

LKAD116V-T



Class2 SELV TYPE HL



Features

Output:	Constant Voltage
Range:	120-277VAC
PFC design:	Built-in active PFC function
Efficiency:	Up to 84%
Protections:	Short circuit/ over load/ over temperature
Heat dissipation:	Cooling by free air convection
Waterproof Performance:	For dry, damp, wet locations
Dimming function:	Phase dimming: work with forward phase, MLV and Reverse phase, ELV, TRIAC dimmers. 0-10V dimming: 0-10V/1-10V/Potentiometer/10V PWM 4 in 1
Dimming Range:	0-100%
Application:	Suitable for LED lighting and moving sign applications
Warranty:	5 years warranty

Specification

Model:		LKAD116DV825012T	LKAD116DV412524T	LKAD116DV206048T
Certificate		UL,CUL		
Output	DC Voltage	12V	24V	48V
	Voltage Tolerance	±0.5V		
	Voltage Regulation	±0.5%		
	Rated current	10A	5A	2.5A
	Rated power	120W		
	Load Regulation	±2%	±1%	±1%
Input	Voltage Range	120-277VAC		
	Frequency Range	50/60hz		
	Power Factor(Typ.) @full load	0.999@120VAC 0.934@277VAC	0.99@120VAC 0.969@277VAC	
	THD(Typ.) @ full load	<15%@120VAC & 277VAC		
	Efficiency(Typ.) @ full load	≥87.65%@120VAC ≥90.45%@277VAC	≥89.43%@120VAC ≥91.3%@277VAC	
	AC Current (Max.)	0.58A		
	Inrush Current (Typ.)	15A, 50%, 1.4ms @120VAC	65A, 50%, 1.4ms @277VAC	
	Leakage current	<0.5mA		
Protection	Short Circuit	shut down o/p voltage, re-power on to recover after fault condition removed		
	Over Load	≤120% constant current limiting, auto-recovery after fault condition removed		
	Over temperature	100℃±10℃ shut down o/p voltage, automatically recover after cooling		
Environment	Working TEMP.	-40~+60℃ (see below derating curve)		
	Working Humidity	20 - 95%RH non-condensing		
	Storage TEM.,Humidity	-40 - +80℃,10 - 95% RH non-condensing		
	TEMP.coefficient	±0.03%/℃(0 - 50℃)		
	Vibration	10~500Hz, 5G 12min./1 cycle, period for 72min. each along X,Y,Z axes		
Safety & EMC	Safety standards	UL8750 , CAN/CSA-C22.2 No.250.13		
	Withstand voltage	I/P-O/P: 1.8KVAC I/P-FG: 1.8KVAC O/P-FG1.8KVAC		
	Isolation resistance	I/P-O/P: 100MΩ / 500VDC/ 25℃/ 70% RH		
	EMC Emission	FCC 47 CFR Part 15 ,Subpart B		
Others	Net Weight			
	Dimension	264*58*18.5mm(L*W*H)		
	Packing	1 pc in 1 inner box		
Notes	1. All parameters NOT specially mentioned are measured at 120VAC input, rated load and 25℃ of ambient temperature. 2. Tolerance: includes set up tolerance and load regulation.			

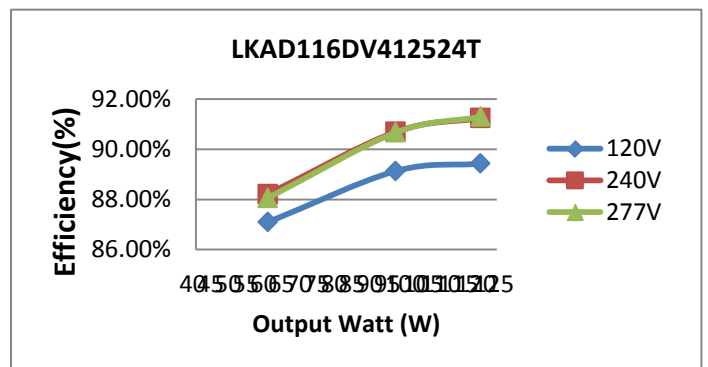
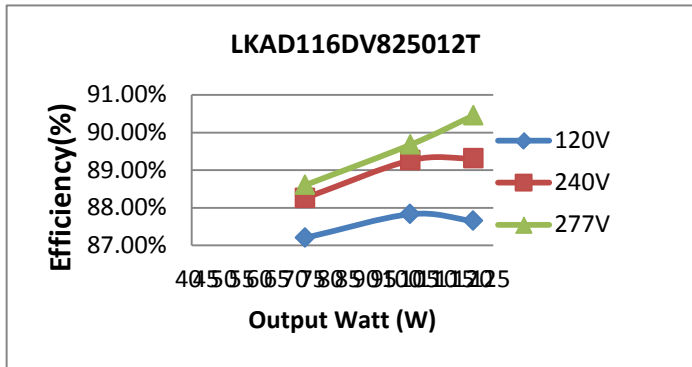


