

KLPL30JU SERIES

30W Single Output Programmable LED Driver

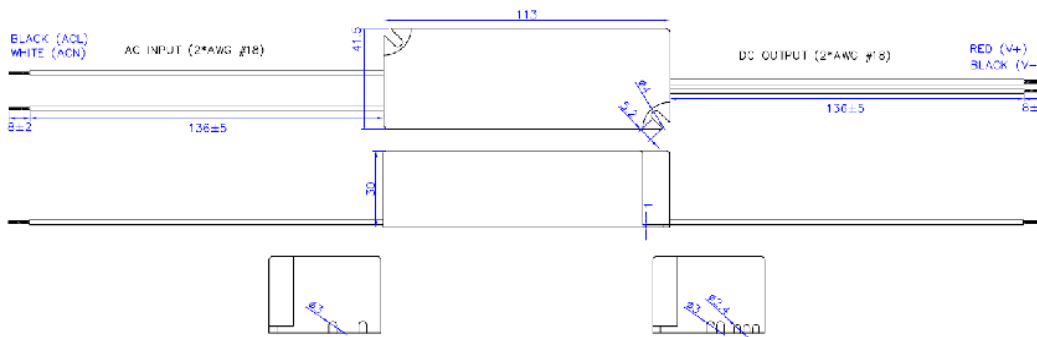
- NFC technology programmable output current
- Wide input voltage 90 to 305VAC, 47 to 63Hz
- Over Voltage / Short Circuit / Over Temperature / Input Surge Protection
- High efficiency (up to 86.5%), active power factor correction
- Building-in dimming function (0~10V/ PWM/ Timer)
- IP66 waterproof rating, fully isolated
- Comply to worldwide safety regulations for lighting
- Cooling by free air convection
- Suitable for LED lighting & moving sign applications, for dry / damp / wet locations

3 Year Warranty
Approvals: IP66 CE RoHS2
SPECIFICATION

Part Number	KLPL30JU-S030051P	KLPL30JU-S051085P	
OUTPUT	CONSTANT POWER OUTPUT VOLTAGE RANGE	30-51 V	51-85 V
	WORKING VOLTAGE RANGE	18-51 V	30.6-85 V
	PROGRAMMABLE CONSTANT CURRENT REGION(A)	0.4-1 A	0.24-0.59 A
	RATED POWER	30 W	
	RIPPLE & NOISE(max.) Note.2	3.0%Vo	3.0%Vo
	CURRENT TOLERANCE Note.3	±5.0%	
	LINE REGULATION	±5.0%	
	LOAD REGULATION	±3.0%	
	SETUP, RISE TIME(Typ.) Note.6	<2.0s/ 115VAC at full load <1.0s / 230VAC	
INPUT	VOLTAGE RANGE Note.4	90 ~ 305 VAC	
	FREQUENCY RANGE	47 ~ 63 Hz	
	POWER FACTOR(Typ.)	PF>0.99/115VAC, PF>0.95/230VAC at full load (Please refer to "Power Factor Characteristic" curve)	
	EFFICIENCY (@110V)	83.5%	84.5%
	EFFICIENCY (@220V)	84.5%	86.5%
	AC CURRENT(Typ.)	0.4A/115VAC 0.2A/230VAC	
	INRUSH CURRENT(Typ.)	COLD START 24A (T-width=270us measured at 50% peak) at 230VAC	
LEAKAGE CURRENT	<0.75mA/277VAC		
PROTECTION	OVER CURRENT	95 ~ 108%	
	SHORT CURRENT	Protection type: Constant current limiting, recovers automatically after fault condition is removed	
	OVER VOLTAGE	Hiccup mode, recovers automatically after fault condition is removed	
	OVER TEMP.	1.4Vo	1.4Vo
	INPUT SURGE PROTECTION	Protection type: Hiccup mode, recovers automatically after fault condition is removed	
		Hiccup mode, recovers automatically after fault condition is removed	
ENVIRONMENT	WORKING TEMP.	2kV line-line, 4kV line-earth	
	WORKING HUMIDITY	-35 ~ +70°C (Refer to "Derating Curve")	
	STORAGE TEMP., HUMIDITY	10 ~ 100% RH non-condensing	
	TEMP. COEFFICIENT	-40 ~ +85°C, 5 ~ 100% RH	
	VIBRATION	±0.03%/°C (0~50°C)	
	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes		

