



THINK
ON.

NCL2801LED2GEVB Test Procedure

ON Semiconductor[®]



Internal Use Only

Revision History

Revision	Date	Comment
00	4/11/19	Initial Release

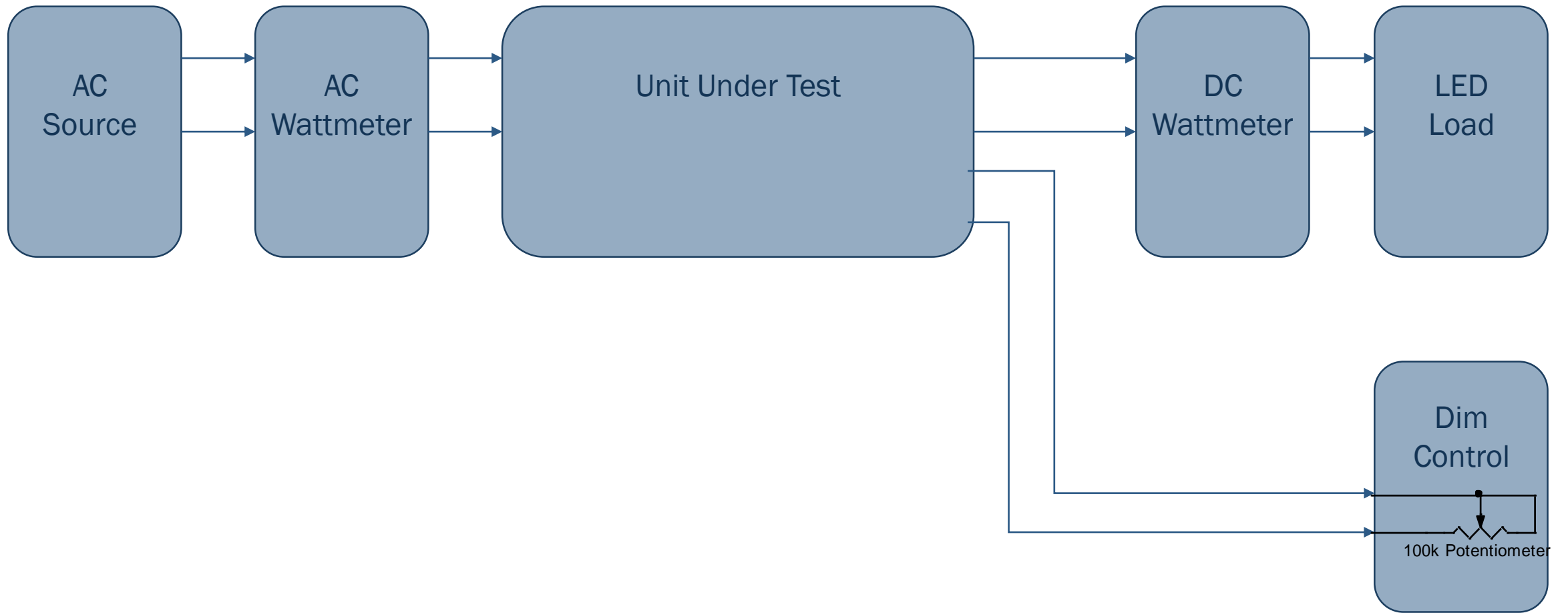


Equipment

- AC Source – 300W minimum, 90V ac – 305V ac 50/60Hz
- 2 Wattmeters – one for AC input and one for LED output
- LED Load – 50V dc @ 3A dc
- Dim Control – 100k Ω Potentiometer

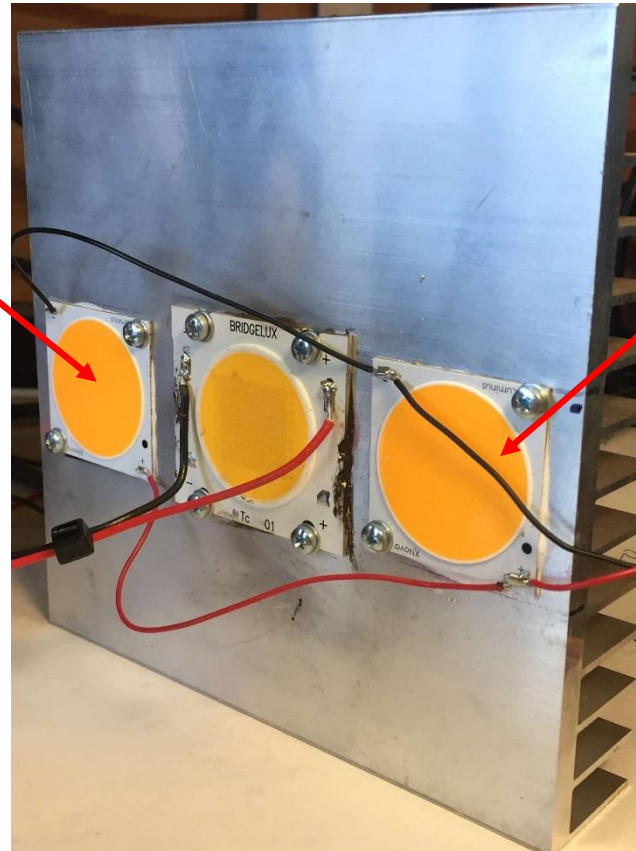


Test Setup



LED Load Recommended

- LED Load – 2 X Luminus Devices CXM-32-27-80-54-AC30-F4-3 (Digikey PN 1214-1504-ND) connected in parallel mounted on a heatsink