Electrical Characteristics

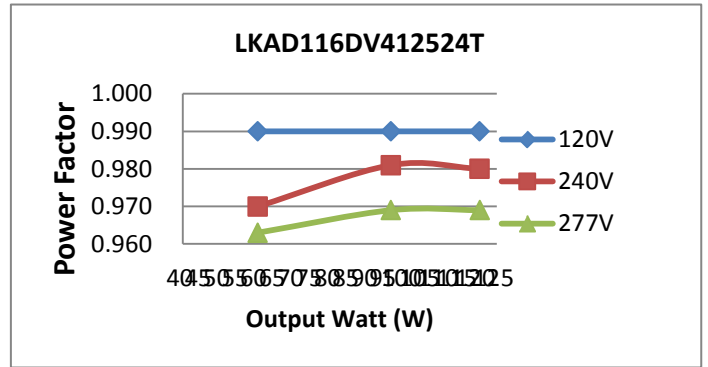
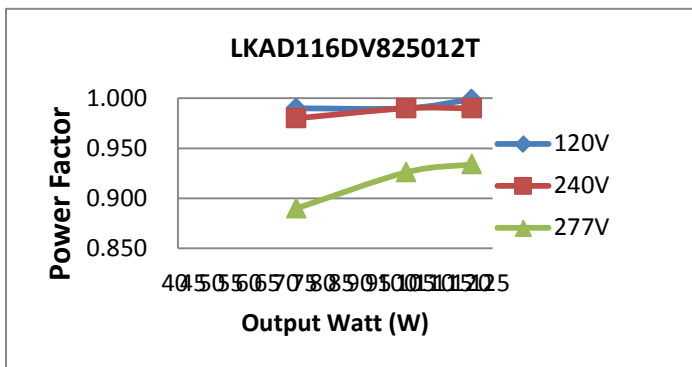
Model: LKAD116DV825012T							
Input voltage (Vac)	Input Current (mA)	Input Power (W)	Power Factor	Output Voltage (Vdc)	Output Current (MA)	Output Power (W)	Efficiency (%)
120V	1100	136.11	0.999	11.93	10000	119.30	87.65%
	940	115.65	0.990	11.95	8500	101.58	87.83%
	670	82.50	0.990	11.99	6000	71.94	87.20%
240V	550	133.69	0.990	11.94	10000	119.40	89.31%
	470	113.89	0.990	11.96	8500	101.66	89.26%
	330	81.51	0.980	11.99	6000	71.94	88.26%
277V	510	132.00	0.934	11.94	10000	119.40	90.45%
	440	113.36	0.926	11.96	8500	101.66	89.68%
	320	81.26	0.890	12.00	6000	72.00	88.60%

Model: LKAD116DV412524T							
Input voltage (Vac)	Input Current (mA)	Input Power (W)	Power Factor	Output Voltage (Vdc)	Output Current (MA)	Output Power (W)	Efficiency (%)
120V	1140	134.58	0.990	24.07	5000	120.35	89.43%
	910	108.07	0.990	24.08	4000	96.32	89.13%
	580	69.21	0.990	24.11	2500	60.28	87.09%
240V	560	131.90	0.980	24.07	5000	120.35	91.24%
	455	106.25	0.981	24.09	4000	96.36	90.69%
	290	68.33	0.970	24.11	2500	60.28	88.21%
277V	490	131.88	0.969	24.08	5000	120.40	91.30%
	390	106.28	0.969	24.09	4000	96.36	90.67%
	250	68.45	0.963	24.11	2500	60.28	88.06%

Efficiency Curve (efficiency vs output watt)



