

Project Name:	
Type:	

LD400H

400W AC-DC Constant Voltage
LED Driver

PRODUCT FEATURE

- Universal AC input range 90~305VAC
- Constant Voltage Operation
- Built-in Active PFC Function
- Protections: OVP / OCP/ SCP/ OTP
- High Efficiency 93% ~ 93.5%
- Fully insulated Case with IP67 level
- Cooling by Free Air Convection (Metal Housing)
- No Load Consumption <0.5 at 230Vac
- Suitable for LED Strips and Moving Sign Applications
- Function options: 3 in 1 dimming (dim-to-off); DALI
- The output and dimming lines are re-compliant with the new regulations with isolation.



LD400H-VUYYNN-76



LD400H-VUYYNN-76D /
LD400H-VUYYNN-76DA

WARRANTY

LD400H-VUYYNN-76(X), **YYY**=Rated Current, **Nn**= DC Voltage, **(X)**=Black → Non DIM
(X)=D → 3-in-1 Dim., **(X)**=DALI DIM

CE FC IP65 SELV cUL US



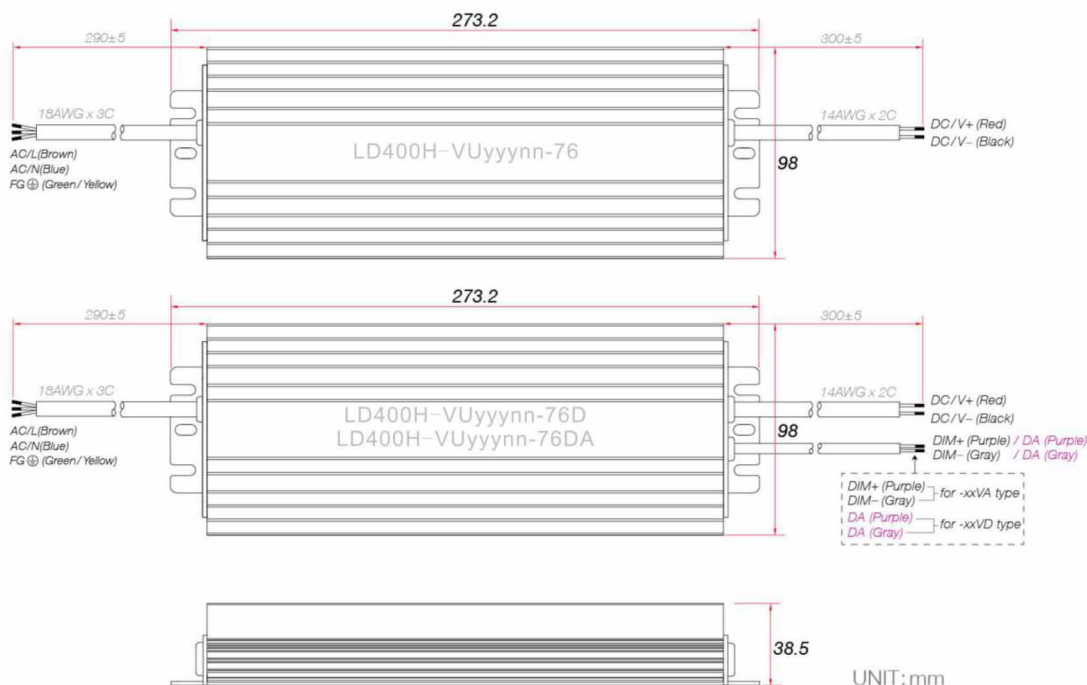
WARRANTY

- See [Limited Warranty Policy](#) for more additional information

RELATED PRODUCTS

- [LD100H-70 LED Driver](#)
- [LD200H-72 LED Driver](#)
- [LD300H-74 LED Driver](#)
- [HA100 Series](#)

Mechanical Drawing: 273.2 x 98 x 38.5mm



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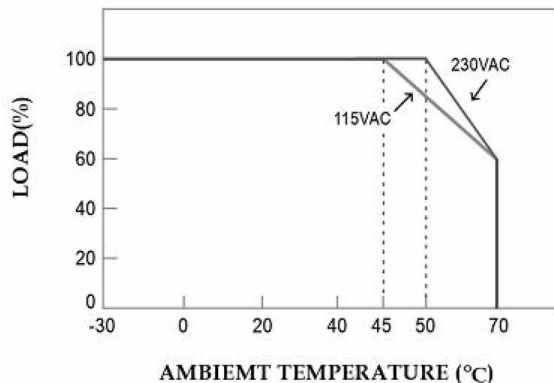
SPECIFICATION

