

**KLPA160JV SERIES**
**160W Single Output Programmable LED Driver**


- NFC technology programmable without driver power on
- Constant power programmable design, CC/CV hybrid output
- High efficiency, active power factor correction
- Ultra low THD at light load
- 0~10V/ PWM/ Timer, Dim to off option, Programmable timer
- 12V/200mA AUX Output
- UL recognized with HL/ TL/Surge(Diff:4kV, Common:6kV)
- UL8750 / EMC: EN55015, EN61000-4-2,3,4,5,6,8,11 / EN61000-3-2 Class C

**5 Year Warranty**

 Approvals: **IP67**
**ELECTRICAL SPECIFICATIONS**

Part Number	Output Voltage Range Without Dimming	Programmable Constant Voltage Region	Programmable Constant Current Region	Max Output Power	Input Current	Power Factor	Efficiency		Line Regulation	Load Regulation
							110V	220V		
KLPA160JV-S024036P	24-36 V	24-36 V	2.67-6.67 A	160W	1.56A (115VAC) 0.76A (230VAC)	0.99 (115VAC) 0.97 (230VAC)	89%	91%	± 1%	±1%
KLPA160JV-S036048P	36-48 V	36-48 V	1.77-4.44 A	160W			90%	92%		
KLPA160JV-S048080P	48-80 V	48-80 V	1.33-3.33 A	160W			92%	93%		
KLPA160JV-S080140P	80-140 V	80-140 V	0.8-2 A	160W			92%	94%		
KLPA160JV-S140233P	140-233 V	140-233 V	0.45-1.14 A	160W			91%	93%		

Note: Efficiency value is typical value.

**PROTECTIONS & CONDITIONS**

PROTECTION	OVER CURRENT	95~108% Protection type: Constant current limiting, recovers automatically after fault condition is removed
	SHORT CURRENT	Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	1.3Vo, Protection type: Hiccup mode, recovers automatically after fault condition is removed
	OVER TEMP.	Hiccup mode, recovers automatically after fault condition is removed
ENVIRONMENT	WORKING TEMP.	-35 ~ +70°C (Refer to "Derating Curve")
	WORKING HUMIDITY	10 ~ 100% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 5 ~ 100% RH
	TEMP. COEFFICIENT	±0.05%/°C (0~50°C)
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
	Max T-case TEMP	90°C

