CUI INC®

SERIES: PLDA40 | DESCRIPTION: LED DRIVER

FEATURES

- up to 40 W continuous power
- universal input range (90~305 Vac)
- single output
- dimming options: PWM, 1~10 Vdc, resistive, DALI
- power factor correction ≥ 0.9
- constant current
- low profile for easy installation
- IP67 rated
- over voltage, continuous short circuit, and over temperature protection
- UL 8750, IEC/EN61347-2-13 approval
- EN61000-3-2 Class C (harmonic current) approval
- efficiency up to 88%
- suitable for LED lighting and signage applications

RoHS c UL us CE FC F 110 LPS TÜV RT PS E IP67

MODEL

MODEL	output voltage range[1] min (Vdc)	output voltage range[1] max (Vdc)	output current (mA)	output power max (W)	ripple and noise[2] max (mVp-p)	efficiency typ (%)
PLDA40-840-277	9	48	840	40.32	480	88
PLDA40-1110-277	9	36	1110	40	360	86
PLDA40-1700-277	9	24	1700	40.8	240	86

Notes: 1. constant current region
2. ripple and noise are measured at 20MHz bandwidth with a 0.1uF ceramic capacitor and 10uF aluminum capacitor.

PART NUMBER KEY

PLDA40 - XXXX - 277XXX

- Base Number
- Output Current
- Input Voltage
  277 = (90~305 Vac)
- Dimming
  PE = PWM, 1~10 Vdc, resistive
  D = DALI
  "blank" = no dimming
- IP Rating
  "blank" = IP64
  A = IP67

INPUT

parameter	conditions/description	min	typ	max	units
voltage		90 127		305 420	Vac Vdc
frequency		50		60	Hz
current	at 115 Vac, full load at 230 Vac, full load		0.45 0.22		A A
inrush current	at 240 Vac, cold start, 25°C, after 100 µs			5	A
leakage current	at 277 Vac			0.75	mA
power factor correction	at 115 Vac/230 Vac, 75~100% load	0.9			
no load power consumption				1	W

OUTPUT

parameter	conditions/description	min	typ	max	units
current line regulation	measured from high line to low line at full load			±5	%
current load regulation	measured from min. to max. of constant current region			±5	%
constant current accuracy	at nominal input and full load			±5	%
switching frequency			60		kHz
start-up time	at 90 Vac			0.5	s
temperature coefficient			±0.05		%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	TVS clamp				
short circuit protection	hiccup mode, auto recovery				
over temperature protection			105		°C

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 1 minute			3,750	Vac
isolation resistance	input to output	100			MΩ
safety approvals	UL8750, IEC/EN61347-1, IEC/EN61347-2-13, PSE				
DALI	IEC62386-102, IEC62386-207				
EMI/EMC	FCC Part 15 Class B/EN55015, EN61547, EN61000-4-(2,3,4,5), EN61000-3-2 Harmonic Class C, EN61000-3-3				
MTBF	as per MIL-HDBK-217F, at 25°C		200,000		hours
RoHS	2011/65/EU				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-40		70	°C
storage temperature		-40		85	°C
operating altitude				3,000	m

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	6.614 x 1.575 x 0.992 (168 x 40 x 25.2 mm)				inches
weight			350		g

