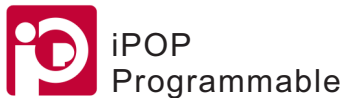


## 90 - 305V Input LED Driver



### General Features

- Ultra High Efficiency (Up to 92%)
- Full Power at Wide Output Current Range (Constant Power)
- Thermal Sensing and Protection for LED Module
- 0-10V/PWM dimming
- Input Surge Protection: 5kV line-line, 10kV line-earth
- All-Around Protection: OVP, SCP, OTP
- IP67 and UL Dry / Damp / Wet Locations
- Dual Stage; SELV Output
- UL recognized - TL Mark
- 5 year warranty

### Recommended Applications

LED street light, LED tunnel light, LED gas station light,  
LED billboard, LED grow light

### Product Description:

The LPxA-Series is a constant current, programmable LED drives that has a wide range of power supplies from 105W to 320W, with various output voltages and current. The wide range operating voltage from 90 - 305VAC with excellent power factor and THD. The typical efficiency is approx. 93% to ensure the highest quality and trouble free operation.

Output Power (W)	Model No.	AC Input Voltage (VAC)	DC Output Current (A)	DC Output Voltage (V)	Eff. @220VAC (%)	Life Time @70°C Tc (Hours)	Dimensions (LxWxH) (mm)
105	LPJA-105-020VN	90 ~ 305	1.69 - 3.0	20 - 62	> 90	50K	163x53x34
	LPJA-105-060VN		.07 - 1.4	60 - 150	> 90		
	LPJA-105-120VN		0.344 - 0.86	120 - 305	> 90		
150	LPSA-150-020VN		2.8 - 4.2	20 - 54	> 89		200x53x39.5
	LPSA-150-060VN		1.25 - 2.1	60 - 120	> 90		
	LPSA-150-080VN		0.7 - 1.1	80 - 214	> 90		
	LPSA-150-176VN		0.45 - 0.7	179 - 335	> 91		
200	LPDA-200-020VN		3.7 - 6.3	20 - 54	> 90		199x59x40
	LPDA-200-060VN		1.67 - 2.8	60 - 120	> 90		
	LPDA-200-120VN		0.65 - 1.4	120 - 305	> 91		
	LPDA-200-230VN		0.45 - 0.7	230 - 445	> 92		
240	LPHA-240-020VN		5.86 - 7.5	20 - 41	> 90		232x53x43.5
	LPHA-240-062VN	3.87 - 5.2	20 - 62	> 90			
	LPHA-240-080VN	1.33 - 2.1	80 - 180	> 91			
	LPHA-240-190VN	0.65 - 1.1	190 - 368	> 91			
320	LPZA-320-020VN	7.8 - 9.99	20 - 41	> 91	210x78x40		
	LPZA-320-062VN	5.6 - 8.2	20 - 62	> 91			
	LPZA-320-230VN	1.39 - 2.1	120 - 230	> 91			
	LPZA-320-235VN	0.7 - 1.1	235 - 457	> 91			

**Notes:** 1. Output current range with constant power at maximum rated wattage.  
2. Measured at full load and 220VAC input.

## Input Specifications:

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 VAC		305VAC	Nominal : 100-277VAC
Input Frequency	47 Hz		63 Hz	
Leakage Current			< 0.75 mA	
Input AC current			105W, 1.5A 150W, 1.70A 200W, 1.85A	Measured at full load and 220VAC
Inrush Current			<75A	
PF		0.96		At 100-277VAC, 70-100% load
THD			< 15%	

## Output Specifications:

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5% loiset		5% loiset	At full load condition
Total Output Current Ripple; pk-pk		5% loiset	10% loiset	At full load condition, 20Mhz BW
Output Current Ripple at < 200 Hz; pk-pk		2% loiset		At full load condition
Startup Overshoot Current			10% ilomax	At full load condition
Line Regulation			± 5%	Measure at full load
Load Regulation			± 1.5%	
Turn-on Delay Time			1 sec.	
Temperature Coefficient of loiset			0.03%/ °C	Case Temperature 0°- Tc max.

