

## Main Features:

- Input Voltage: 120~277Vac
- Output Wattage: Constant Current (C.C.) at 96W  
with Adjustable Current Setting
- Programmable Method: Wiring with Bluetooth Programmer
- High Efficiency: Up to 90%
- Dimming Function: 0-10V with Dim to off (dto)
- Lightning Protection: Built-in [Line to line 2.5kV, line to ground 2.5kV]
- Reliability Protection: SCP, OTP
- Safety Regulation: Complies with UL8750 Class 2 & Class P
- Waterproof Rating: IP20
- Five Year Warranty under Normal Usage Conditions



## SPECIFICATION

Model No. (*)	Output Voltage Range	C.C. or C.P. Programmable Rated Output or Range	Programming Method	Dimming Control Method	Dim to off (dto)	Aux
LDD- <i>www(D)vvv(P/F)ccccHH-(V/D)</i>	(Vdc)	(mA) <sup>(i)</sup>			(V or %)	(Vdc)
<b>LDDS096D040P2400-U-V</b>	10 - 54	700 - 2400	Analog/Wire	0-10V	1V or 10%	12
(*) model name pattern: <b>LDD-<i>www(D)vvv(P/F)ccccHH-(V/D)</i></b> LDD means, LED Driver with C.C. (D) means, 12V Aux (P/F) means, Wire/Wireless Programming method (V/D) means, Analog Voltage/Digital DALI Dimming method	<sup>(i)</sup> Pre-set Constant Current Value with dimming Auxiliaries Voltage: 12V <sub>aux</sub> with <b>100mA</b> Dim to Off (dto) with 0.5W Standby Power Case Tamp: T <sub>c</sub> : <b>90°C</b> SCP (Short Circuit Protection): when its load is being shorted, the driver will enter hiccup mode, and shall be self-recover when the fault condition is clean. OTP (Over Temperature Protection): Reduce the output current to about 50mA once T <sub>a</sub> ≥ 75 ± 10°C; Recover only if restart the input power at T <sub>a</sub> ≤ 50 ± 10°C .					

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Universal Input	108	120-277	305	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	At 120 VAC/277 VAC input, full load output			0.95/0.45	A
Power Factor	At 120 VAC/277 VAC input, 25°C full load		>0.95		
Inrush Current	At 120 VAC input, 25°C cold start / At 277 VAC input, 25°C cold start			20	A
Leakage Current	@277Vac 60Hz			0.5	mA
Surge Protection	Differential and common mode, combination wave			2.5K	V

Output Spec.	Condition Description	Min.	Normal	Max.	Units
Current Accuracy	At 25°C, @120Vac & 277Vac, full load		±5		%
Ripple Current	At 25°C, full load, measured at 20MHz bandwidth. The result differs according to different LED load characteristic.			5	% Ip-p (Io)
Overshoot/Undershoot	% of I out max & LED load, at 25°C, measured at 20MHz bandwidth			10	%
Turn-On Delay	Measured at 120Vac/277Vac input and Full Load			0.5	S
Aux Output Voltage	Aux out current with 100mA up to 1.2W max	11	12	13	Vdc

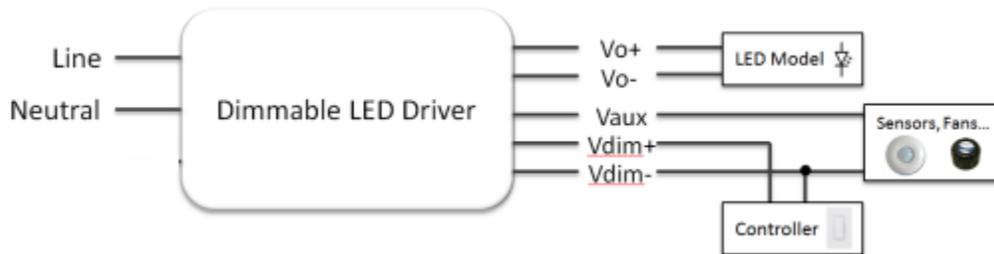
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	120Vac 277Vac measured at 25°C, full load	87 88	89 90		%
MTBF	at Tc = 25°C Full load and nominal input condition		≥500,000		Hours
Lifetime	at Tc < 85°C Full load and nominal input condition		≥50,000		Hours
Operating/Storage Temperature	10%RH~85%RH/5%RH~95%RH	-30/-40		55/85	°C
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	241/227 x 33.0 x 28.0			mm
		9.5/8.94 x 1.30 x 1.10			inch
Weight	Net weight without package	0.95/0.43			lb/kg