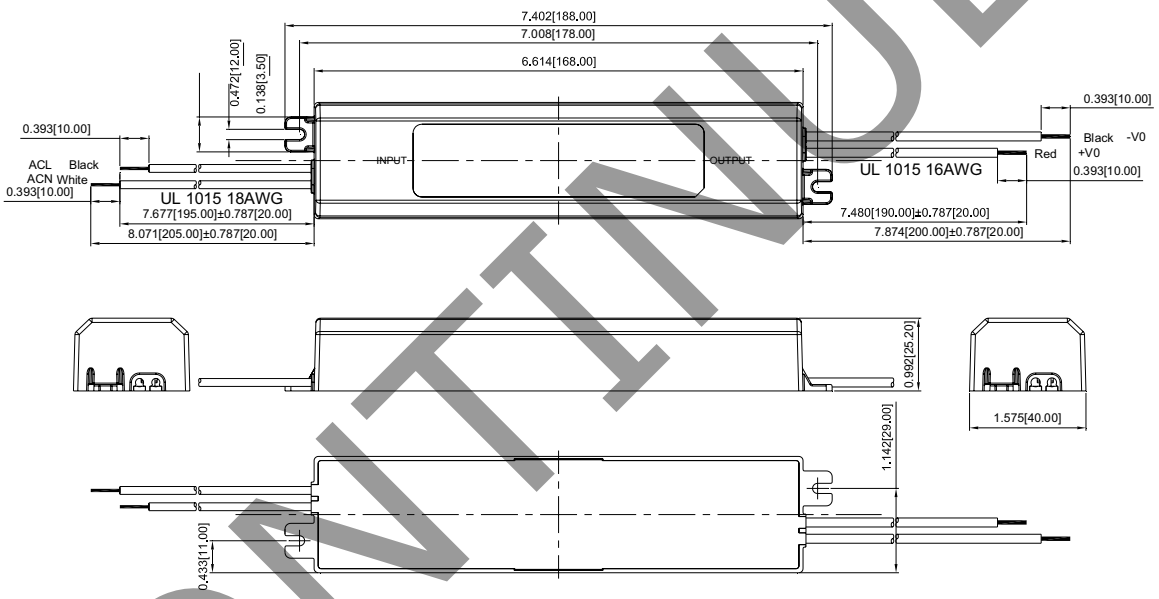
MECHANICAL DRAWING

MODELS WITHOUT DIMMING

units: inches[mm]
tolerance: ±0.02[±0.5]
unless otherwise specified

INPUT WIRE CONNECTIONS	
Color	Function
Black	ACL
White	ACN

OUTPUT WIRE CONNECTIONS	
Color	Function
Red	+Vo
Black	-Vo



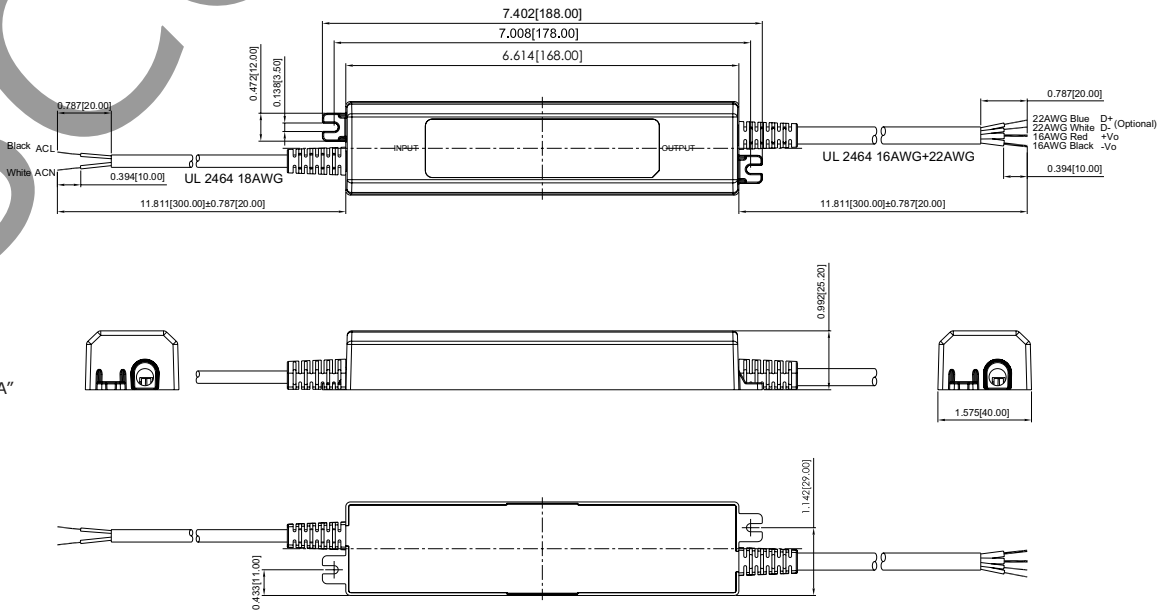
MODELS WITH DIMMING

units: inches[mm]
tolerance: ±0.02[±0.5]
unless otherwise specified

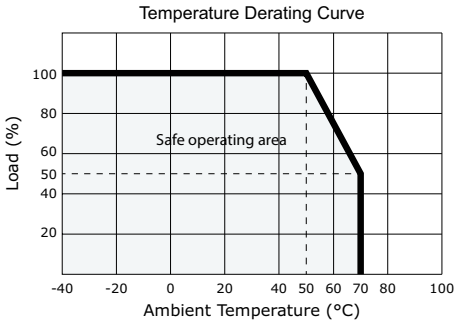
INPUT WIRE CONNECTIONS	
Color	Function
Black	ACL
White	ACN

