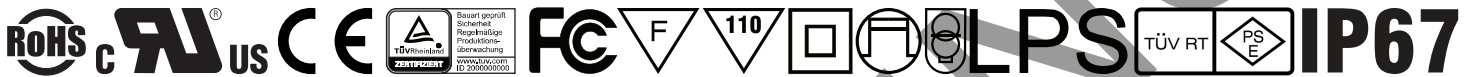
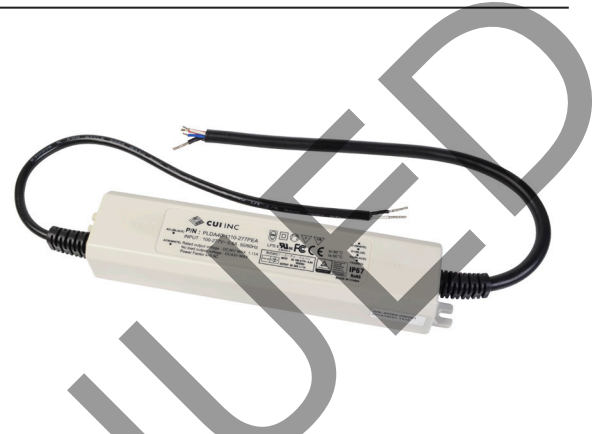


**SERIES:** PLDA40 | **DESCRIPTION:** LED DRIVER

**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  $\geq 0.9$
- 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



MODEL	output voltage range <sup>1</sup>		output current	output power max	ripple and noise <sup>2</sup>	efficiency
	min (Vdc)	max (Vdc)	(mA)	(W)	max (mVp-p)	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		305	Vac
		127		420	Vdc
frequency		50		60	Hz
current	at 115 Vac, full load		0.45		A
	at 230 Vac, full load		0.22		A
inrush current	at 240 Vac, cold start, 25°C, after 100 $\mu$ s			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			$\pm 5$	%
current load regulation	measured from min. to max. of constant current region			$\pm 5$	%
constant current accuracy	at nominal input and full load			$\pm 5$	%
switching frequency			60		kHz
start-up time	at 90 Vac			0.5	s
temperature coefficient			$\pm 0.05$		%/°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			M $\Omega$
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