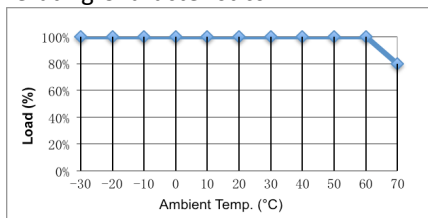
SAFETY & EMC	SAFETY STANDARDS Note.6	MEET UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
	WITHSTAND VOLTAGE	I/P – O/P: 3.75kVAC
	ISOLATION RESISTANCE	I/P – O/P: 100M Ohms / 500VDC / 25°C / 70% RH
	EMC EMISSION	Compliant to EN55015, EN61000-3-2 Class C ($\geq 60\%$ load); EN61000-3-3
	EMC IMMUNITY	Compliant to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level (surge 2kV), criteria A
OTHERS	MTBF Note.10	200 khrs min.
	DIMENSION (L*W*H)	113*41.5*30 mm 4.45*1.63*1.18 inch
	PACKING	
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance: includes set up tolerance, line regulation & load regulation. Derating may be needed under low input voltages. Please check the static characteristics for details. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. 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 manufactures must re-qualify EMC DIRECTIVE on the complete installation again. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. To fulfill requirements of the latest ERP regulation for lighting fixtures, this LED power supply can only be used behind switch without permanently connected to the mains. Measured at 120V input, 80% load, MIL-HDBK-217F (25°C). 	

Mechanical Specification

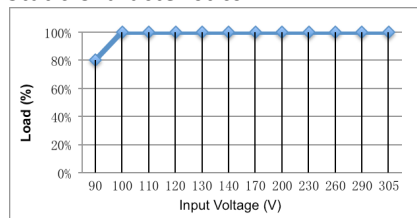


Characteristic Charts

Derating Characteristics

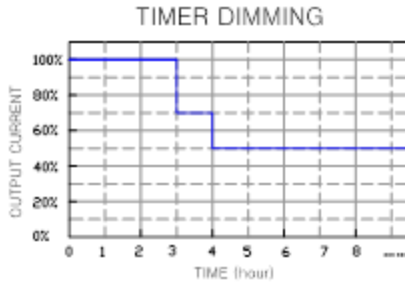


Static Characteristics



Dimming Function

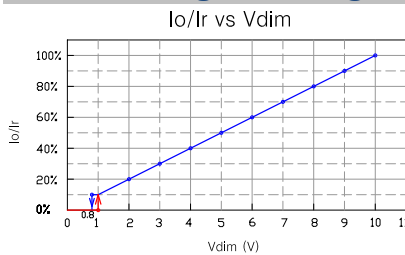
TIMER Dimming



NOTE:

1. The dimming time can be customized according to different orders.

0-10V Analog Dimming



Input Dimming Voltage	0-10V
Input Source Current	0-10mA

NOTE:

1. If the dimming function is not used, short **10V output pin (yellow)** and **0-10V input pin (purple)**.
2. I_o is actual output current and I_r is rated current without dimming control.
3. For the driver to operate properly, the load voltage must be maintained above the minimum voltage threshold, proximately 50% of the max. output voltage for any given mode.
4. The output will be shut down when the dimming signal decrease to 0.8V, and will stay 0 until the dimming signal rise up to 1V, it will then return to 10% I_r .
5. Do not connect the **GND of dimming (green)** to the output. Otherwise, the LED driver can not work normally.

PWM Dimming

PWM Signal	10 V	Purple wire vs Green wire
Input Max Current	10 mA	
PWM Frequency	0.5 ~ 3 kHz	
PWM Pulse Width	10%~100%	

NOTE:

1. Pulse width less than 10% will cause the driver working unsteadily.
2. Green wire is the GND wire.

NFC Programmable



NOTE:

1. The NFC controller can modulate the output current from 40% to 100% rated value.
2. The NFC dimming is a way of non-contact process, therefore much safer compared to traditional ones.
3. Power devices can be programmed with the output current even if it's powered off.