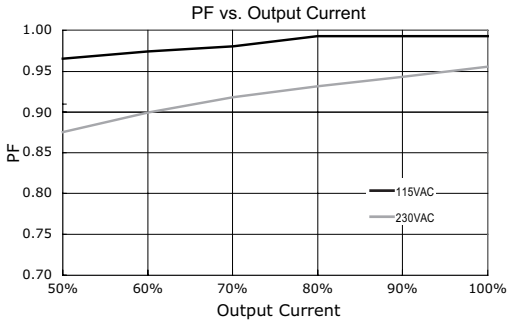
OUTPUT WIRE CONNECTIONS	
Color	Function
Red	+Vo
Black	-Vo
Blue[1]	D+/DA+
White[1]	D-/DA-

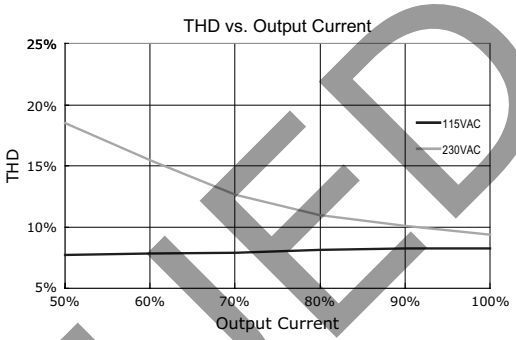
Note: 1. DALI models are marked with "DA"