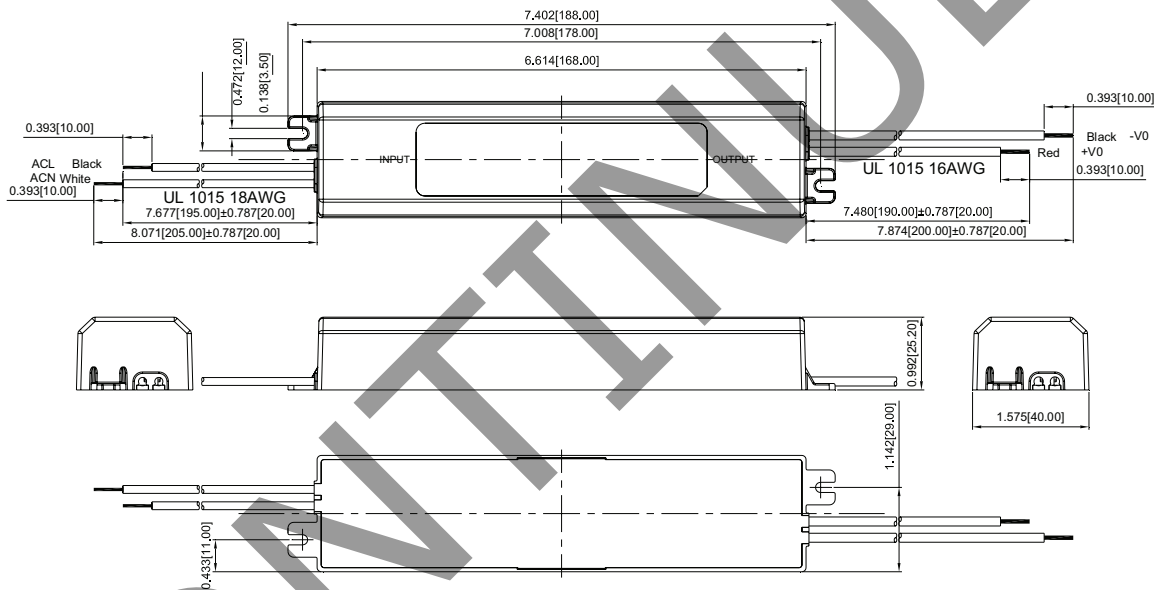
### MODELS WITHOUT DIMMING

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

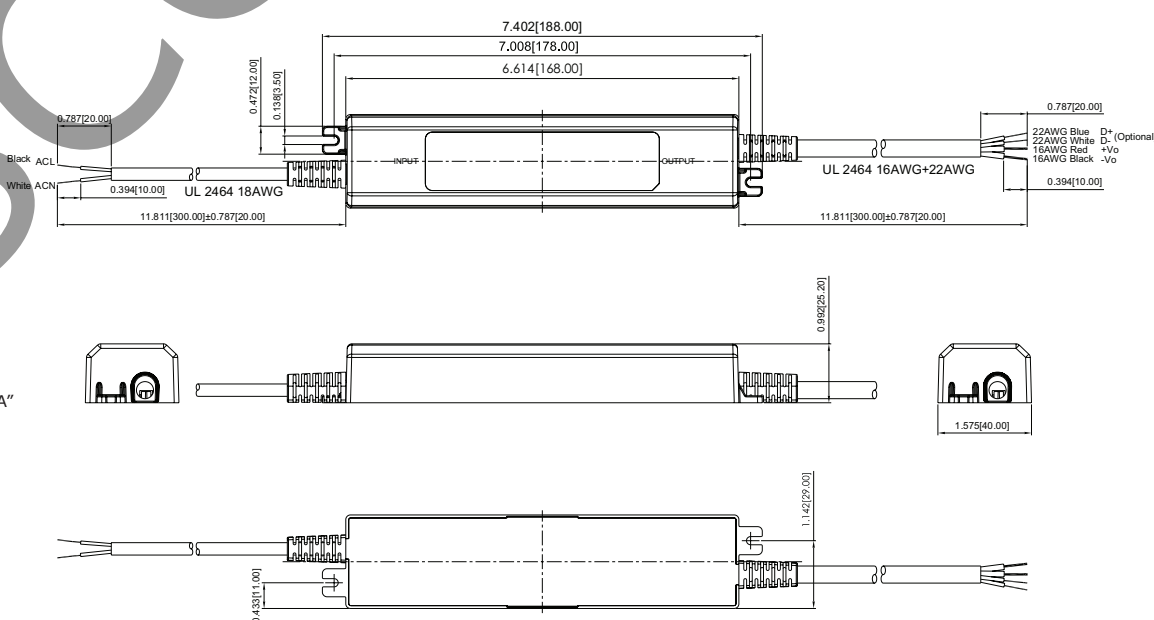
units: inches[mm]  
 tolerance: ±0.02[±0.5]  
 unless otherwise specified

INPUT WIRE CONNECTIONS	
Color	Function
Black	ACL
White	ACN

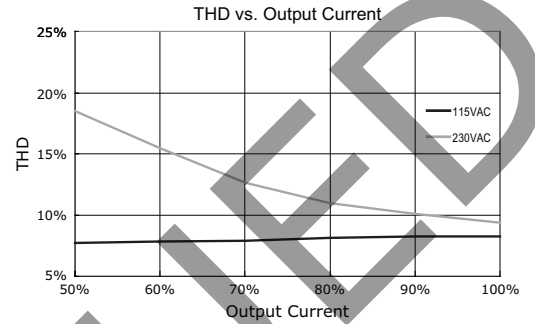
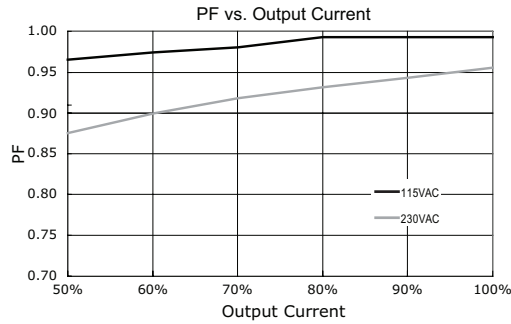
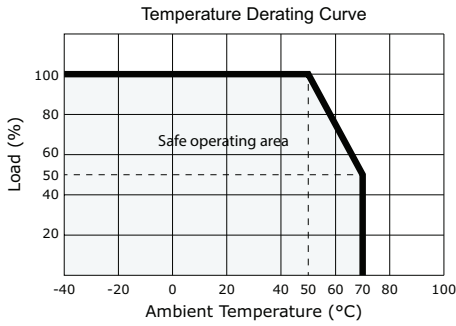
  

OUTPUT WIRE CONNECTIONS	
Color	Function
Red	+Vo
Black	-Vo
Blue <sup>1</sup>	D+ /DA+
White <sup>1</sup>	D- /DA-