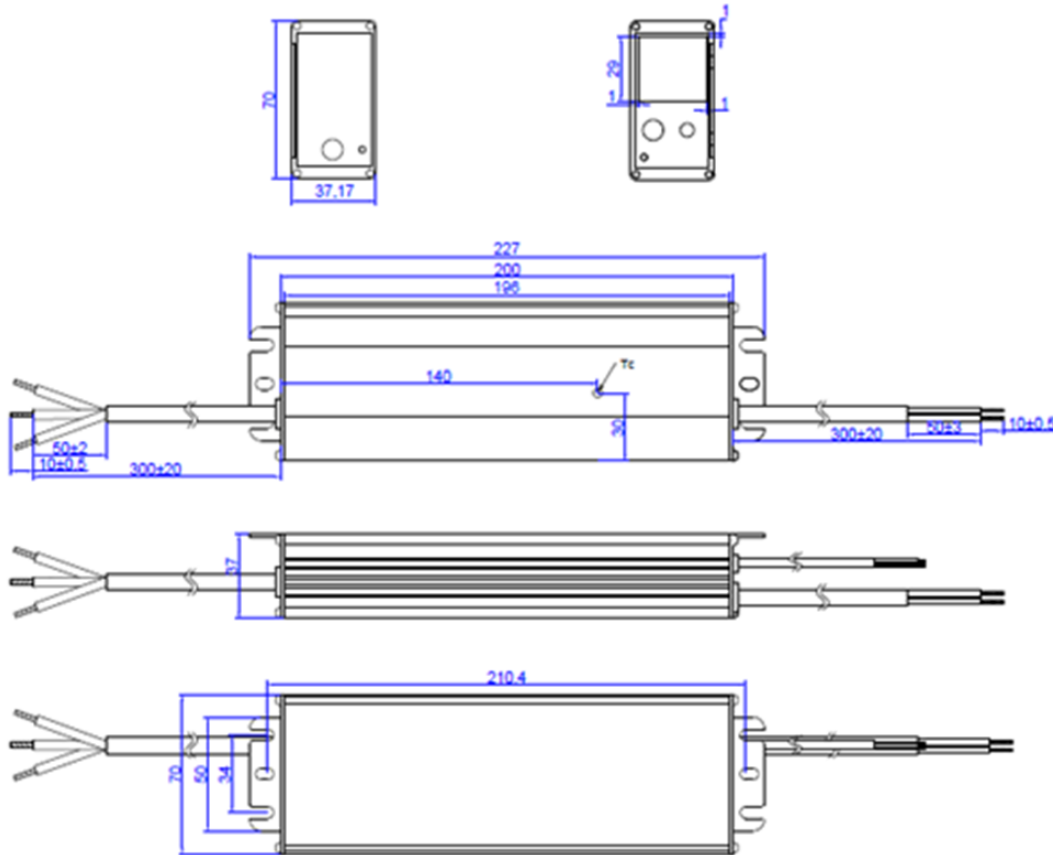
### GENERAL INFORMATION

LED Driver Type	Constant Current / Constant Voltage
Maximum Wattage	160W
Input Voltage	90 ~ 305 VAC
Input Frequency	47 ~ 63 Hz
Total Harmonic Distortion	<20%
WARRANTY	5 year limited warranty
Inrush Current	65A at 230VAC cold start +25°C
MTBF	> 200kHrs to MIL-HDBK-217 at25°C,GB
Protection	Overload/Over temperature/Short circuit protection
Weight	1050.6g
Packaging	12pcs/carton

### CERTIFICATES & COMPLIANCE

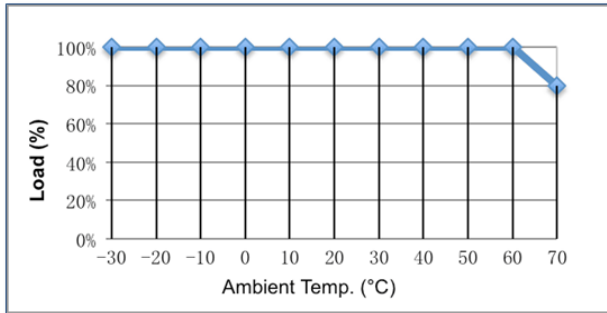
SAFETY & EMC	SAFETY STANDARDS	UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
	WITHSTAND VOLTAGE	I/P – O/P: 3.75kVAC
	ISOLATION RESISTANCE	I/P – O/P: 100M Ohms / 500VDC /25°C / 70% RH
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C ( $\geq 60\%$ load); EN61000-3-3
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024