Power Factor Curve





Compatibility Testing for Phase Dimmer

Test by EU Standard 240V dimmers				
Model: LKAD116DV825012T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	T&J 25-1000W	8.20	127.34	6.44%
2	Lautrupvang DK-275D	24.00	114.06	21.04%
3	TENGEN V5-TG/G	24.62	125.90	19.56%
4	Nader	10.30	130.00	7.92%
5	CLIPSAL 500VA	2.70	112.66	2.40%
6	Midea 220V 630W	25.03	127.10	19.69%
7	European-No 1	1.87	126.80	1.47%
8	TCL 630W 220V	1.30	126.90	1.02%
9	SHYUSLC UK-PRD400VA	15.07	112.53	13.39%

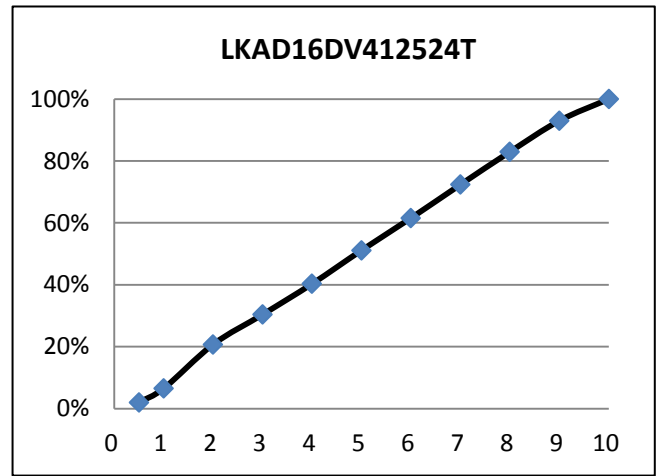
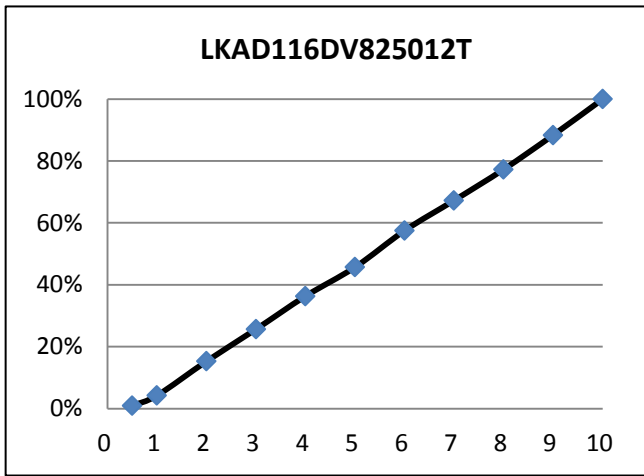
Model: LKAD116DV412524T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	T&J 25-1000W	8.20	127.34	6.44%
2	Lautrupvang DK-275D	24.00	114.06	21.04%
3	TENGEN V5-TG/G	24.62	125.90	19.56%
4	Nader	10.30	130.00	7.92%
5	CLIPSAL 500VA	2.70	112.66	2.40%
6	Midea 220V 630W	25.03	127.10	19.69%
7	European-No 1	1.87	126.80	1.47%
8	TCL 630W 220V	1.30	126.90	1.02%
9	SHYUSLC UK-PRD400VA	15.07	112.53	13.39%

Test by US Standard 120V dimmers				
Model: LKAD116DV825012T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	Lutron SB-1 600W	11.50	114	10.09%
2	LC211	2.20	112.2	1.96%
3	Lutron DVCL-253P-WH	6.70	103.4	6.48%
4	TLC-0005	11.22	118.1	9.50%
5	PEC-002	11.48	118.28	9.71%
6	LEVLTON 150W	1.37	109.7	1.25%
7	LEVLTON DSL06	2.30	113	2.04%
8	Lutron Scl-153P	7.80	102.2	7.63%
9	Lutron SELV-300P	6.70	116	5.78%