Safety & EMC Compliance	Category	Condition Description
Safety Regulations	UL8750	Light Emitting Diode (LED) Equipment for Use in Lighting Products, Class 2 Class P
	Dielectric Strength (Hi-POT)	Primary to Secondary: 2500Vac /10mA max / 60 seconds (3 seconds for production)
	Insulation Resistance	50M ohm min. @primary to secondary
	IEC 61000-3-3	Voltage fluctuations & flicker
	FCC Part 15	Class A
EMS Standards	IEC 61000-4-2	Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge, criteria A
	IEC 61000-4-4	Electrical fast transient (EFT)/ burst-EFT 2kV/5KHz
	IEC 61000-4-5	Surge immunity test, differential and common mode, 2.5kV, combination wave

## ■ Dimming Curve

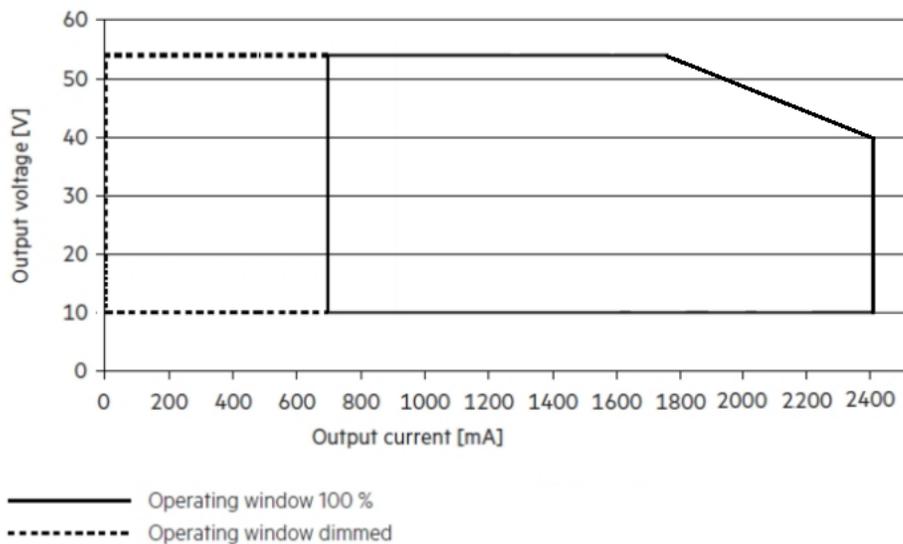
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	500uA	1mA
Vdim Allowed Input Voltage	-15 V		15 V
0-10V Dimming Range	0% (Vdim=1V)	Linear	100% (Vdim=9~10V)

Dimming Wire



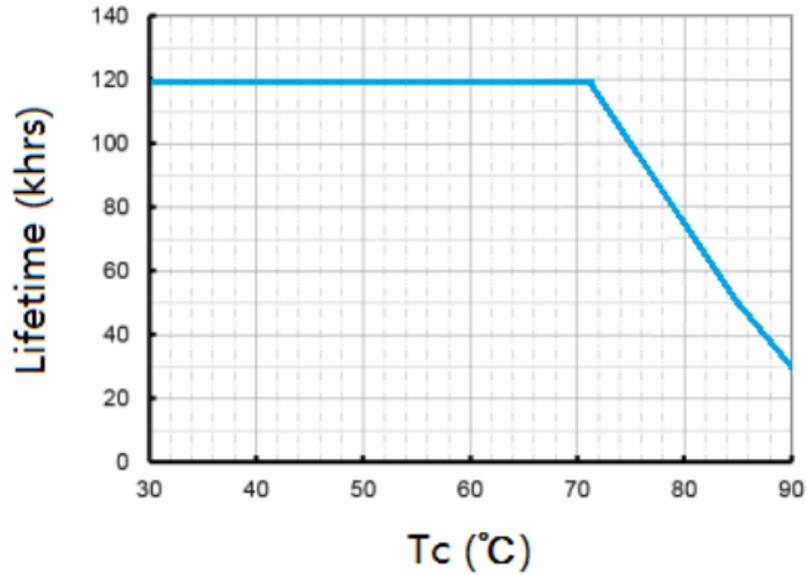
## ■ Operating Window

Make sure that the LED driver is operated within the given window under all the operation conditions. Special attention needs to be paid at dimming as the forward voltage of the connected LED modules varies with the dimming level.



