









#### ■ Features

- · Constant Current mode output
- · Plastic housing with Class II design
- · Built-in active PFC function
- · Class 2 power unit
- IP67 rating for indoor or outdoor installations
- Function: 3 in 1 dimming
- Typical lifetime>50000 hours
- 5 years warranty

# ■ Applications

- · LED panel lighting
- · LED downlight
- LED decorative lighting
- · LED tunnel lighting
- Moving sign

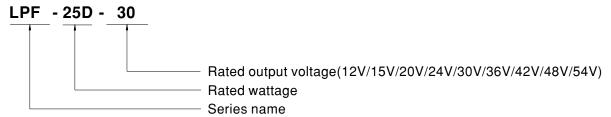
#### **■** GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

# Description

LPF-25D series is a 25W AC/DC LED driver featuring the constant current output. LPF-25D operates from  $90\sim305$ VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the efficiency up to 86%, with the fanless design, the entire series is able to operate for  $-35^{\circ}\text{C} \sim +70^{\circ}\text{C}$  case temperature under free air convection. The entire series is rated with IP67 ingress protection level and is suitable to work for a variety of applications at dry, damp or wet locations. LPF-25D is equipped with the 3 in 1 dimming function so as to provide the design flexibility for LED lighting system.

# **■** Model Encoding



# 25W Constant Current Mode LED Driver

# LPF-25D series

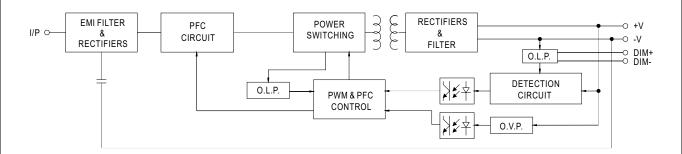
#### **SPECIFICATION**

MODEL		1 DE 05D 40	1 DE 05D 45	1 DE 05D 00	1 DE 05D 04	L DE OED OO	1 DE 05D 00	1 DE 05D 40	1 DE 05D 40	1 DE 05D 5				
		LPF-25D-12			LPF-25D-24		LPF-25D-36	LPF-25D-42	LPF-25D-48	LPF-25D-54				
	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V				
	RATED CURRENT	2.1A	1.67A	1.25A	1.05A	0.84A	0.7A	0.6A	0.53A	0.47A				
	RATED POWER Note.5	25.2W	25.05W	25W	25.2W	25.2W	25.2W	25.2W	25.44W	25.38W				
OUTPUT	CONSTANT CURRENT REGION Note.2													
	CURRENT RIPPLE	5.0% max. @rated current												
	CURRENT TOLERANCE	±5.0%												
	SETUP, RISE TIME Note.6	1500ms, 80ms / 115VAC 500ms, 80ms / 230VAC												
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC												
	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)												
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR	PF≥0.97/115VAC, PF≥0.95/230VAC, PF≥0.92/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)												
	TOTAL HARMONIC DISTORTION	THD< 20%(@load≧60%/115VC,230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)												
INPUT	EFFICIENCY (Typ.)	84%	84%	85%	85.5%	85.5%	85.5%	85.5%	86%	86%				
-	AC CURRENT	0.4A / 115VA			.2A/277VAC									
	INRUSH CURRENT(Typ.)	COLD START 50A(twidth=200µs measured at 50% Ipeak) at 230VAC; Per NEMA 410												
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	12 units (circuit breaker of type B) / 21 units (circuit breaker of type C) at 230VAC												
	LEAKAGE CURRENT	<0.75mA/240VAC												
		95 ~ 108%												