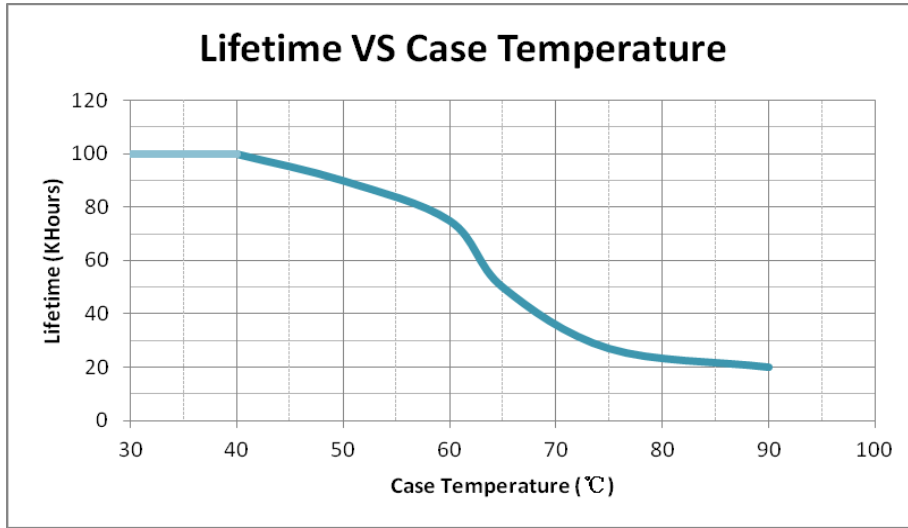
## General Specifications:

Parameter	Min.	Typ.	Max.	Notes
MTBF	200K hrs.			Measured at 220VAC, 80% load and 25 °C ambient temperature
Lifetime	50K hrs.			
Operating Case Temperature	-40 ° C		+85 ° C	
Storage Temperature	-40 ° C		+85 ° C	5% RH to 100% RH humidity

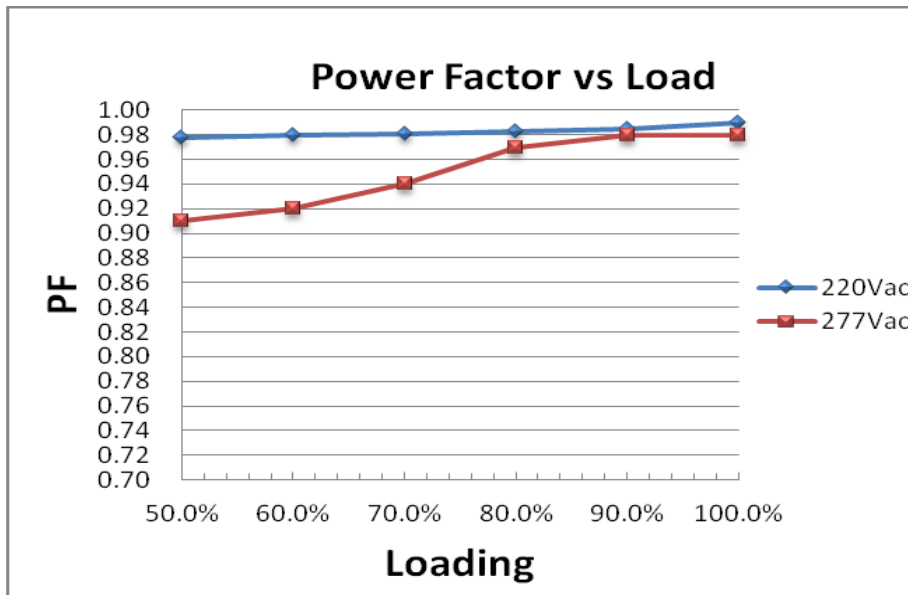
## Protections:

Parameter	Descriptions
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed
Short Circuit Protection	Auto Recovery, No damage will occur when any output is short circuited. The output shall return to normal after the fault condition is removed
Over Voltage Protection	Limis output voltage at no load