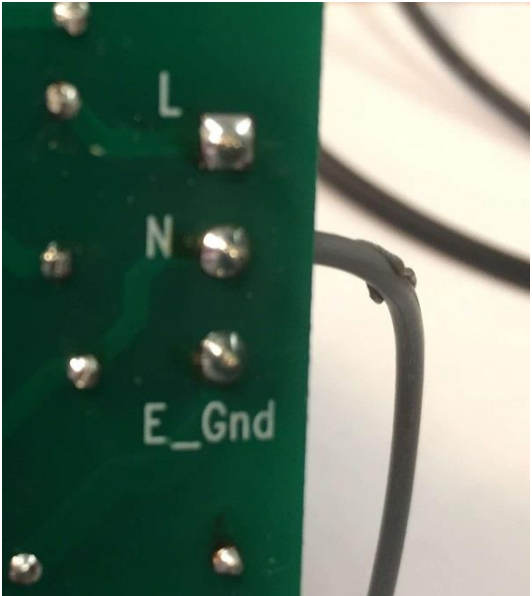
Dim Control Recommended

- Dim Control – 100k 10 turn potentiometer Bourns 3549S-1AA-104A (Digikey PN 3549S-1AA-104A-ND)

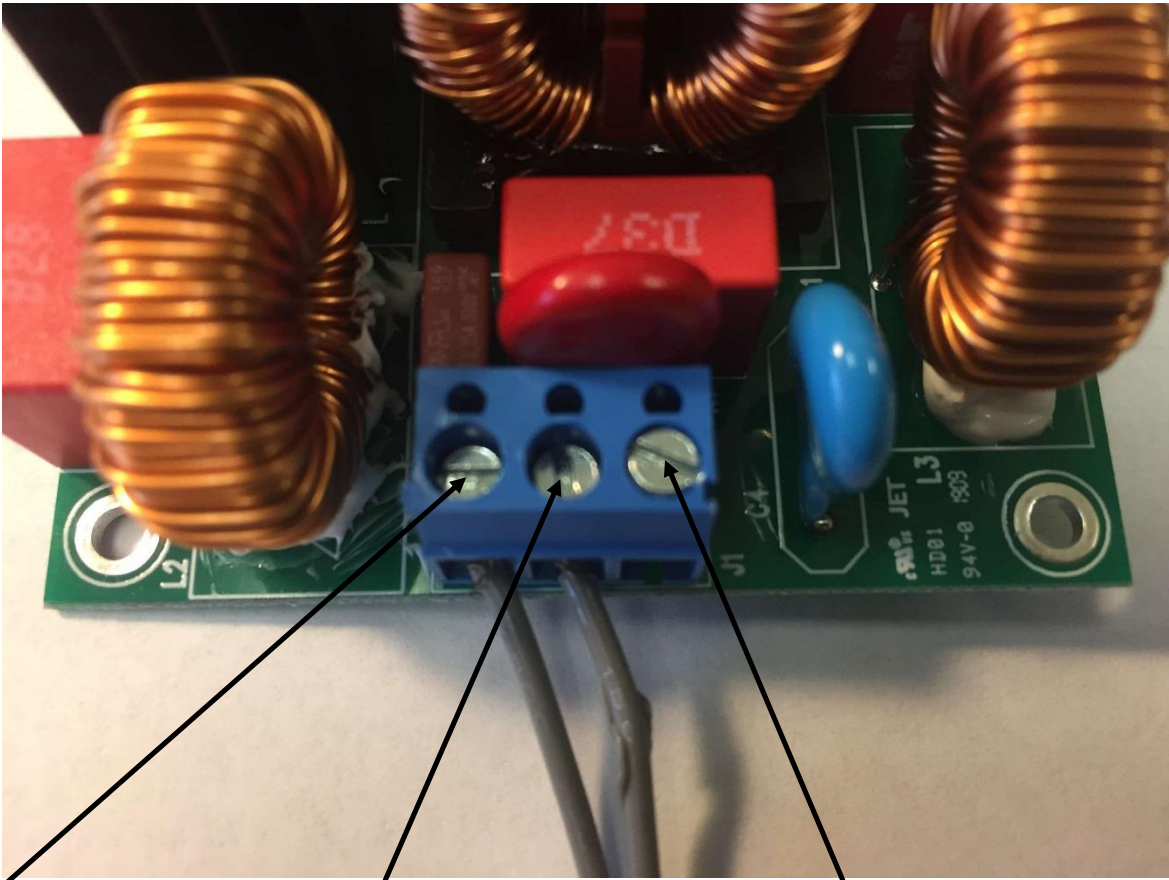


BOM	
Description	Digikey PN
Knob	679-3545-ND
Enclosure	L122-ND
100k Pot	3549S-1AA-104A-ND
Red Banana Jack	J151-ND
Blk Banana Jack	J118-ND
Wht Banana Jack	J150-ND