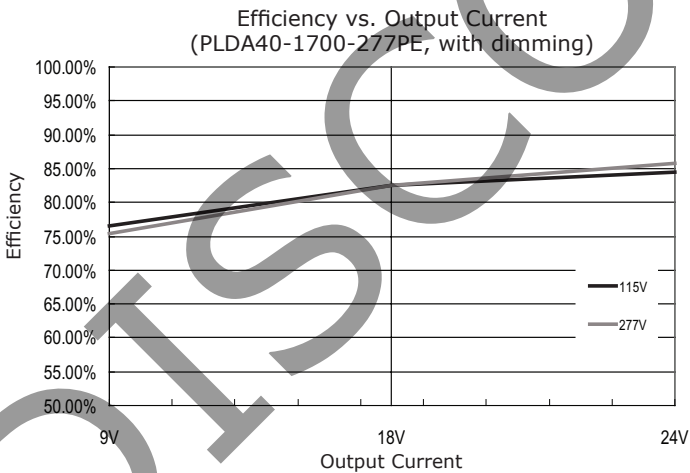
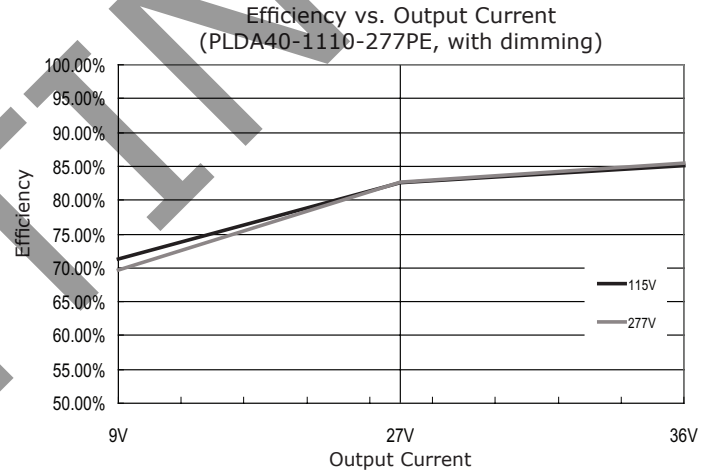
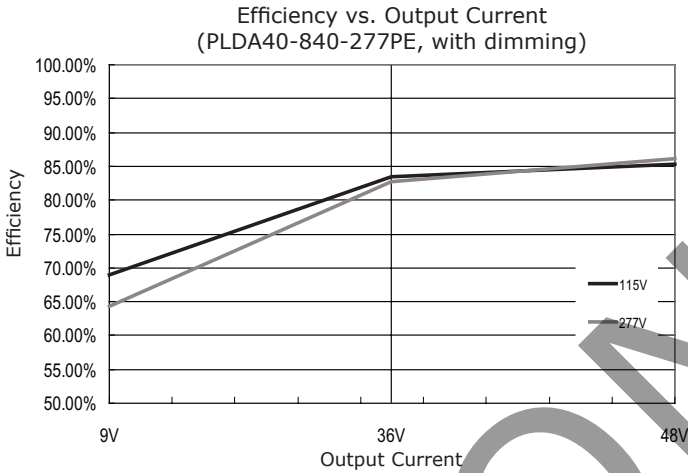
Note: 1. DALI models are marked with "DA"



## DERATING CURVES



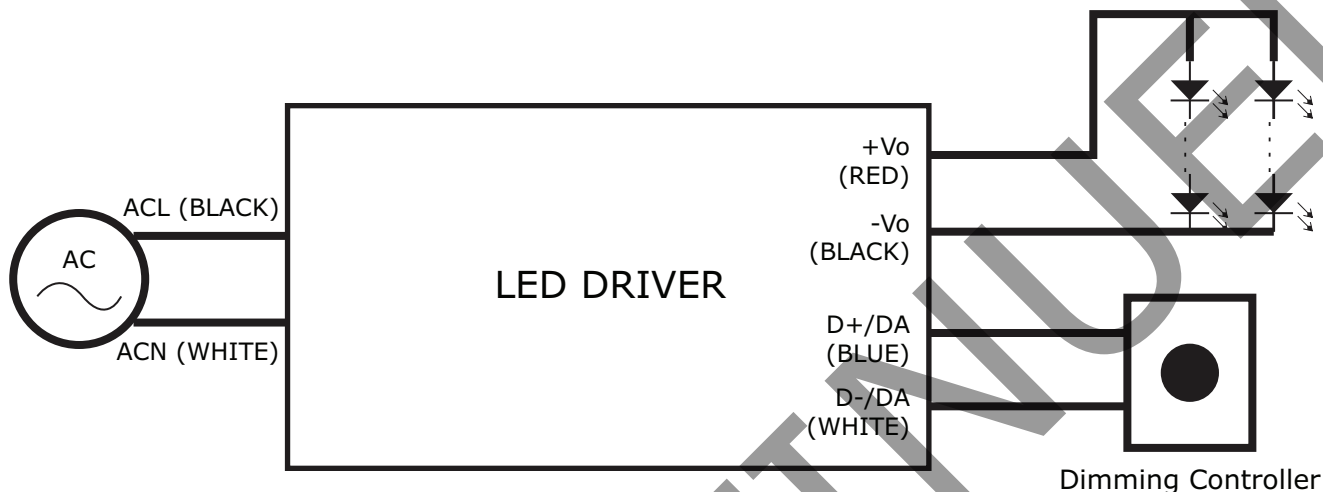
## EFFICIENCY CURVES



## 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.



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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