Model No.		LD400H-VU1K624-76(X)	LD300H-VU1K136-76(X)	LD300H-VU83348-76(X)
OUTPUT	DC Voltage	24V	36V	48V
	Rated Current	16.A	11.1A	8.3A
	Current Range	0~16.7A	0~11.1A	0~8.3A
	Rated Power	400.8W	399.6W	398.4W
	Ripple & Noise(Max)	350mV	400Mv	500Mv
	Efficiency at 230VAC (Typ.)	93%	93%	93.5%
	Voltage Tolerance	±5%	±5%	±5%
	PWM Dimming (Optional)	> 1600 Hz (for dimmable version)		
	Setup Time (Max.)	0.5s / 230VAC, 1s/ 115VAC, at full load		
INPUT	Rated Voltage	100 ~ 277VAC		
	Voltage Range	90 ~ 305VAC		
	Frequency Range	47 – 63Hz		
	AC Current (Max)	4.5A at 115VAC/ 2.3A at 230VAC		
	Power Factor	>0.98 at 115VAC / <0.94 at 230VAC at full load. PF ≥ 0.9 at 70% load		
	Total harmonic Distortion	THD < 15% at 230VAC, full load		
	Inrush Current (Max)	Cold Start 80A at 230VAC		
	Leakage Current	<1mA / 230VAC		
DIM. CONTROL (3 IN 1)	DC Dimming	DC 0-10V		
	PWM Dimming	Puls: Hi=10V Low=0V, Duty: 0%~100, Fsw 0.5 – 3KHz		
	Resistance Dimming	0KΩ~100KΩ or Electronic Potentiometer 0-10V		
DIM. CONTROL (DALI)	DALI Standards	Compatibility with IEC 62386-101, 102 and 207		
	DALI bus current consumption	< 2mA		
PROTECTIONS	Over Current	105% - 180% rated output power		
		Type: Auto recover after fault condition disappeared		
	Short Circuit	Type: Hiccup mode & recovers after fault condition disappeared		
	Over Voltage	26 ~ 38V	38 ~ 50V	50 ~ 65V
		Type: Hiccup mode (re-power on to recover)		
	Over Temperature	Type: 95°C ± 10%		
Type: Shutdown mode (re-power on to recover)				
ENVIRONMENT	Working Temp.	-30°C ~ 50°C (Refer to Derating Curve)		
	Working Humidity	20% ~ 90% RH non-condensing		
	Storage Temp., Humidity	-40 ~ + 80°C, 10% ~ 90% RH		
	Vibration	10 ~ 500Hz, 2G 10min./ 1 cycle, period for 60min. Each long X, Y, Z axes		
SAFETY & EMC	Safety Standard	EN61347-1, EN61347-2-13, independent, IP67 approved		
	Withstand Voltage	I/P-O/P: 3.75KVAC I/P-FG: 1.88KVAC O/P-FG: 0.5KVAC		
	Isolation Resistance	I/P – O/P, I/P-FG: 100M ohms/ 500VDC at 25°C		
	EMC Emission	Compliance to EN55015, FCC part 15		
	Harmonic Current	Compliance to EN61000-3-2 Class C (≥ 75% load), EN61000-3-3		
	EMS Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, criteria B		
OTHERS	MTBF	120K hours min. MIL-HDBK-217F(25°C)		
	Dimension (L*W*H)	273.2 x 98 x 38.5 mm; 1270g/pcs		
NOTE	1. All parameters NOT specially mentioned are measured at 230V AC input, rated, load and 25°C ambient temperature. 2. Ripple & Noise are measured at 20 MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation and load regulation. 4. Derating maybe needed under low input voltage. Please check the static characteristic for more details. 5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacture must re-qualify EMC Directive on the complete installation again. 6. Length of setup time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the setup time. 7. The unit might not be suitable for lighting application in EU countries. Please check with your local authorities for the possible use of the unit. 8. Suitable for indoor use or outdoor use without direct sunlight exposure. 9. THD < 25% at 264VAC, full load.			

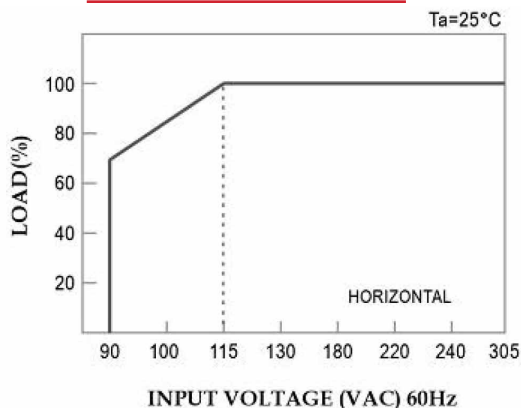
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DERATING CURVE



STATIC CHARACTERISTIC



3-in-1 Dimming Control (DC/ PWM/ Resistance)
3-in01 Dimmable Function Description

(1) 0-100KΩ RESISTANCE DIMMABLE (TYPICAL)

Resistor	Single-driver	Short	9K	20K	30K	40K	50K	60K	70K	80K	95K	100K
	Multi-driver	Short/N	9K/N	20K/N	30K/N	40K/N	50K/N	60K/N	70K/N	80K/N	95K/N	100K/N
Vout Duty Cycle(%)		0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

The length of extended wire for DIM+/- shall not exceed 20meters. (Wire ≤ 20m)

N= The number of dimmer drivers should not exceed 15. (N ≤ 15)