## ■ Lifetime vs. Case Temperature

## Lifetime vs. Case Temperature



### ■ Mechanical Outline (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance: ±0.51 mm

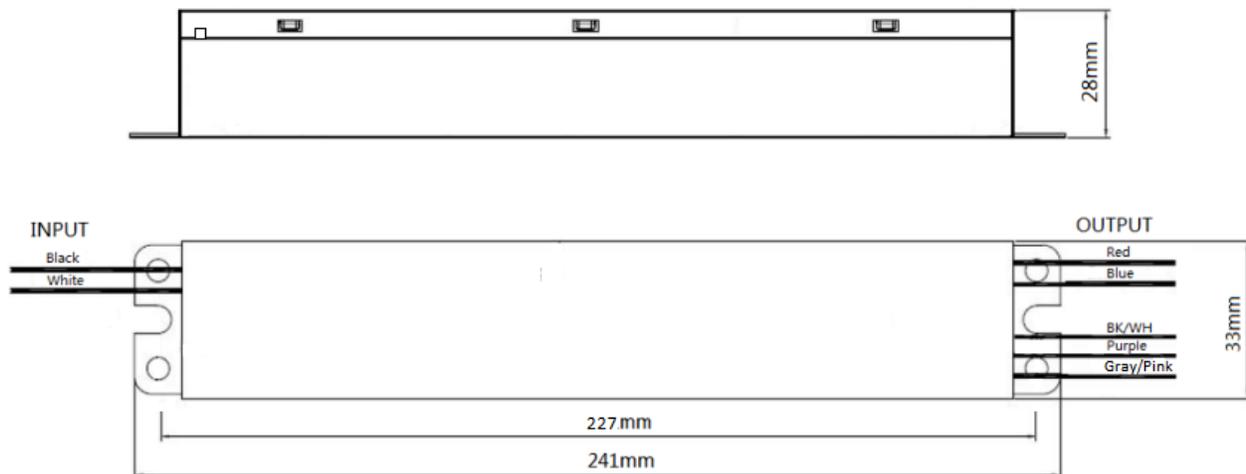


Figure 28, MR9YT

## ■ Wiring : ( $\pm 20\text{mm}$ )

### Input wiring:

White & Black :  $300\text{mm} \pm 10\text{mm}$  , strip 10mm Tin Plated , 18AWG , UL1015 .

### Output wiring:

Red & Blue :  $300\text{mm} \pm 10\text{mm}$  , strip 10mm Tin Plated , 18AWG , UL1015 .

### Dimming wiring:

Purple & Gray (or Pink ) :  $270\text{mm} \pm 10\text{mm}$  , strip 10mm Tin Plated , 22AWG , UL1569 .

### Vaux wiring:

Black / White :  $270\text{mm} \pm 10\text{mm}$  , strip 10mm Tin Plated , 22AWG , UL1569 .

**Safety Note:** Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

## Revision

Date	Rev.	Description of Change		
		Item	Old	New
Date	Rev.	Description of Change		
		Item	Old	New
4/18/2020	V1a	In Draft Release	/	/
9/28/2020	V1b	Change model name	<b>LDDS096D040p2400-U-v</b>	<b>LDDS096D040P2400-U-V</b>
		Waterproof level		IP54
		Lightning protection		2.5kV
		Programmable method		Wiring with Bluetooth Device
3/15/2021	V1c	Waterproof level	IP54	IP20
		Warranty year	Three Year	Five Year
		Weight	1.30/0.60	0.95/0.43
		Vdim Sourcing Current	200uA-300uA-450uA	200uA-500uA-1mA
		Vdim Allowed Input Voltage	-20V~20V	-15V~15V
4/25/2021	V1c01	OTP description	when ambient temp is over about 70° C, the driver output current will reduce to ~50mA and recover the driver restarts.	Reduce the output current to about 50mA once $T_a \geq 75 \pm 10^\circ\text{C}$ ; Recover only If restart the input power at $T_a \leq 50 \pm 10^\circ\text{C}$ .
2/18/2022	V1d	Tc	85°C	90°C
		Add Wiring	/	<b>Input wiring、 Output wiring、 Dimming wiring、 Vaux wiring</b>
		Add Lifetime vs. Case Temperature	/	Lifetime vs. Case Temperature
		Dimming Wire	/	Vaux