Unit Connections



AC Connection marking on the solder side of the PCB



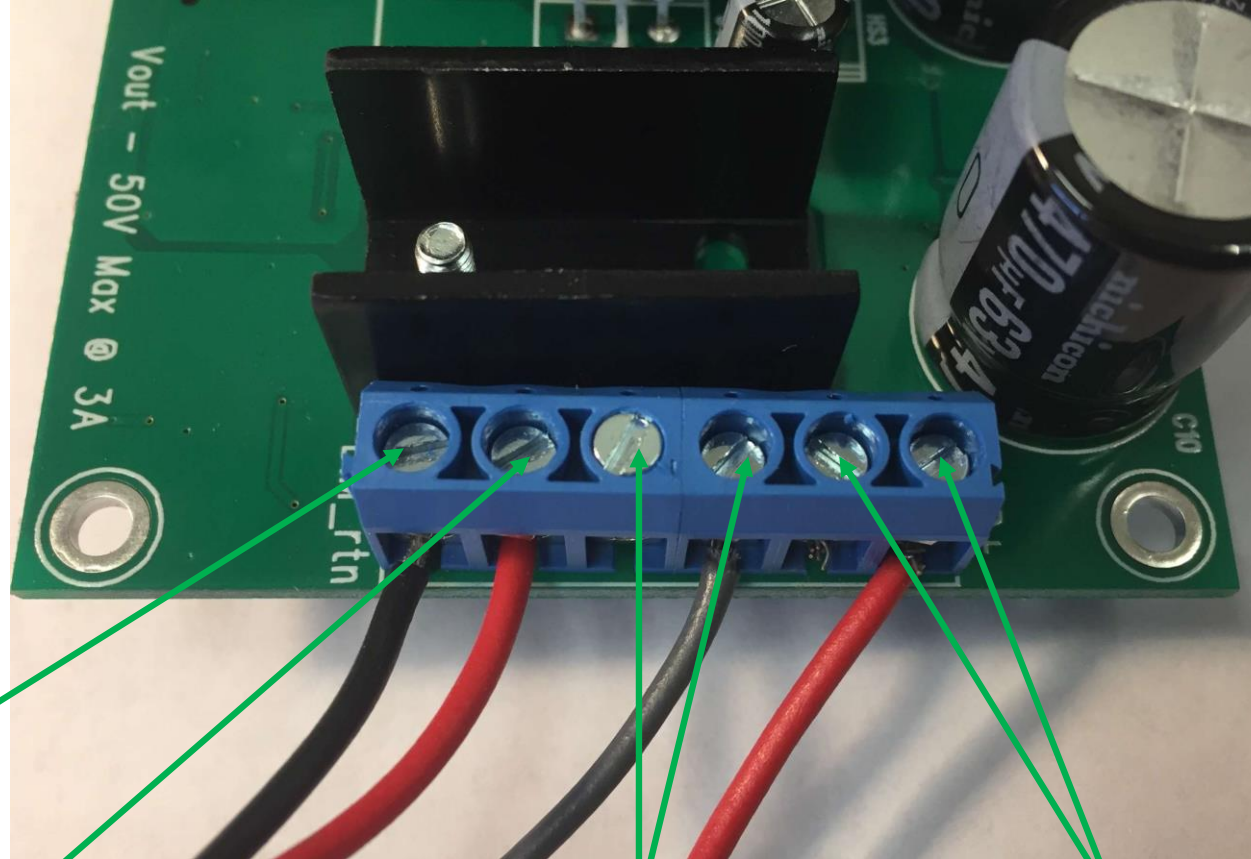
AC Line

AC Neutral

Earth Gnd

Output Connections

Dim connector polarity is only important when connecting a voltage source for dimming control. Polarity is irrelevant when connecting a resistor for dimming control.



Dim -

Dim +

LED -

LED +



Test Matrix

Vin (V ac)	Frequency (Hz)	Iout (minimum) Dim = 0	Test Limits	Pass/Fail	Iout (maximum) Dim = 10	Test Limits	Pass/Fail
90	50		10mA -30mA	P / F		2.85A – 3.00A	P / F
120	50		10mA -30mA	P / F		2.85A – 3.00A	P / F
230	50		10mA -30mA	P / F		2.85A – 3.00A	P / F
277	50		10mA -30mA	P / F		2.85A – 3.00A	P / F
305	50		10mA -30mA	P / F		2.85A – 3.00A	P / F



Test Matrix

Vin (V ac)	Frequency (Hz)	Load	Power Factor	Test Limits	Pass/Fail	THDi	Test Limits	Pass/Fail
120	60	20%		0.96	P / F		10%	P / F
	60	50%		0.98	P / F		10%	P / F
	60	100%		0.98	P / F		10%	P / F
277	50	20%		0.70	P / F		15%	P / F
	50	50%		0.90	P / F		10%	P / F
	50	100%		0.95	P / F		10%	P / F