### MECHANICAL SPECIFICATION

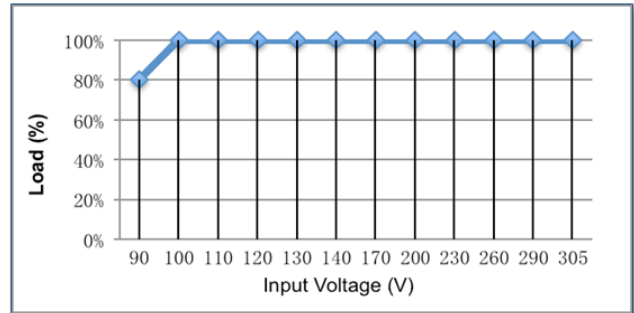


CHARACTERISTIC CHARTS

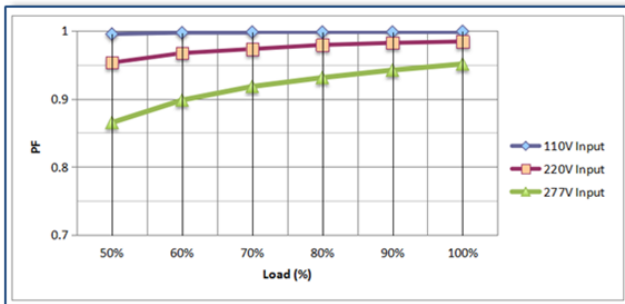
Derating Characteristics



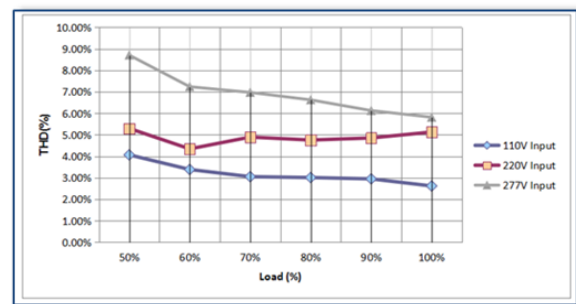
Static Characteristics



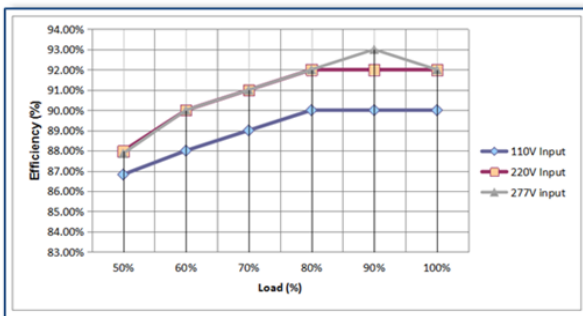
KLPA160JV-S036048P / PF vs Output



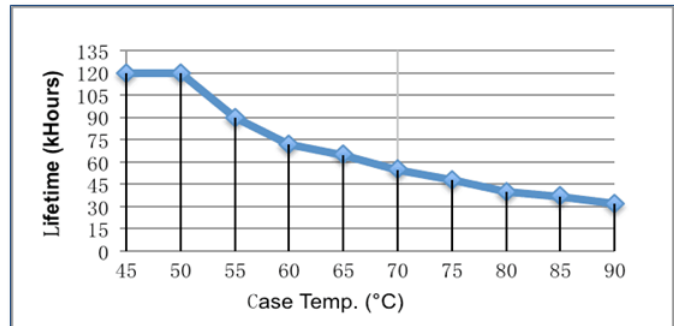
KLPA160JV-S036048P / THD vs Output



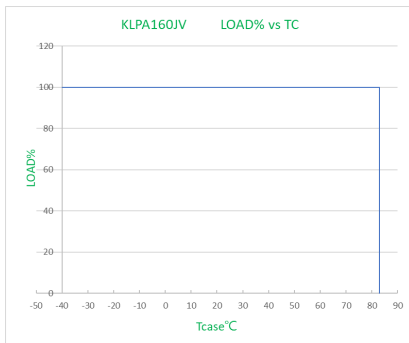
KLPA160JV-S036048P / Efficiency vs Output



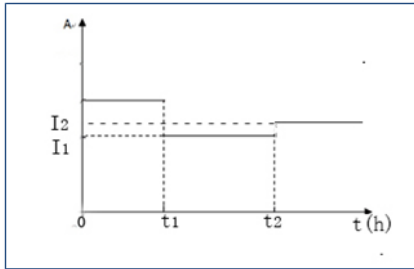
KLPA160JV / Lifetime vs Case Temp



KLPA160JV LOAD% vs Tc



## TIMER DIMMING

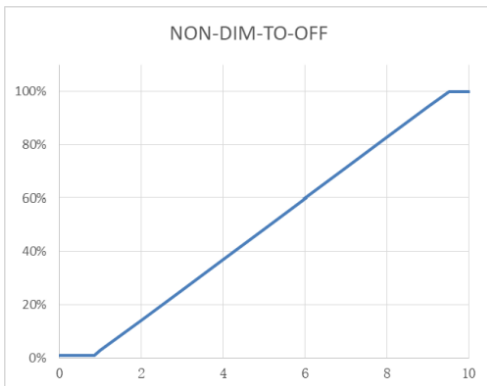


**NOTE:**

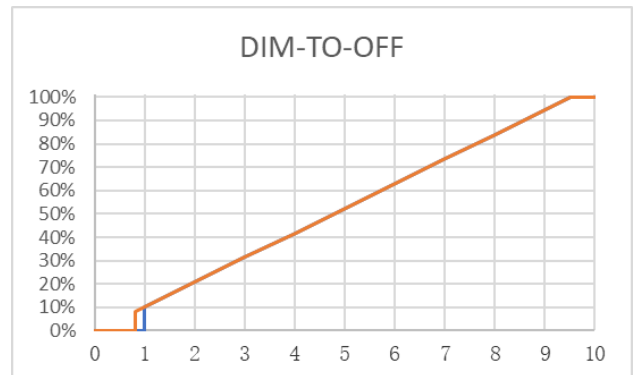
1. The dimming time can be programmed by the NFC controller.
2. The time of  $t_1$  and  $t_2$  can be set by the NFC programmer. (0.5h step)
3. The value of  $I_1$  and  $I_2$  can be set by the NFC programmer.
4. Current change from  $I_1$  to  $I_2$  need a few minutes.

## 0-10V ANALOG & PWM DIMMING

**Io/Ir vs Vdim**



**Io/Ir vs Vdim**



<b>GND</b>	Grey
<b>Dimming wire 0-10V&amp;PWM</b>	Purple
<b>10V AUX</b>	Yellow
<b>Input Dimming Voltage</b>	0-10V
<b>DIM+ Source Current</b>	0-1mA
<b>12V AUX Source Current</b>	200mA
<b>PWM Frequency Range</b>	0.5 ~ 3 kHz
<b>PWM high level</b>	10V

**NOTE:**

1.  $I_o$  is actual output current and  $I_r$  is rated current without dimming control.
2. For the driver to operate properly, the load voltage must be in the working voltage range.
3. We have DIM-TO-OFF option can be programmed by the programmer.
4. Maximum input voltage at dimming wire is 12V.
5. AUX wire is only for source, can't connect to other voltage source.

## NFC CONTROLLER

**NOTE:**

1. The NFC controller can program the output current, voltage and timer delays.
2. The NFC programming is a non-contact process, therefore much safer compared to traditional programming methods.
3. Power devices can be programmed without AC power applied to the driver.