	OVER CURRENT		ent limiting rec	overs automatic	cally after fault	condition is rem	noved							
	SHORT CIRCUIT			matically after			iovou							
PROTECTION	OHORT OIROUT	15 ~ 18V	17.5 ~ 21V	23 ~ 27V	28 ~ 35V	34 ~ 40V	41 ~ 49V	46 ~ 54V	54 ~ 63V	59 ~ 66V				
	OVER VOLTAGE			-			41.434	+0	34 * 03 V	00 00 V				
	OVED TEMPEDATURE	Shut down and latch off o/p voltage, re-power on to recover												
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down												
	WORKING TEMP.	Tcase=-35 ~ +70°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)												
	MAX. CASE TEMP.	Tcase=+70°C												
	WORKING HUMIDITY	20 ~ 95% RH non-condensing												
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH												
	TEMP. COEFFICIENT	±0.03%/℃ (0~50°C)												
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes												
SAFETY &	SAFETY STANDARDS Note.8	UL8750, CSA C22.2 No. 250.0-08,ENEC BS EN/EN61347-1, BS EN/EN61347-2-13 independent, BS EN/EN62384, EAC TP TC 004,GB19510.1,GB19510.14,IP67 approved ;Design refer to UL60950-1												
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC												
EMC	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH												
	EMC EMISSION Note.8	Compliance to	BS EN/EN5501	5,BS EN/EN610	00-3-2 Class C	Compliance to BS EN/EN55015,BS EN/EN61000-3-2 Class C (@load ≥ 55%); BS EN/EN61000-3-3,GB17743 and GB17625.1,EAC TP TC 02								
L		Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level (surge immunity Line-Line 2KV),EAC TP TC 020												
	EMC IMMUNITY	Compliance to	BS EN/EN610	00-4-2,3,4,5,6,8	8,11; BS EN/EN	161547, light inc	dustry level (sur	ge immunity Lir	ne-Line 2KV),E					
	EMC IMMUNITY MTBF	Compliance to 3574.2K hrs n		00-4-2,3,4,5,6,8 ia SR-332 (Bell			dustry level (sur MIL-HDBK-217	• •	ne-Line 2KV),E					
OTHERS		·	nin. Telcord				• •	• •	ne-Line 2KV),E					
OTHERS	MTBF DIMENSION	3574.2K hrs n 148*40*32mn	nin. Telcord n (L*W*H)	ia SR-332 (Bell			• •	• •	ne-Line 2KV),E					
	МТВГ	3574.2K hrs n 148*40*32mn 0.36Kg; 40pc y mentioned at	nin. Telcord n (L*W*H) s/ 15.4Kg/1.02 re measured a	ia SR-332 (Bell CUFT at 230VAC inpu	lcore); 391.6	6Khrs min. N	MIL-HDBK-217	F (25°C)	ne-Line 2KV),E					
	MTBF DIMENSION PACKING  1. All parameters NOT speciall 2. Please refer to "DRIVING M 3. Ripple & noise are measured	3574.2K hrs n 148*40*32mn 0.36Kg; 40pc y mentioned al ETHODS OF I at 20MHz of b	nin. Telcord n (L*W*H) s/ 15.4Kg/1.02 re measured a LED MODULE andwidth by us	ia SR-332 (Bell CUFT at 230VAC inpu "". sing a 12" twist	lcore); 391.6	6Khrs min. M	AIL-HDBK-217	F (25°C)	,					
