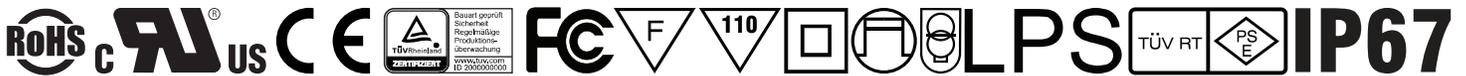


**SERIES:** PLDA40 | **DESCRIPTION:** LED DRIVER

**FEATURES**

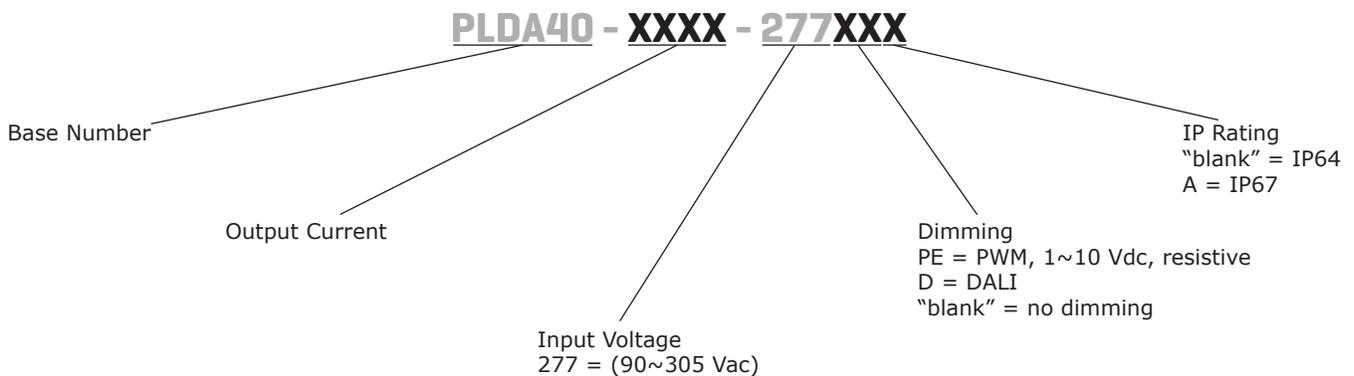
- up to 40 W continuous power
- universal input range (90~305 Vac)
- single output
- dimming options: PWM, 1~10 Vdc, resistive, DALI
- power factor correction  $\geq 0.9$
- constant current
- low profile for easy installation
- IP67 rated
- over voltage, continuous short circuit, and over temperature 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 (mA)	output power max (W)	ripple and noise <sup>2</sup> (mVp-p)	efficiency typ (%)
	min (Vdc)	max (Vdc)				
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**



## 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 $\mu$ 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

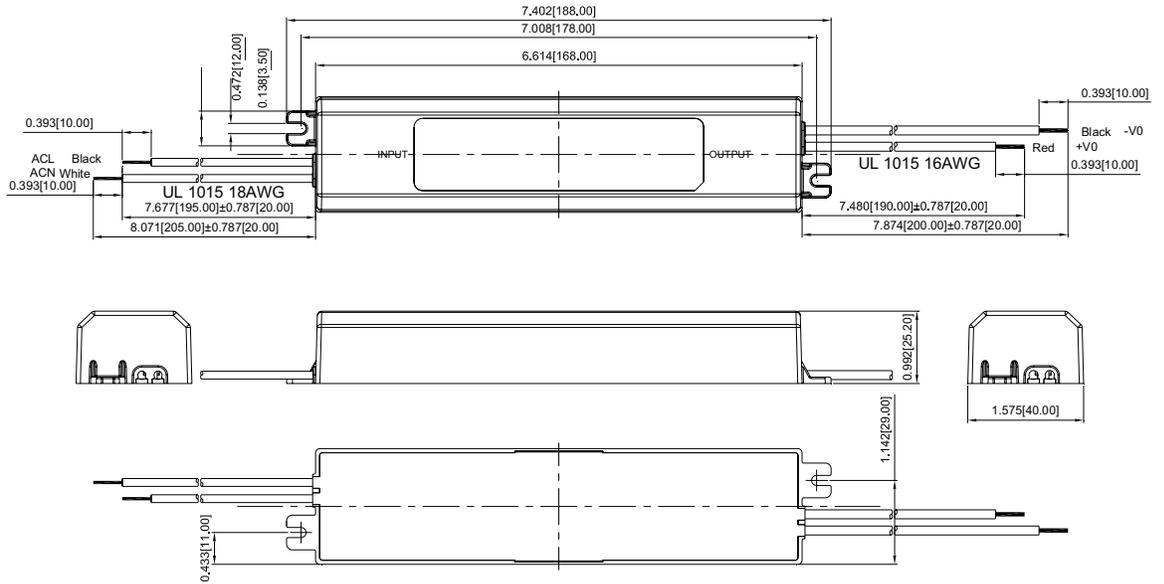
### MODELS WITHOUT DIMMING

units: inches[mm]  
 tolerance:  $\pm 0.02[\pm 0.5]$   
 unless otherwise specified

