

**Professionally approved products.**

## Datasheet

# Constant Voltage LED Driver 25.2W 6.6 → 12V 2.1A RS LPF-25-12

RS Stock number 764-7209



### ■ Features :

- Universal AC input / Full range (up to 305VAC)
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level (Note.6)
- Class II power unit, no FG
- Class 2 power unit
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

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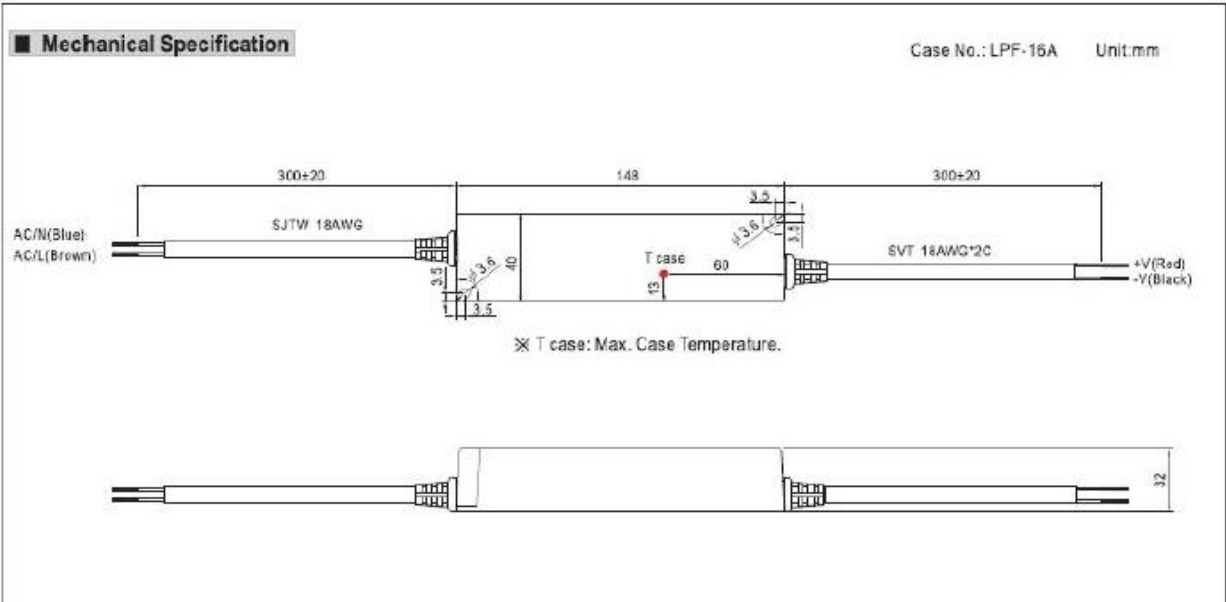
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### SPECIFICATION

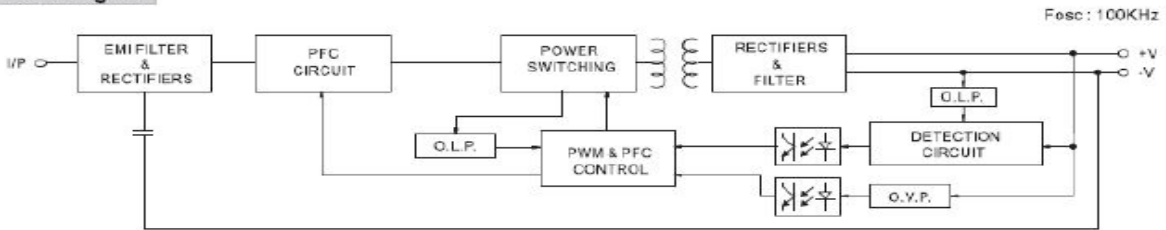
MODEL		764-7209	764-7218	764-7211	764-7215	764-7224	764-7227	764-7221	764-7230	764-7233	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION <small>Note.4</small>	6.6 ~ 12V	8.25 ~ 15V	11 ~ 20V	13.2 ~ 24V	16.5 ~ 30V	19.8 ~ 36V	23.1 ~ 42V	26.4 ~ 48V	29.7 ~ 54V	
	RATED CURRENT	2.1A	1.67A	1.25A	1.05A	0.84A	0.7A	0.6A	0.53A	0.47A	
	RATED POWER	25.2W	25.05W	25W	25.2W	25.2W	25.2W	25.2W	25.44W	25.38W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p	
	VOLTAGE TOLERANCE <small>Note.3</small>	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME <small>Note.7</small>	1500ms, 80ms / 115VAC at full load 1500ms, 80ms / 230VAC									
	HOLD UP TIME (Typ.)	16ms at full load 230VAC / 115VAC									
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC		127 ~ 431VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.97/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to "Power Factor Characteristic" curve)									
	EFFICIENCY (Typ.)	84%	85%	86%	86%	86%	86%	86%	87%	86.5%	
	AC CURRENT	0.4A / 115VAC		0.25A / 230VAC		0.2A/277VAC					
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC									
	LEAKAGE CURRENT	<0.75mA / 240VAC									
PROTECTION	OVER CURRENT <small>Note.4</small>	95 ~ 108% Protection type : Constant current limiting, recovers automatically after fault condition is removed									
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.									
	OVER VOLTAGE	15 ~ 18V	17.5 ~ 21V	23 ~ 27V	28 ~ 35V	34 ~ 40V	41 ~ 49V	46 ~ 54V	54 ~ 63V	59 ~ 66V	
	OVER TEMPERATURE	95°C ± 5°C (TSW1) Detect on U2 Protection type : Shut down o/p voltage, re-power on to recover									
	WORKING TEMP.	-35 ~ +70°C (Refer to "Derating Curve")									
ENVIRONMENT	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
	SAFETY & EMC	SAFETY STANDARDS <small>Note.6</small>	UL8750, CSA C22.2 No. 250.0-08 (except for 42V, 48V, 54V), EN61347-1, EN61347-2-13 independent, EN62384, IP67 approved ; Design refer to UL60950-1, TUV EN60950-1								
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 (≥50% load) ; EN61000-3-3									
EMC IMMUNITY		Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, light industry level (surge 2KV), criteria A									
OTHERS	MTBF	473.4Khrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	148*40*32mm (L*W*H)									
	PACKING	0.36Kg; 40pcs/ 15.4Kg/1.02CUFT									