	MTBF DIMENSION PACKING  1. All parameters NOT speciall 2. Please refer to "DRIVING M 3. Ripple & noise are measured 4. Tolerance: includes set up to	3574.2K hrs n 148*40*32mn 0.36Kg; 40pc y mentioned al ETHODS OF I at 20MHz of b olerance, line re	nin. Telcord n (L*W*H) s/ 15.4Kg/1.02 re measured a LED MODULE andwidth by us gulation and lo	CUFT  at 230VAC input  "" sing a 12" twisting a regulation.	ut, rated currer	SKhrs min. Manual Manua	AIL-HDBK-217 ambient tempo	F (25°C) erature. arallel capacito	,					
	MTBF DIMENSION PACKING  1. All parameters NOT speciall 2. Please refer to "DRIVING M 3. Ripple & noise are measured 4. Tolerance : includes set up to 5. De-rating may be needed up	3574.2K hrs n 148*40*32mm 0.36Kg; 40pc y mentioned at ETHODS OF I at 20MHz of b olerance, line re-	nin. Telcord  n (L*W*H) s/ 15.4Kg/1.02 re measured a LED MODULE andwidth by us gulation and lo	ia SR-332 (Bell CUFT  at 230VAC input  ". sing a 12" twist ad regulation. se refer to "ST	ut, rated currered pair-wire ter	SKhrs min. Note that and 25°C of minated with a	ambient tempo 0.1uf & 47uf p ections for det	F (25°C)  erature.  arallel capacito	,					
	MTBF DIMENSION PACKING  1. All parameters NOT speciall 2. Please refer to "DRIVING M 3. Ripple & noise are measured 4. Tolerance : includes set up to 5. De-rating may be needed up 6. Length of set up time is mea	3574.2K hrs n 148*40*32mn 0.36Kg; 40pc y mentioned at ETHODS OF I at 20MHz of b olerance, line re- nder low input vasured at first of	nin. Telcord n (L*W*H) s/ 15.4Kg/1.02 re measured a LED MODULE andwidth by us gulation and lo voltages. Plea	ia SR-332 (Bell CUFT  at 230VAC input  ". sing a 12" twist ad regulation. se refer to "ST ing ON/OFF th	ut, rated currer ed pair-wire ter ATIC CHARA	SKhrs min. Note that and 25°C of minated with a CTERISTIC" seed to increase	ambient tempo 0.1uf & 47uf p ections for det	F (25°C)  erature.  arallel capacito  ails.  time.	or.					
	MTBF DIMENSION PACKING  1. All parameters NOT speciall 2. Please refer to "DRIVING M 3. Ripple & noise are measured 4. Tolerance : includes set up to 5. De-rating may be needed up 6. Length of set up time is mea 7. The driver is considered as	3574.2K hrs n 148*40*32mn 0.36Kg; 40pc y mentioned at ETHODS OF I at 20MHz of b olerance, line re- nder low input vasured at first ca a component the	nin. Telcord  n (L*W*H) s/ 15.4Kg/1.02 re measured a LED MODULE andwidth by us gulation and lo voltages. Plea sold start. Turn nat will be ope	cuft at 230VAC input ti 230VAC input ting a 12" twist ad regulation. se refer to "ST ing ON/OFF the trated in combi	ut, rated currer ed pair-wire ter ATIC CHARA e driver may I nation with fina	SKhrs min. Note that and 25°C of minated with a CTERISTIC" seed to increase all equipment.	ambient tempo 0.1uf & 47uf p ections for det e of the set up	F (25°C)  erature.  arallel capacito  ails.  time.  rformance will	or.					
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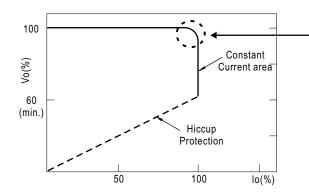
## ■ BLOCK DIAGRAM

