ON Semiconductor®

Test Procedure for the NCL30288LED1GEVB Evaluation Board

Equipment Needed

AC Source – 90 to 305 V ac 50/60 Hz Minimum 50 W capability
AC Wattmeter – 100 W Minimum, True RMS Input Voltage, Current, Power Factor, and THDi 0.2% accuracy or better
DC Voltmeter – 300 V dc minimum 0.1% accuracy or better
DC Ammeter – 100 mA dc minimum 0.1% accuracy or better
LED Load – 90 V – 160 V @ 113 mA

Test Connections

1. Connect the LED Load to the red(+) and black(-) leads through the ammeter shown in Figure 7. Caution: Observe the correct polarity or the load may be damaged.
2. Connect the AC power to the input of the AC wattmeter shown in Figure 7. Connect the white leads to the output of the AC wattmeter
3. Connect the DC voltmeter as shown in Figure 7.

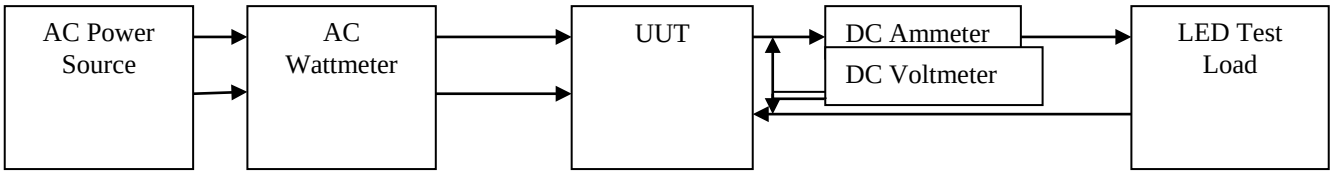

Figure 7. Test Set Up

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

Functional Test Procedure

1. Set the LED Load for ~160V output.
2. Set the input power to 120 V 60 Hz. Caution: Do not touch the ECA once it is energized because there are hazardous voltages present. This UUT does not provide input/output isolation. Ensure measurement equipment is rated for sufficient common mode voltage.

Line and Load Regulation
120 V / Max Load

Load Voltage	Output Current 114mA ± 3mA	Output Power	Power Factor	THDi
90V				
135V				
160V				

230V / Max Load

Load Voltage	Output Current 114mA ± 3mA	Output Power	Power Factor	THD < 20%
90V				
135V				
160V				

$$\text{Efficiency} = \frac{Vout \times Iout}{Pin} \times 100\%$$