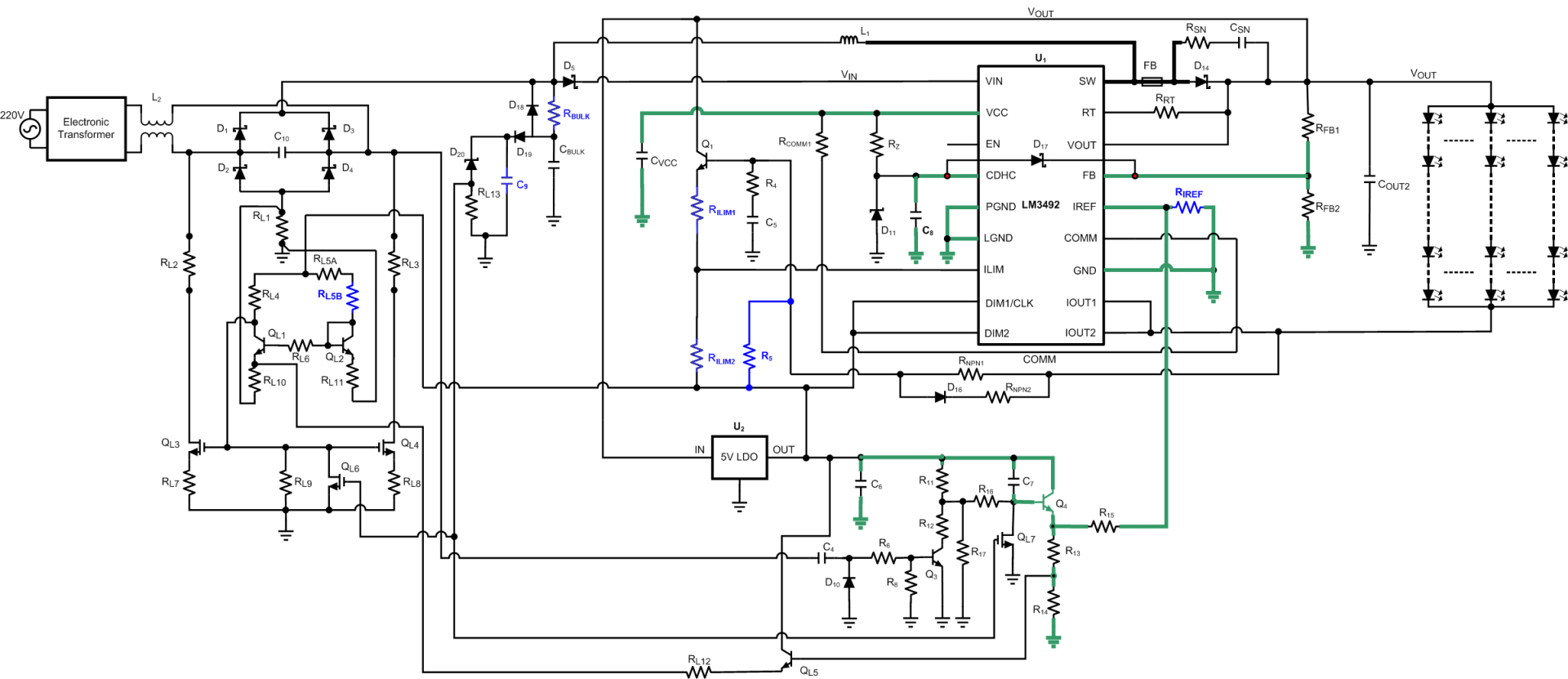
Electronic Transformer Waveform (Philips ETK50)



1. 220V 50Hz AC Power is supplied by Kikusui PCR 500LA
2. Rio RT50M E-Transformer

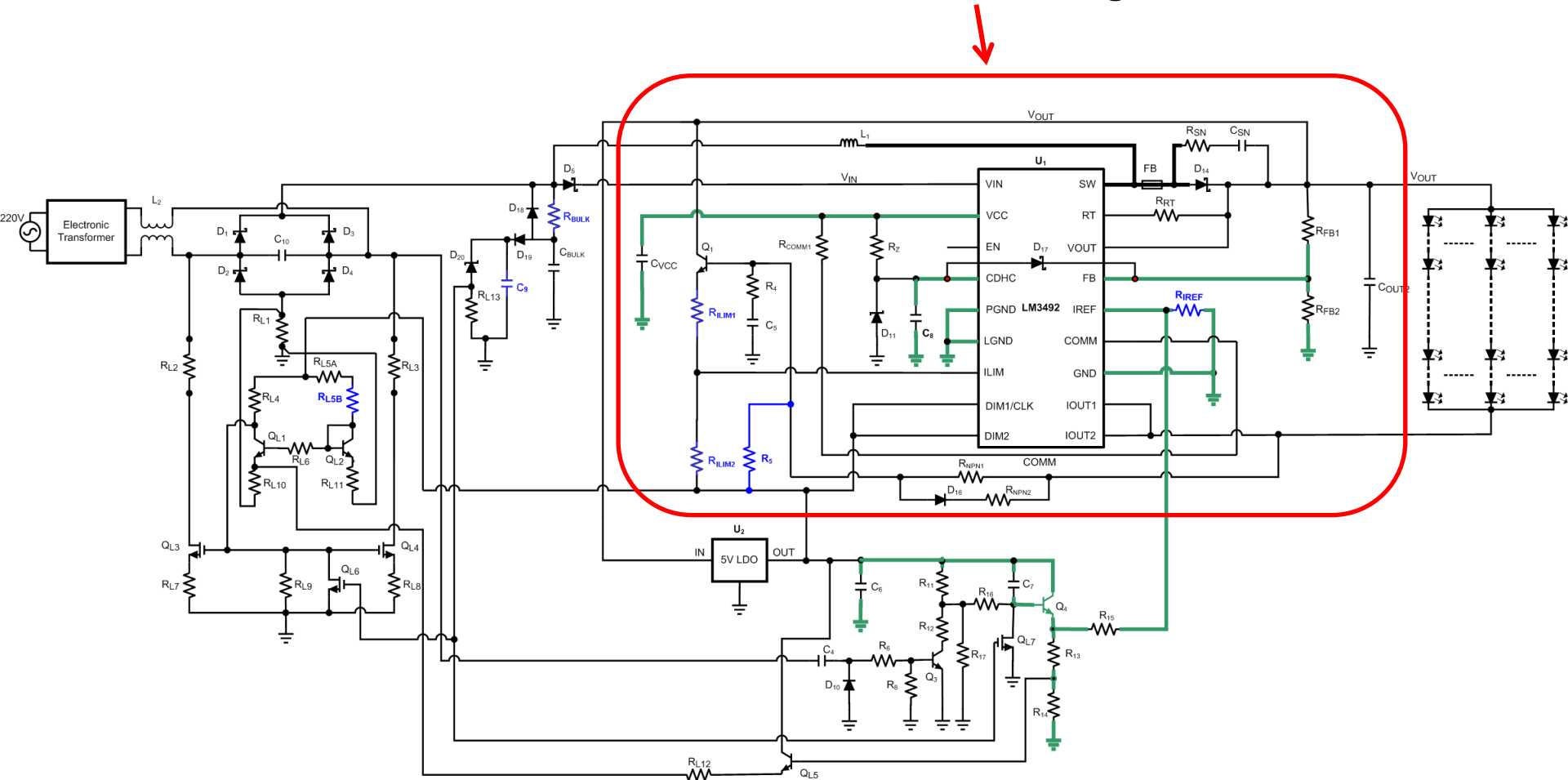
CH1: LED Voltage
CH2: LED Current
CH3: Output Current from Transformer
CH4: Output Voltage from Transformer
(100mV * 200 = 20V/div)

Operation principles of the LM3492 MR16 solution

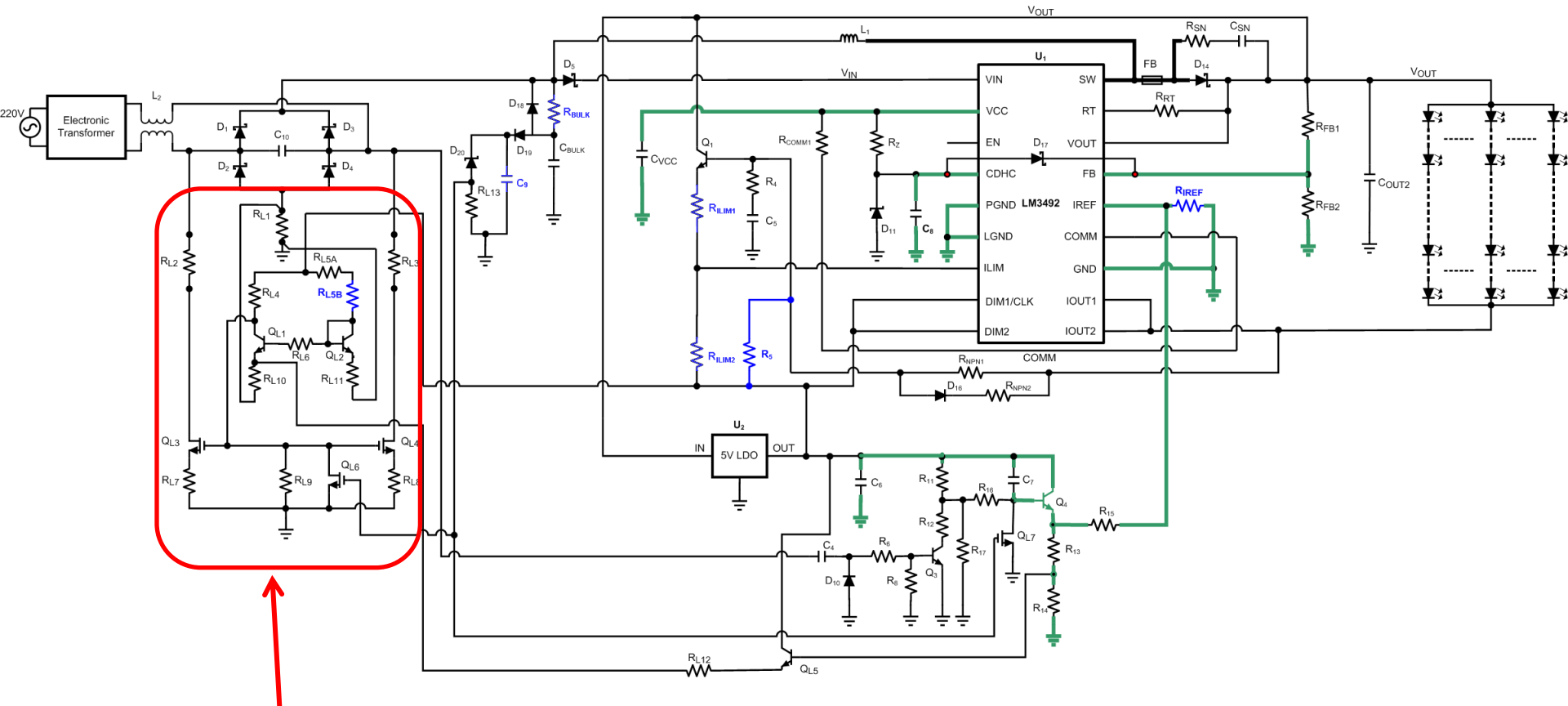


Operation principles of the LM3492 MR16 solution

Boost LED driver stage

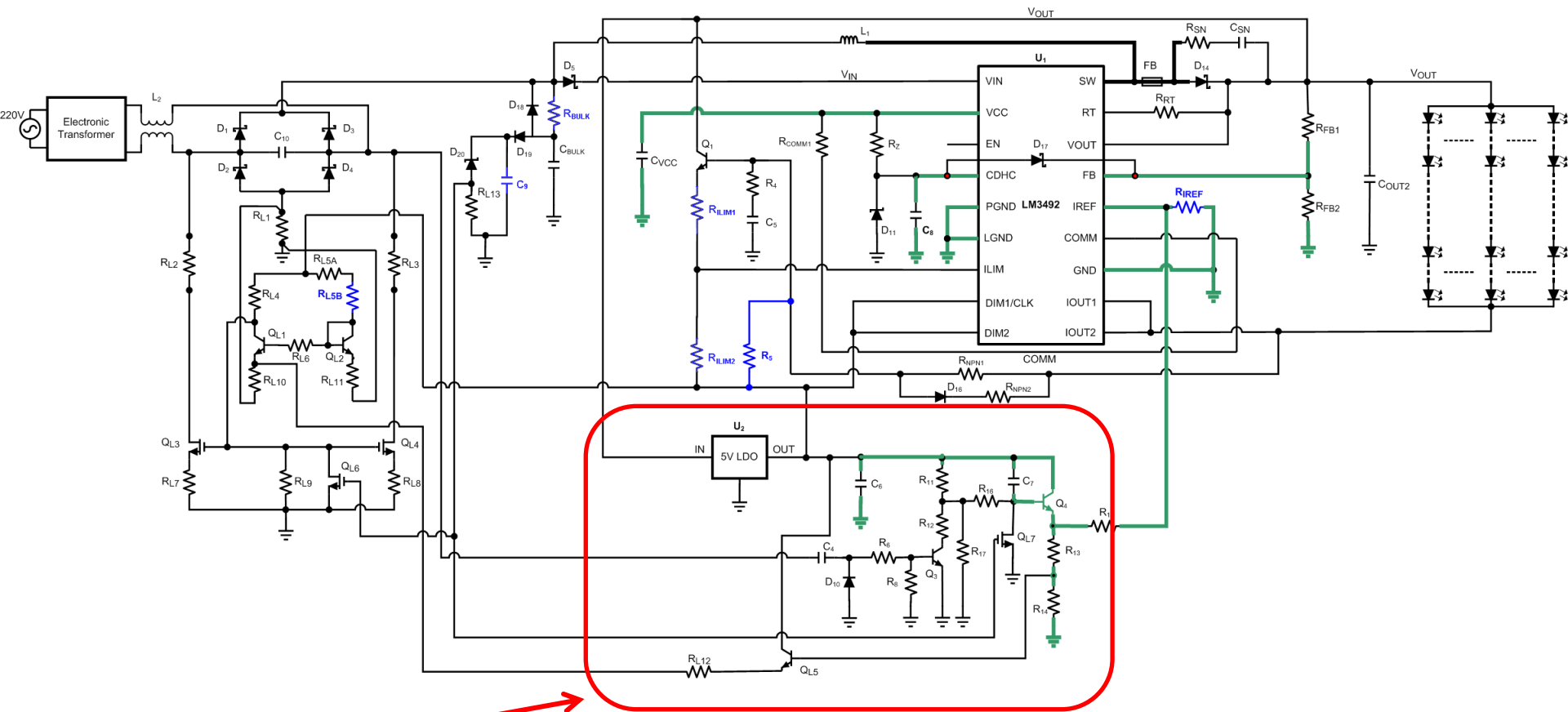


Operation principles of the LM3492 MR16 solution



Current sensor for constant input current regulation and AC dummy load circuit

Operation principles of the LM3492 MR16 solution



Electronic transformer detection and IOUT reference adjustment circuit

• Q&A?