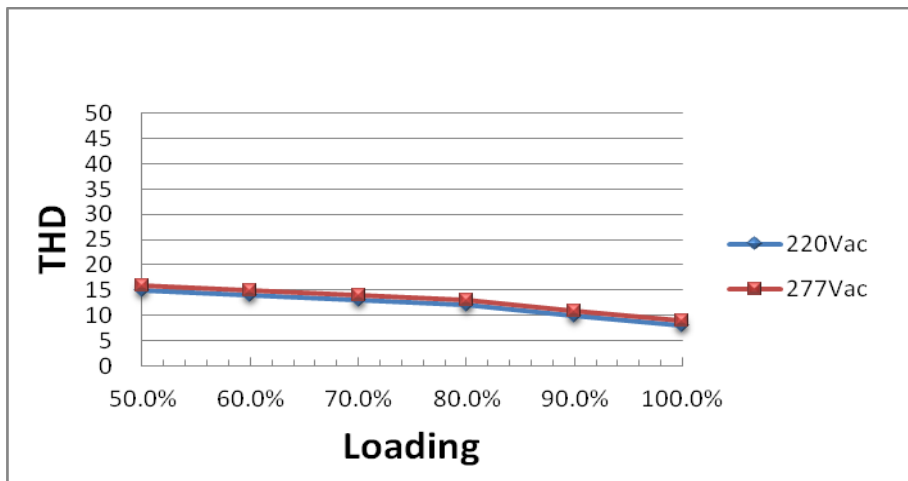
**Lifetime vs Case temperature:**



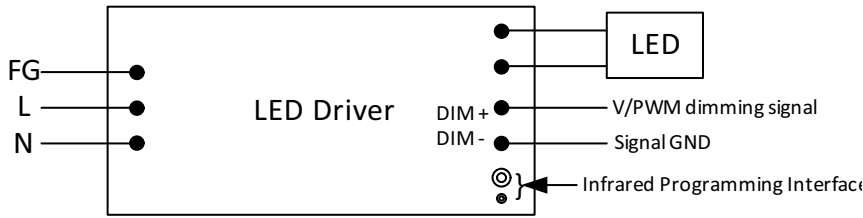
**Power Factor vs Load**



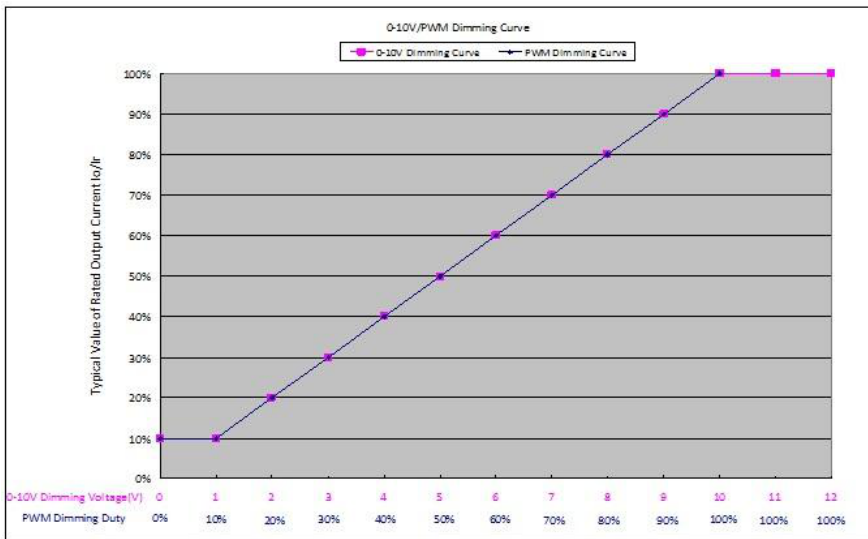
**Total Harmonic Distortions**



**Dimming, 0-10V dimming wiring schematics:**



**Typical dimming curve:**



**Mechanical Dimensions:**