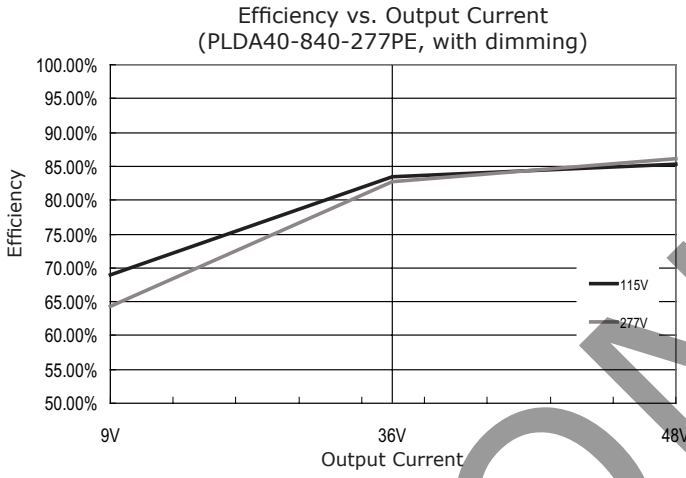
DERATING CURVES

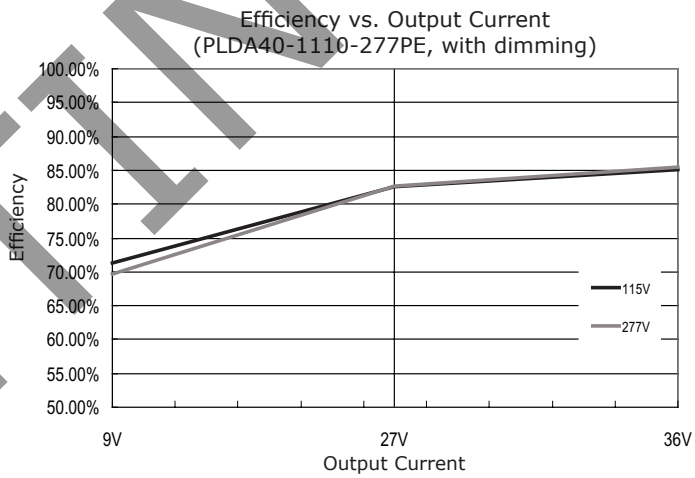


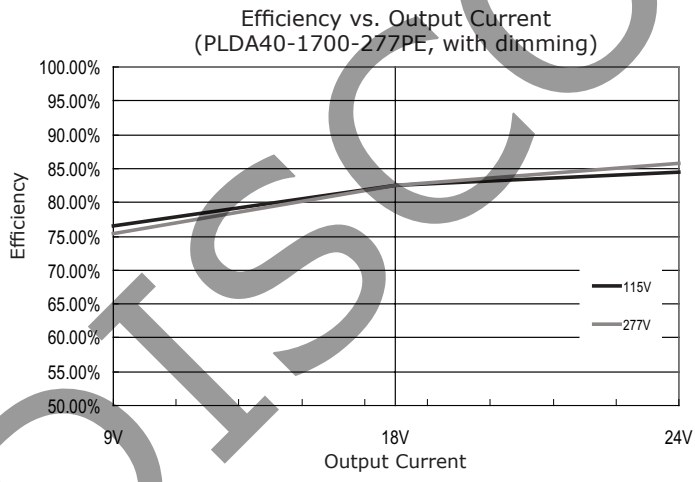




EFFICIENCY CURVES

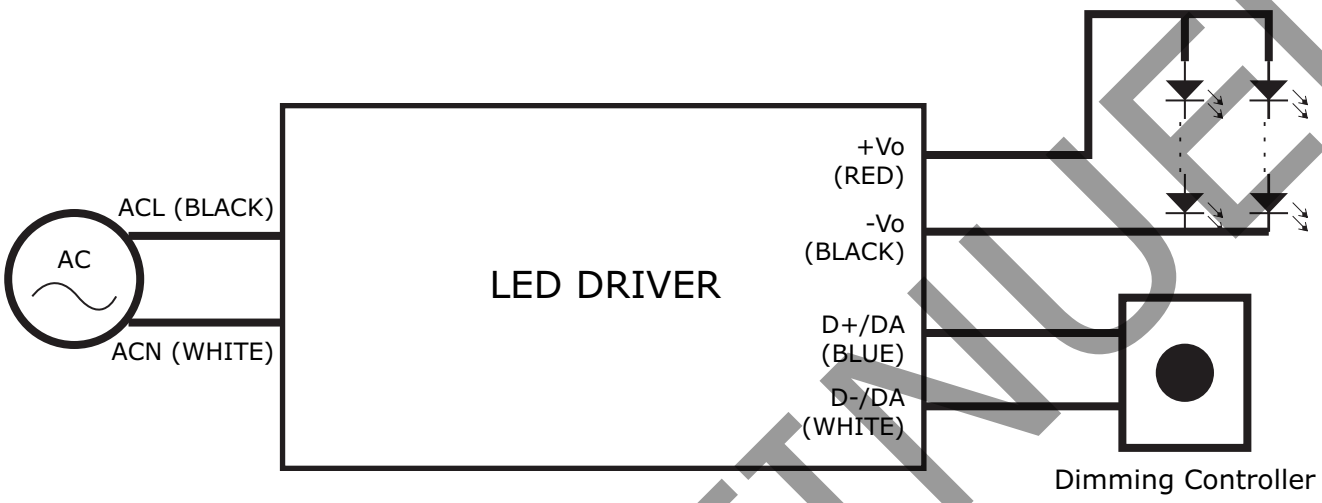






APPLICATION NOTES

1. **Dimming**
Dimming should be controlled from the dimming controller with DALI, PWM, 1~10 Vdc, or resistive. Set the DALI controller to "broadcast mode" when connecting to the LED driver, since it will not be addressed in production.



1~10 Vdc Dimming

Voltage	**1V**	**2V**	**3V**	**4V**	**5V**	**6V**	**7V**	**8V**	**9V**	**10V (Open)**
Output Current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Potentiometer Dimming

Potentiometer	**1K**	**2K**	**3K**	**4K**	**5K**	**6K**	**7K**	**8K**	**9K**	**10K (Open)**
Output Current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

PWM Dimming (@ 1kHz, 10V)

Duty Cycle	**10%**	**20%**	**30%**	**40%**	**50%**	**60%**	**70%**	**80%**	**90%**	**100% (Open)**
Output Current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

Note: 1. All specifications are measured at Ta=25°C, 115/230 Vac input voltage, and full load unless otherwise specified.

REVISION HISTORY

rev.	description	date
1.0	initial release	09/22/2014

The revision history provided is for informational purposes only and is believed to be accurate.

CUI INC®

Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com