LKAD077V-T



Class2 SELV TYPE HL



Features

Constant Voltage Output:

Range: 120-277VAC

PFC design: Built-in active PFC function

Efficiency: Up to 84%

Protections: Short circuit/ over load/ over temperature

Cooling by free air convection **Heat dissipation:**

Waterproof Performance: For dry, damp, wet locations

Phase dimming: work with forward phase, MLV and Reverse phase, ELV, **Dimming function:**

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:		LKAD077DV500012T	LKAD077DV250024T	LKAD077DV125048T			
Certificate		cUL,CE,Rosh,					
	DC Voltage	12V	24V	48V			
	Voltage Tolerance	±0.5V		•			
Output	Voltage Regulation	±0.5%					
Output	Rated current	5A	2.5A	1.25A			
	Rated power	60W					
	Load Regulation	±2%	±1%	±1%			
	Voltage Range	120-277VAC					
	Frequency Range	50/60hz					
	Power Factor(Typ.) @full load	0.99@120VAC 0.938@277VAC	0.999@120VAC 0.94@277VAC	0.99@120VAC 0.94@277VAC			
Input	THD(Typ.) @ full load	<15%@120VAC & 277VAC					
input	Efficiency(Typ.) @ full load	≥85.68%@120VAC ≥88.84%@277VAC	≥87.17%@120VAC ≥90.08%@277VAC	≥84.54%@120VAC ≥86.96%@277VAC			
	AC Current (Max.)	0.58A					
	Inrush Current (Typ.)	15A, 50%, 1.4ms @120VAC 65A, 50%, 1.4ms @277VAC					
	Leakage current	<0.5mA					
	Short Circuit	shut down o/p voltage, re-power on to recover after fault condition removed					
Protection	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					
	Working TEMP.	-40~+60 ℃ (see below derating curve)					
	Working Humidity	20 - 95%RH non-condensir	ng				
Environment	Storage TEM.,Humidity	-40 - +80℃,10 - 95% RH r	non-condensing				
	TEMP.coefficient	±0.03%/℃(0 - 50℃)					
	Vibration	10~500Hz, 5G 12min./1 cycl	e, period for 72min. each alor	ng X,Y,Z axes			
	Safety standards	UL8750 , CAN/CSA-C22.2 N	lo.250.13				
Safety & EMC	Withstand voltage	I/P-O/P: 1.8KVAC I/P-FG: 1.	8KVAC O/P-FG1.8KVAC				
Salety & LIVIC	Isolation resistance	I/P-O/P: 100MΩ/ 500VDC/	25℃/ 70% RH				
	EMC Emission	FCC 47 CFR Part 15 ,Subpa	rt B				
	Net Weight						
Others	Dimension	210*55.5*17mm(L*W*H)					
	Packing	1 pc in 1 inner box					
Notes		ally mentioned are measured at 13 tolerance and load regulation.	20VAC input, rated load and $25^\circ\!$	of ambient temperature.			



Triac/0-10V/1-10V/Potentiometer/10V PWM 5 in 1 Dimmable LED driver 60W

Electrical Characteristics

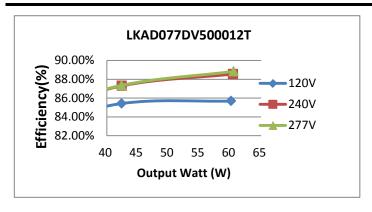
Model: LKA	Model: LKAD077DV500012T						
Input voltage (Vac)	Input Current (mA)	Input Power (W)	Power Factor	Output Voltage (Vdc)	Output Current (MA)	Output Power (W)	Efficiency (%)
	580	70.20	0.990	12.03	5000	60.15	85.68%
120V	410	49.62	0.990	12.11	3500	42.39	85.42%
	240	29.42	0.990	12.12	2000	24.24	82.39%
	290	68.26	0.970	12.09	5000	60.45	88.56%
240V	210	48.59	0.960	12.12	3500	42.42	87.30%
	130	28.95	0.920	12.12	2000	24.24	83.73%
	260	68.16	0.938	12.11	5000	60.55	88.84%
277V	180	48.52	0.931	12.11	3500	42.39	87.36%
	110	28.90	0.930	12.11	2000	24.22	83.81%