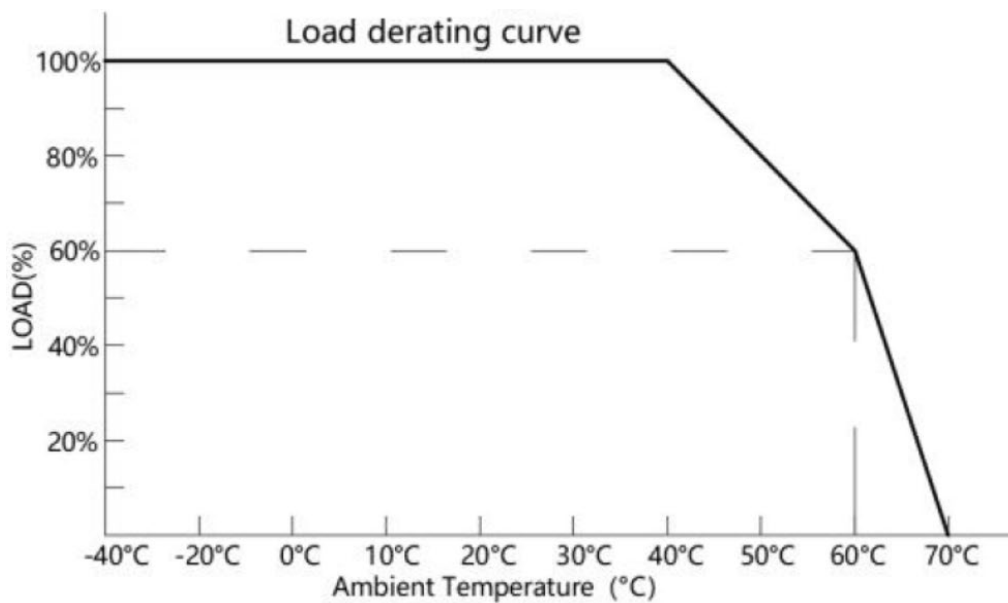
Model: LKAD116DV412524T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	Lutron SB-1 600W	24.60	109	22.57%
2	LC211	3.80	114.9	3.31%
3	Lutron DVCL-253P-WH	4.30	120	3.58%
4	TLC-0005	17.50	123.4	14.18%
5	PEC-002	19.57	122	16.04%
6	LEVLTON 150W	2.13	116	1.84%
7	LEVLTON DSL06	3.00	118	2.54%
8	Lutron Scl-153P	2.63	108.9	2.42%
9	Lutron SELV-300P	4.30	117	3.68%



0-10V Dimming Curve

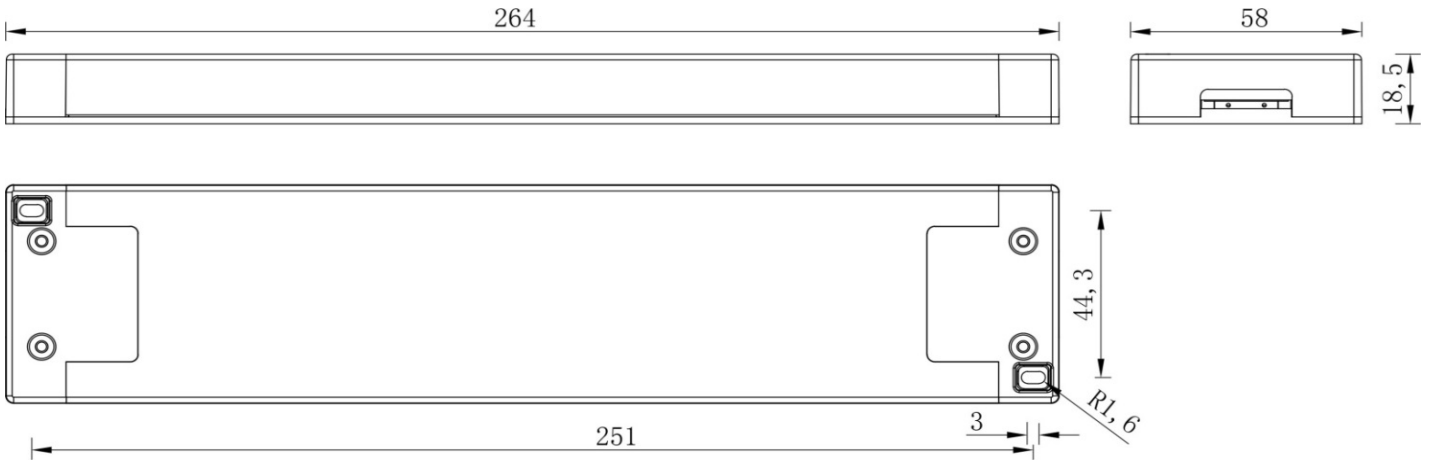


Derating Curve (output load vs TEMP.)