INPUT WIRE CONNECTIONS	
Color	Function
Black	ACL
White	ACN

OUTPUT WIRE CONNECTIONS	
Color	Function
Red	+Vo
Black	-Vo



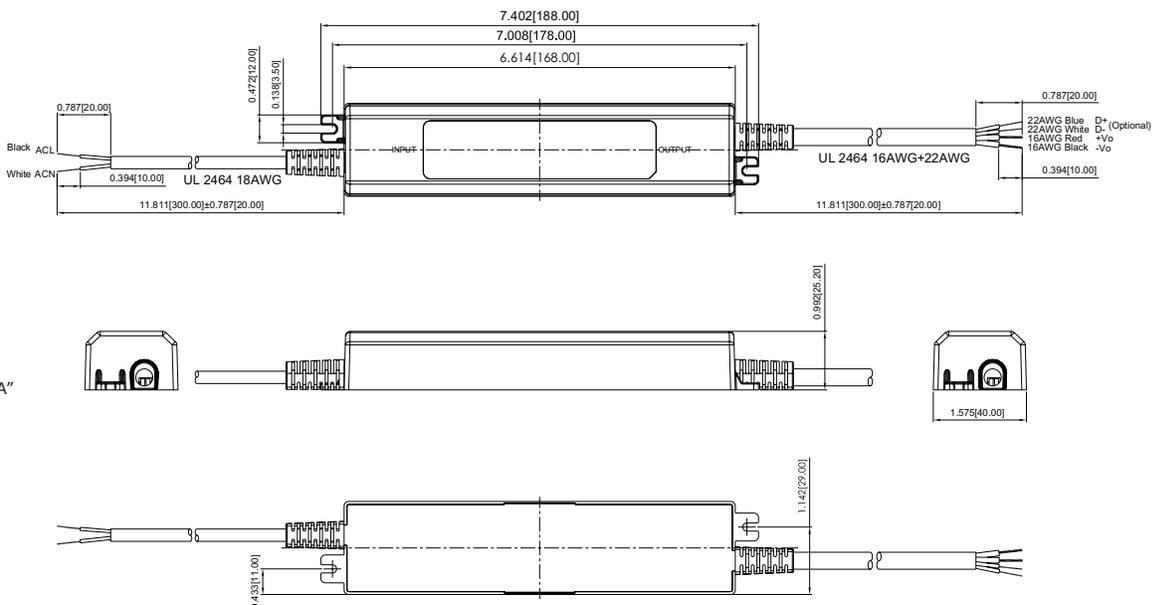
### MODELS WITH DIMMING

units: inches[mm]  
 tolerance:  $\pm 0.02[\pm 0.5]$   
 unless otherwise specified

INPUT WIRE CONNECTIONS	
Color	Function
Black	ACL
White	ACN

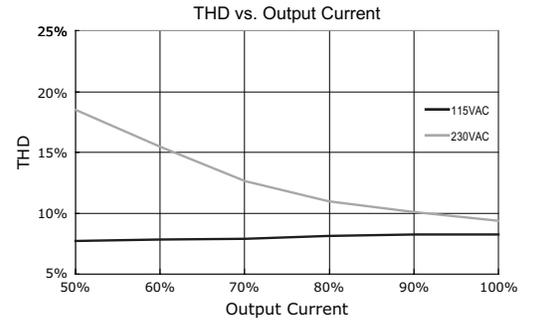
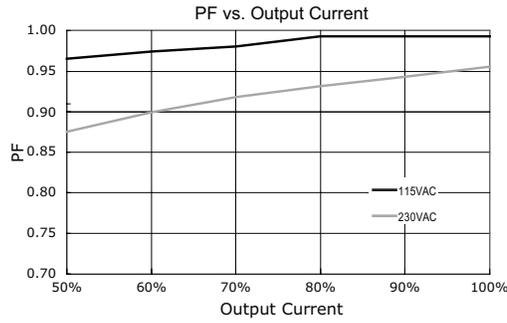
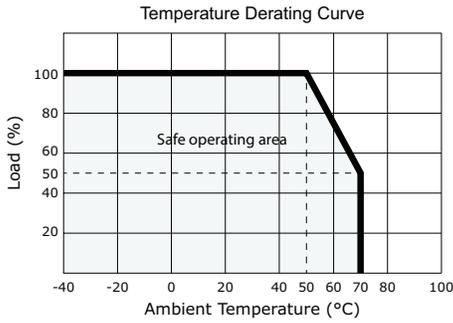
  

OUTPUT WIRE CONNECTIONS	
Color	Function
Red	+Vo
Black	-Vo
Blue <sup>1</sup>	D+/DA+
White <sup>1</sup>	D-/DA-