fosc: 100KHz



## ■ DRIVING METHODS OF LED MODULE

\* This series works in constant current mode to directly drive the LEDs.



Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

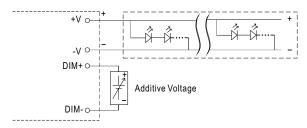


#### **■ DIMMING OPERATION**

 $\divideontimes$  3 in 1 dimming function

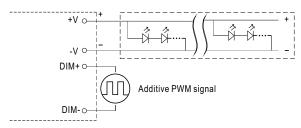


- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
   1 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100µA (typ.)
- O Applying additive 1 ~ 10VDC



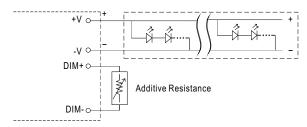
"DO NOT connect "DIM- to -V"

 $\bigcirc$  Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):

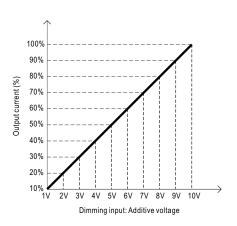


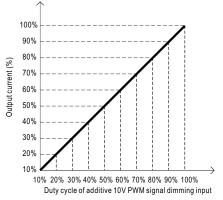
"DO NOT connect "DIM- to -V"

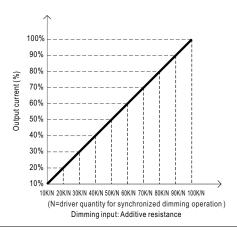
Applying additive resistance:



"DO NOT connect "DIM- to -V"

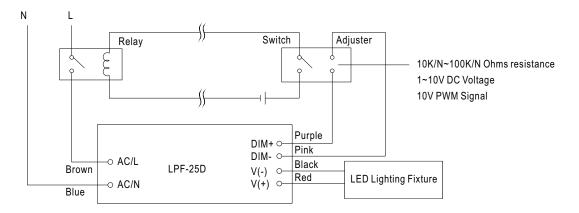






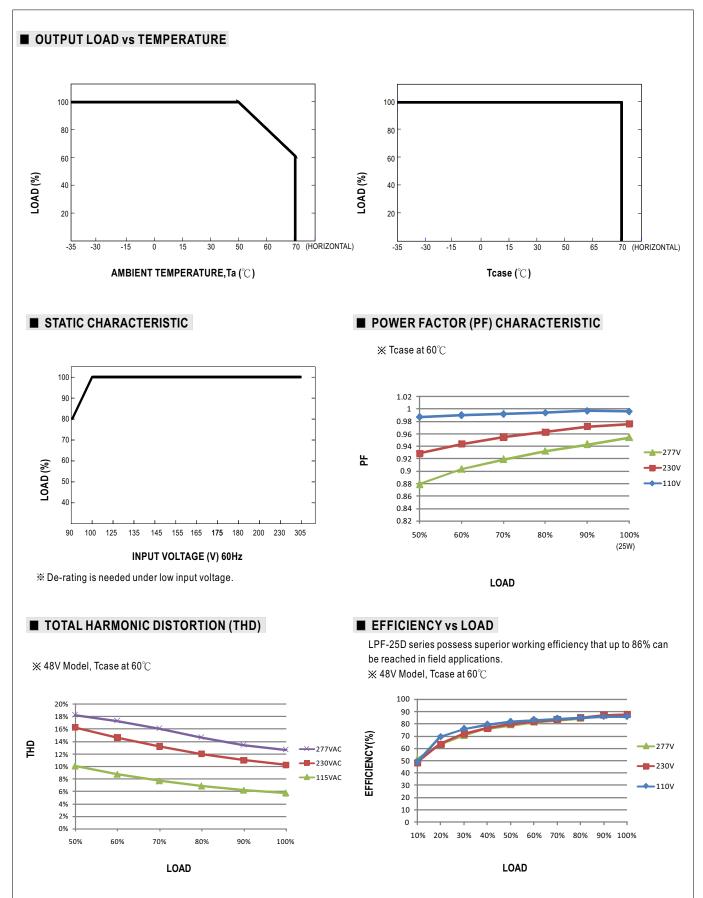


Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



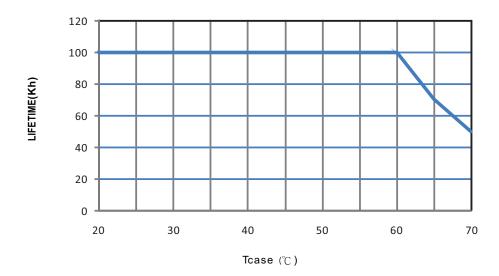
Using a switch and relay can turn ON/OFF the lighting fixture.







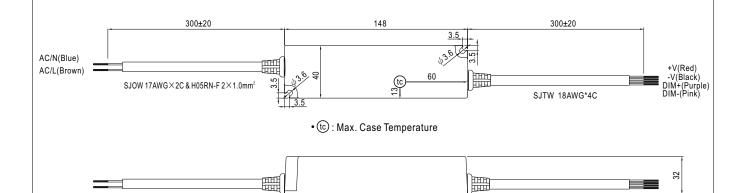
# **■** LIFE TIME





# ■ MECHANICAL SPECIFICATION

CASE NO.: LPF-16A Unit:mm



# ■ Recommend Mounting Direction



### ■ INSTALLATION MANUAL

Please refer to : http://www.meanwell.com/manual.html