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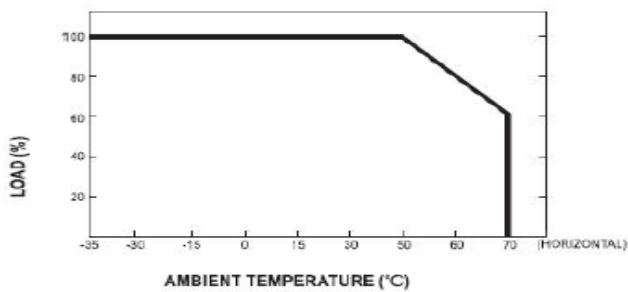
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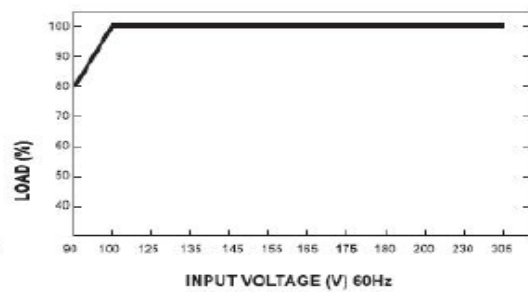
### Block Diagram



### Derating Curve

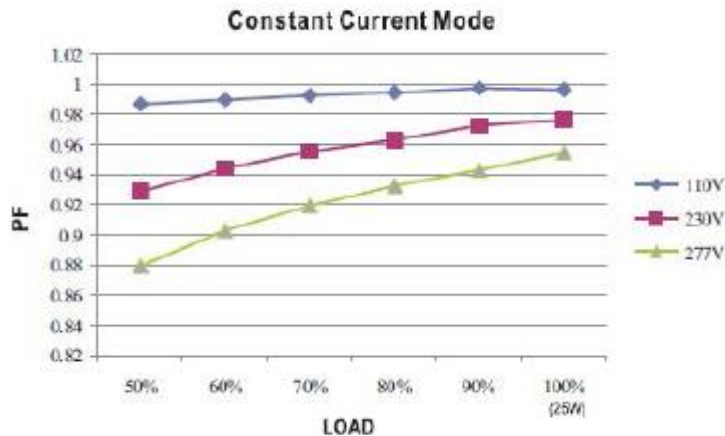


### Static Characteristics



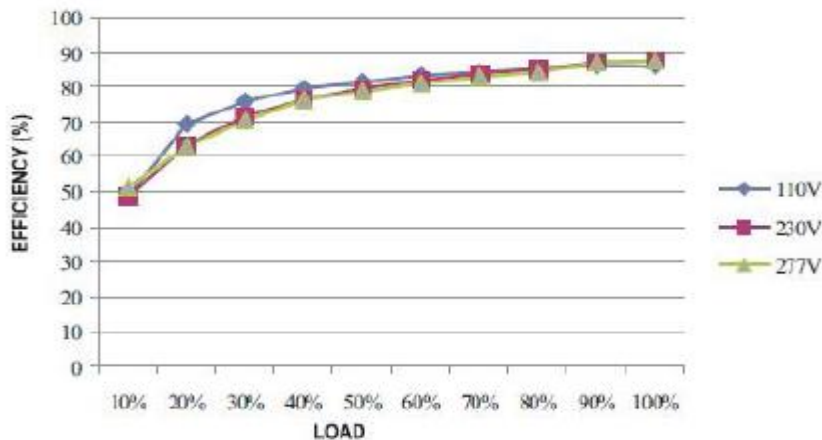
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## Power Factor Characteristic



## EFFICIENCY vs LOAD (48V Model)

LPF-25 series possess superior working efficiency that up to 87% can be reached in field applications.

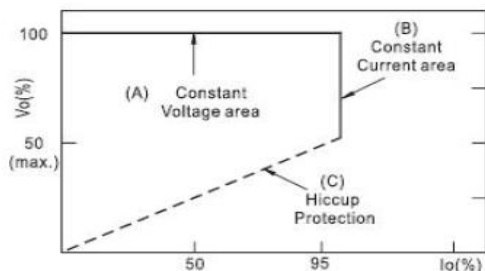


## DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve