ON Semiconductor®

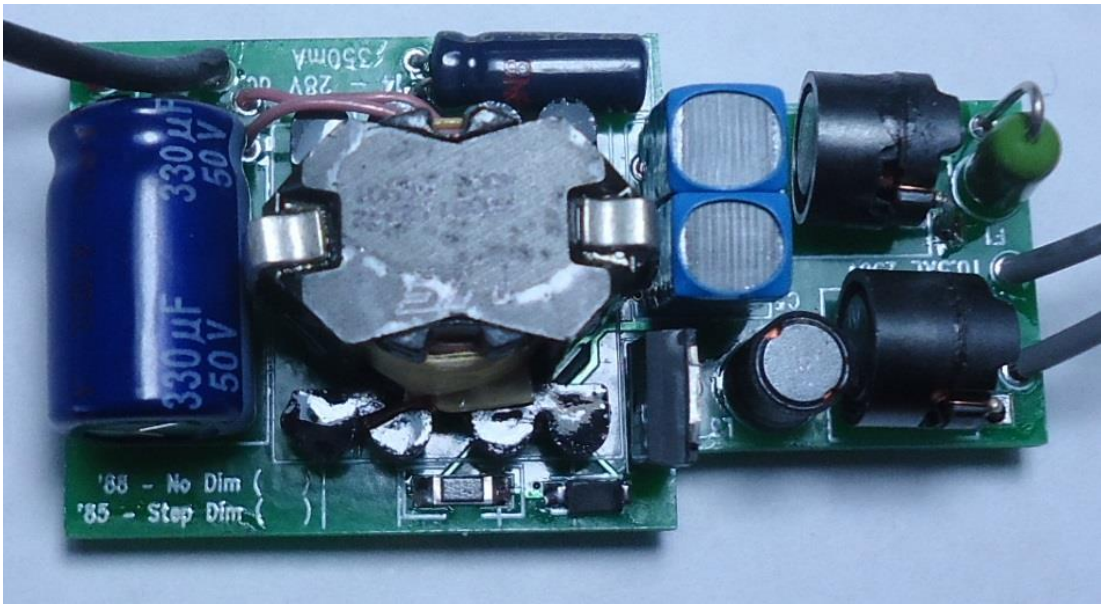
Test Procedure for the NCL30085FLYGEVB

Overview

This procedure describes the functional testing of the NCL30085FLYGEVB and NCL30088FLYGEVB LED driver using a flyback PFC.

Basic Specifications

Input Voltage – 90 V ac to 265V ac Input Frequency – 50/60 Hz
Output Voltage – 14 V dc to 28 V dc
Output Current –350 mA dc Nominal



Equipment Needed

AC Source – 90 V ac to 265 V ac 50/60 Hz Minimum 1A ac capability
AC Wattmeter – 30 W Minimum, True RMS Input Voltage and Current, Power Factor 0.2% accuracy or better
DC Voltmeter – 200 V dc minimum 0.1% accuracy or better
DC Ammeter – 0.5 A dc minimum 0.1% accuracy or better
LED Load – 14 V dc to 28 V dc rated for at least 1000 mA dc operation

Test Set Up

1. Connect the Unit Under Test (UUT) per the test set up in Figure 1.

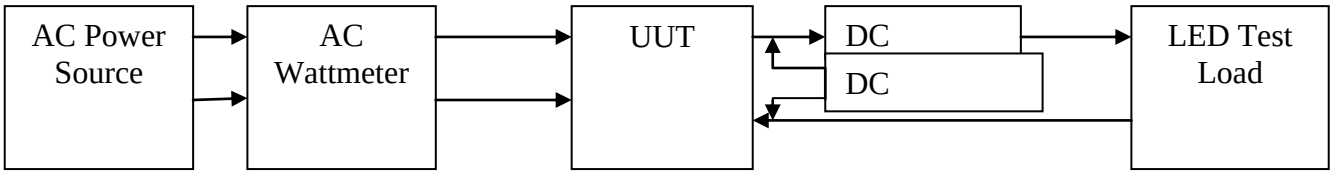


Figure 1. Test Set Up

Note: Unless otherwise specified, all voltage measurements are taken at the terminals of the UUT.

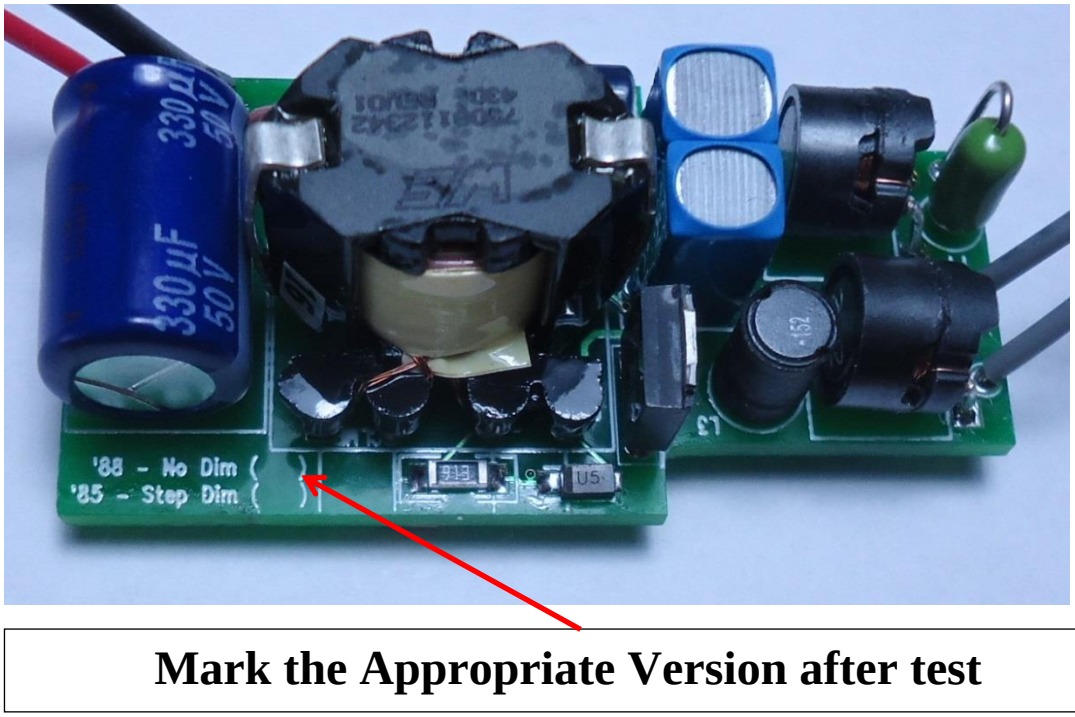
Functional Test Procedure

NCL30085FLYGEVB
Connect the UUT per figure 1.

Test Condition	Test Variable	Test Limits		Pass / Fail (Circle One)
		Min	Max	
Vin = 90 V ac Vout = 28 V dc	Output Current	332mA	368mA	Pass / Fail
Vin = 120 V ac Vout = 28 V dc	Output Current	332mA	368mA	Pass / Fail
Vin = 265 V ac Vout = 28 V dc	Output Current	332mA	368mA	Pass / Fail
Vin = 265 V ac Vout = 28 V dc	Power Factor	0.90		Pass / Fail
Vin = 120 V ac Vout = 28 V dc	Input Power		13W	Pass / Fail

Step Dimming Test Procedure

- Connect the UUT per figure 1 with an LED Load between 20 – 28 V dc.
- Apply 120 V ac and verify that the current is 332 – 368 mA.
- Interrupt the AC input for 1 – 2 seconds. Verify that the current has stepped down.
- Repeat the previous step 2 more times each time verifying that the current has stepped down. Note: the current steps are large and should be evident to the casual observer.
- Interrupt AC input once more and verify that the current returns to the full output 332 – 368 mA.



Mark the Appropriate Version after test