DIM+/- < 7K or 7K Vout Duty cycle 0%

(2) DC: 0-10V DIMMABLE (TYPICAL)

DIM(Voltage)	0V	0.9V	2V	3V	4V	5V	6V	7V	8V	9.5V	10V
Vout Duty Cycle(%)	0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

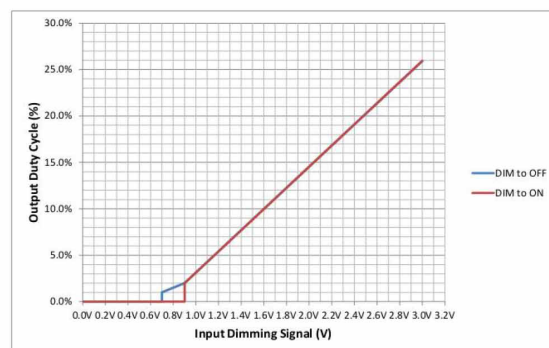
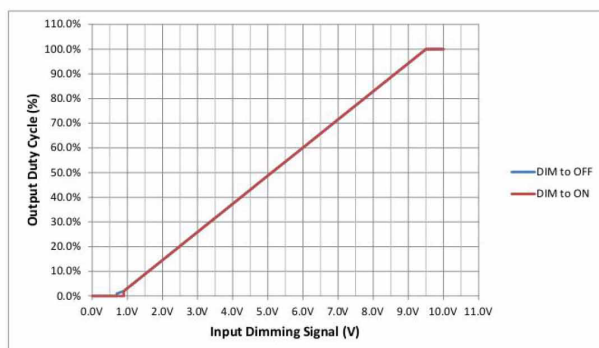
DIM+/- < 7K or 7K Vout Duty cycle 0%

(3) 10V/PWM DIMMABLE (TYPICAL)

DIM(10V/PWM Duty)	0%	9%	20%	30%	40%	50%	60%	70%	80%	95%	100%
Vout Duty Cycle(%)	0%	2%	14.5%	25.9%	37.3%	48.7%	60.1%	71.5%	82.9%	100%	100%

DIM+/- < 7K or 7K Vout Duty cycle 0%

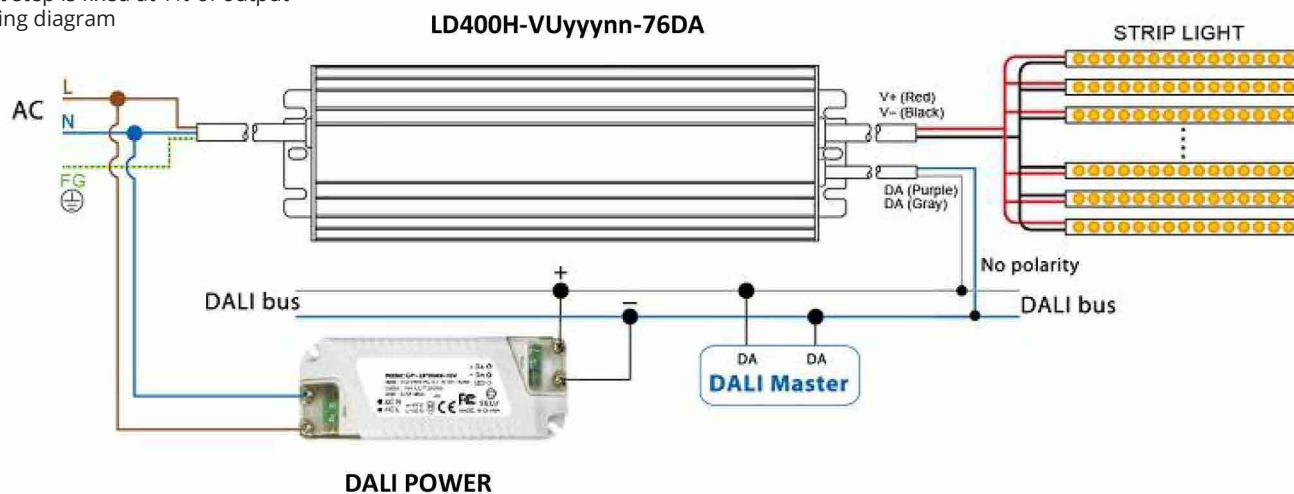
DIMMING CURVE



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DAI Function Description

- (1) Apply DALI signal between DA wires
- (2) First step is fixed at 1% of output
- (3) Wiring diagram



The diagram illustrates the DALI system architecture. On the left, a **DALI MASTER / APPLICATION CONTROLLER** (represented by a square unit with a rotary knob and buttons) and a **DALI POWER** supply (represented by a rectangular unit) are connected to a central **DALI Bus**. The bus is depicted as a vertical blue double-headed arrow. To the right of the bus, multiple sets of **LED STRIP LIGHTS** are shown. Each set consists of a rectangular LED strip connected to the bus. A label **Max. 64 sets** indicates the maximum number of such sets that can be connected. Each LED strip is further connected to a **STRIP LIGHT** fixture, which is shown as a horizontal bar with multiple small yellow circles representing LEDs.