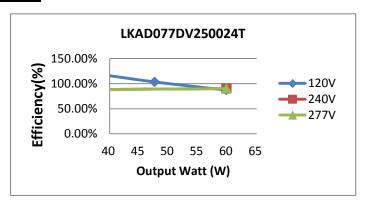
Model: LKAD077DV250024T							
Input voltage (Vac)	Input Current (mA)	Input Power (W)	Power Factor	Output Voltage (Vdc)	Output Current (MA)	Output Power (W)	Efficiency (%)
	574.80	68.60	0.999	23.93	2500	59.80	87.17%
120V	386	46.02	0.990	23.94	1650	47.62	103.48%
	243.80	29.09	0.990	23.95	1000	35.73	122.83%
	286	66.38	0.971	23.93	2500	59.83	90.13%
240V	193.70	44.70	0.964	23.94	1650	39.50	88.37%
	125	28.12	0.941	23.95	1000	23.95	85.17%
	251.90	66.41	0.940	23.93	2500	59.83	90.08%
277V	172	44.70	0.931	23.92	1650	39.47	88.30%
	111.80	28.05	0.900	23.96	1000	23.96	85.42%

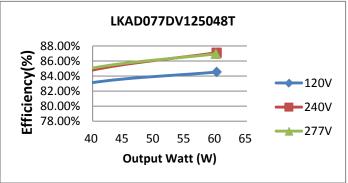
Model: LKAD077DV125048T							
Input voltage (Vac)	Input Current (mA)	Input Power (W)	Power Factor	Output Voltage (Vdc)	Output Current (MA)	Output Power (W)	Efficiency (%)
	588	71.12	0.990	48.10	1250	60.13	84.54%
120V	390	47.66	0.990	48.00	825	39.60	83.09%
	250	30.00	0.990	48.00	500	24.00	80.00%
	290	69.02	0.956	48.10	1250	60.13	87.11%
240V	200	46.73	0.940	48.00	825	39.60	84.74%
	130	29.77	0.900	48.10	500	24.05	80.79%
	260	69.00	0.940	48.00	1250	60.00	86.96%
277V	180	46.67	0.914	48.10	825	39.68	85.03%
	220	29.53	0.869	48.10	500	24.05	81.44%



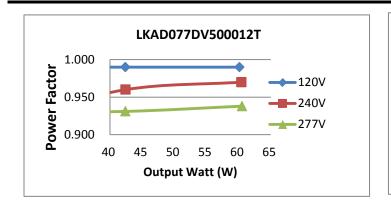
Efficiency Curve (efficiency vs ouput watt)

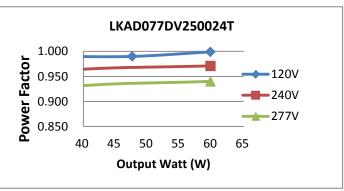


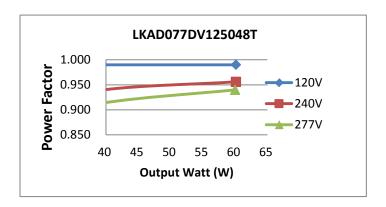




Power Factor Curve







Compatibility Testing for Phase Dimmer

	Test by EU Standard 240V dimmers					
Mode	el: LKAD077DV50001					
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)		
1	T&J 25-1000W	10.00	47.83	20.91%		
2	Lautrupvang DK-275D	10.64	50.43	21.10%		
3	TENGEN V5-TG/G	12.40	57.66	21.51%		
4	Nader	2.22	57.30	3.87%		
5	CLIPSAL 500VA	0.30	41.17	0.73%		
6	Midea 220V 630W	12.50	57.10	21.89%		
7	European-No 1	2.13	57.51	3.70%		
8	TCL 630W 220V	0.15	57.64	0.26%		
9	SHYUSLC UK-PRD400VA	7.40	52.89	13.99%		
I						

Mode	el: LKAD077DV250024			
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	T&J 25-1000W	8.20	69.59	11.78%
2	Lautrupvang DK-275D	13.44	62.12	21.64%
3	TENGEN V5-TG/G	14.22	63.55	22.38%
4	Nader	15.49	62.92	24.62%
5	CLIPSAL 500VA	0.15	58.77	0.26%
6	Midea 220V 630W	12.74	69.09	18.44%
7	European-No 1	1.67	68.85	2.43%
8	TCL 630W 220V	0.17	68.95	0.25%
9	SHYUSLC UK-PRD400VA	8.76	61.83	14.17%

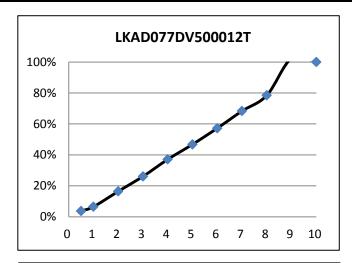
Mode	l: LKAD077DV125048			
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	T&J 25-1000W	24.00	65.99	36.37%
2	Lautrupvang DK-275D	33.79	65.61	51.50%
3	European-No 2	35.04	66.56	52.64%
4	TENGEN V5-TG/G	30.20	68.48	44.10%
5	Nader	16.60	68.70	24.16%
6	CLIPSAL 500VA	0.14	64.46	0.22%
7	Midea 220V 630W	36.00	66.90	53.81%
8	European-No 1	1.85	68.97	2.68%
9	TCL 630W 220V	0.16	69.50	0.23%