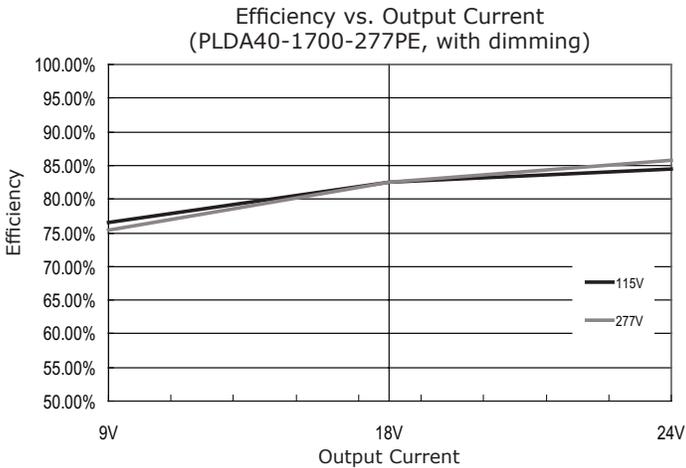
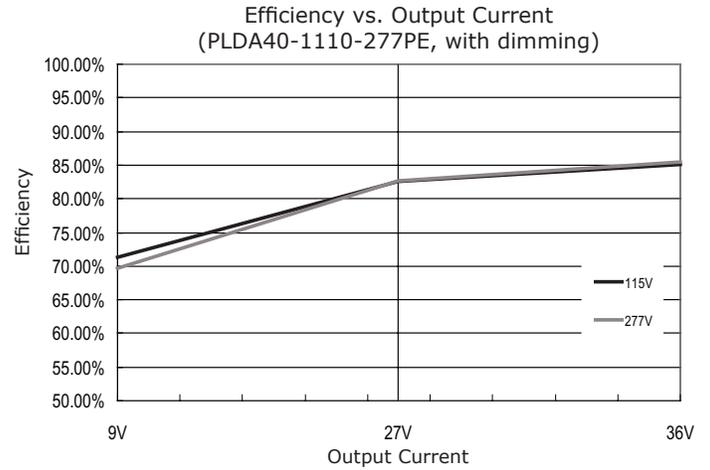
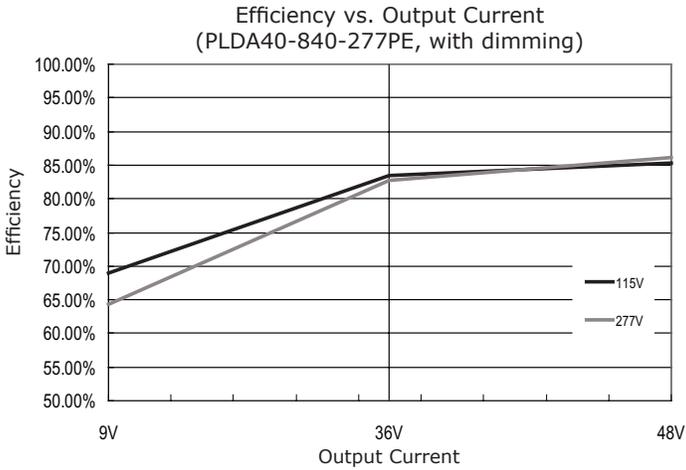


Note: 1. DALI models are marked with "DA"

## DERATING CURVES



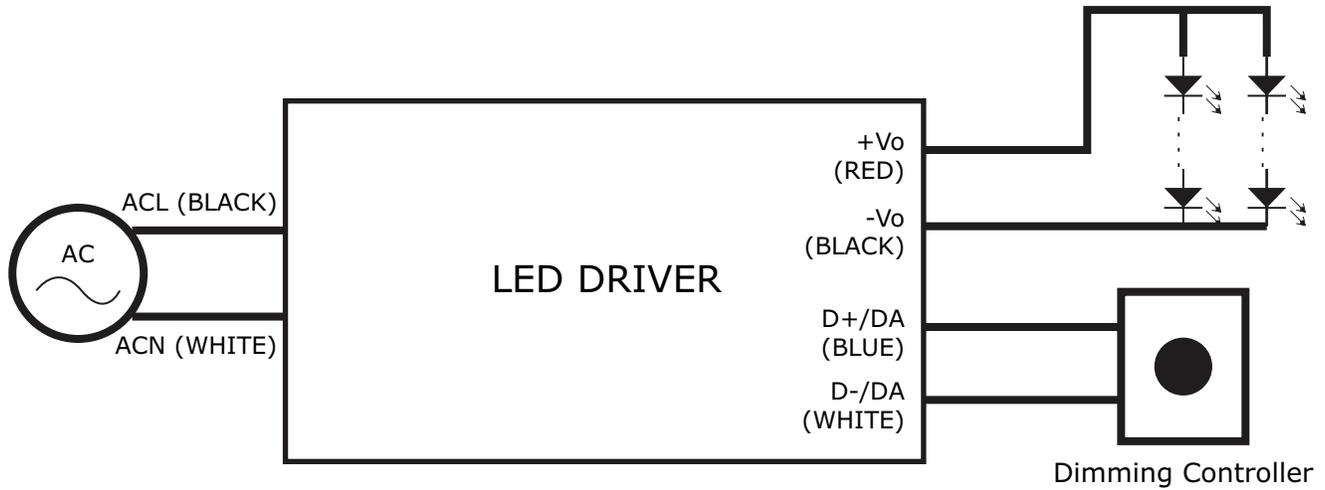
## EFFICIENCY CURVES



## 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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CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.