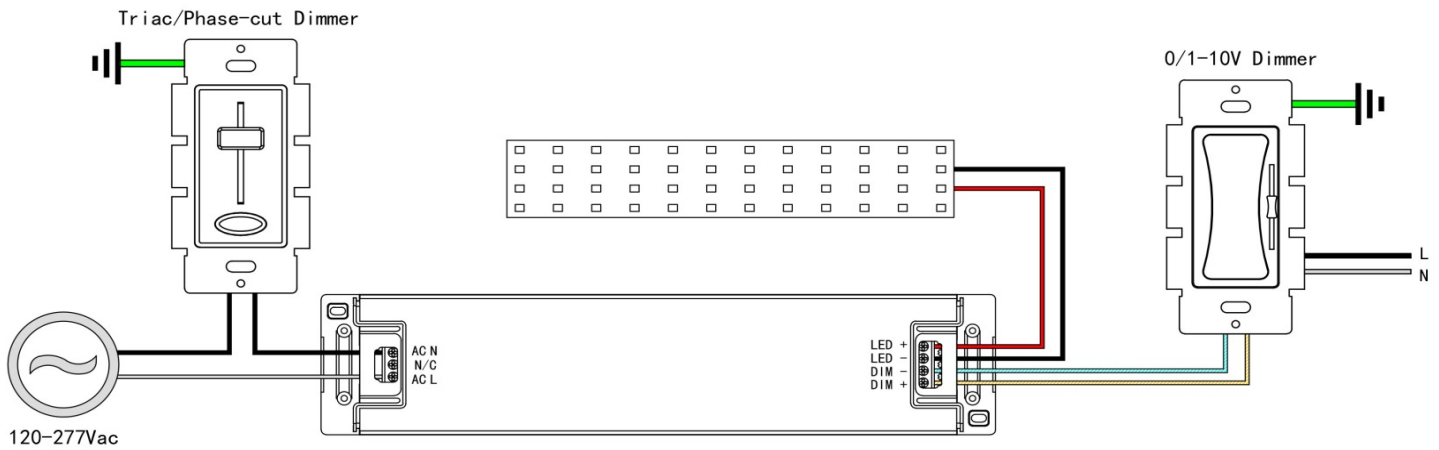




Installation Dimension



Wiring Diagram



1. Input cable 3*18AWG, the Green cable to GND, Black cable to L, and White cable to N of Mains AC.
2. Output cable 2*18AWG, Red cable (+) to LED Positive side (+) , Black cable (-) to LED Negative side (-).
3. Dimming cable 2*22AWG, Purple cable DIM (+) to 0/1-10V dimmer signal(+), Pink cable DIM (-) to 0/1-10V dimmer signal (-).
4. Please DO NOT connect "DIM-" to "LED-", "DIM+" to "LED+", or other incorrect connection.
5. Please make sure your connect these correctly otherwise your product will not function correctly and could be damaged



Dimming Operation

This driver can dimming in two ways at the same time, you must be assured that LED lighting is up to the max. Brightness then you could operate with the other dimming.

1. TRIAC/Phase cut dimming

- The Pulse-Width Modulation (PWM) of output voltage can be adjusted through input terminal of the AC phase line(L) by connection a phase /Triac dimmer or lighting system.
- Working with forward phase, MLV and Reverse phase , ELV, TRIAC dimmers or light system.
- Min. loading is about 10%
- Please try to use dimmers with power at least 1.5 times as the output power of the driver.

2. 0-10/ 1-10V/ 10V PWM/ Potentiometer dimming

Working well with most EU and US brands of 0/1-10V dimmers, 10V PWM dimmers or dimming system as well as potentiometer dimming system.

Notices

1. This driver should be installed by qualified and professional person.
2. Please make sure the driver is installed with adequate ventilation around it to allow for heat dissipation.
3. Ensure that wiring is correct before test in order to avoid light and power supply damage.
4. If driver Cannot work normally, don't maintain privately.

If still have any questions, please contact us directly