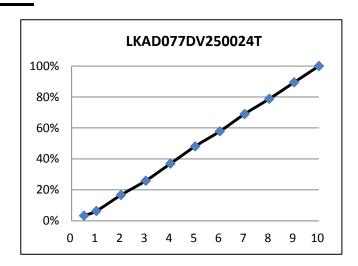
	Test by US Standard 120V dimmers						
Mode	el: LKAD077DV50001						
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)			
1	Lutron SB-1 600W	2.10	53.6W	#VALUE!			
2	LC211	2.09	46.73	4.47%			
3	Lutron DVCL-253P-WH	1.53	48.70	3.14%			
4	TLC-0005	4.50	56	8.04%			
5	PEC-002	4.40	49.88	8.82%			
6	LEVLTON 150W	1.02	45.86	2.22%			
7	LEVLTON DSL06	1.22	50.70	2.41%			
8	Lutron Scl-153P	1.30	53.6	2.43%			
9	Lutron SELV-300P	2.06	54.42	3.79%			

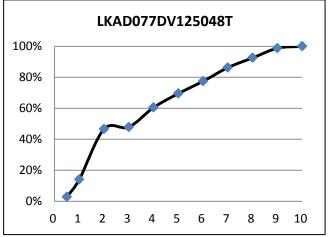
Model: LKAD077DV250024T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	Lutron SB-1 600W	1.50	60.77	2.47%
2	LC211	1.85	57.99	3.19%
3	Lutron DVCL-253P-WH	2.31	59.98	3.85%
4	TLC-0005	5.62	62.78	8.95%
5	PEC-002	5.08	61.78	8.22%
6	TLC-0003	4.70	63.26	7.43%
7	LEVLTON 150W	1.25	58.52	2.14%
8	LEVLTON DSL06	3.18	55.49	5.73%
9	Lutron scl-153P	1.26	53.63	2.35%

Model: LKAD077DV125048T				
NO	Dimmer Model	Min Watt (W)	Max Watt (W)	Dimming ratio (%)
1	Lutron SB-1 600W	0.80	64.92	1.23%
2	LC211	2.88	63.77	4.52%
3	Lutron DVCL-253P-WH	7.20	61.60	11.69%
4	TLC-0005	13.00	66.57	19.53%
5	PEC-002	16.50	64.90	25.42%
6	TLC-0003	14.70	65.7	22.37%
7	LEVLTON 150W	0.61	66.92	0.91%
8	LEVLTON DSL06	6.30	65	9.69%
9	Lutron scl-153P	0.86	60.99	1.41%

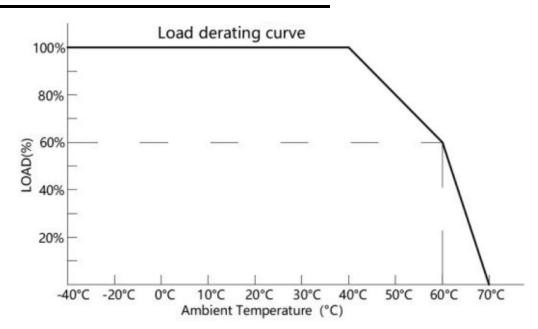
0-10V Dimming Curve





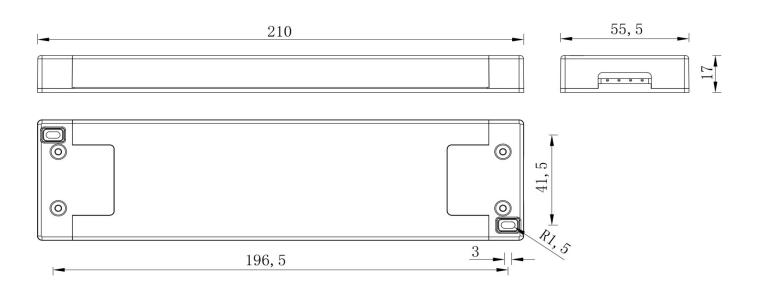


Derating Curve (output load vs TEMP.)

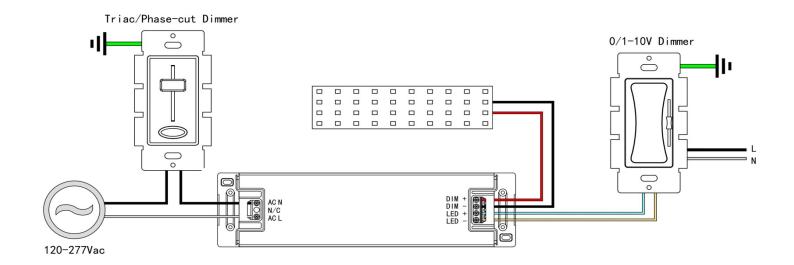




Installation Dimension



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