





#### **■** Features

- · Constant Current mode output
- Flicker free design
- · PCB type design
- · Built-in active PFC function
- No load power consumption<0.5W(Blank-Type)</li>
- Function options: 2 in 1 dimming (dim-to-off);
   Auxiliary DC output
- · 3 years warranty

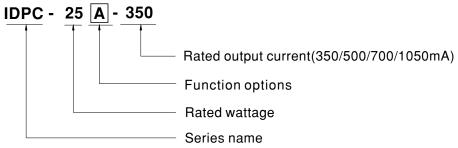
## ■ Applications

- LED panel lighting
- · LED flood lighting
- Indoor LED lighting

# Description

IDPC-25 series is a 25W PCB type LED AC/DC driver featuring the constant current mode output with flicker free design. IDPC-25 operates from  $90^295$ VAC and offers models with different rated current ranging between 350mA and 1050mA. Thanks to the efficiency up to 82%, with the fanless design, the entire series is able to operate for  $-20^{\circ}$  ambient temperature under free air convection. IDPC-25 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for lighting system.

# ■ Model Encoding



Type	Function	Note
Blank	2 in 1 dimming (0~10VDC and 10V PWM)	In Stock
Α	2 in 1 dimming and Auxiliary DC output	In Stock



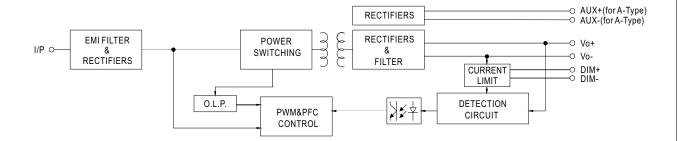
## **SPECIFICATION**

MODEL		IDPC-25□-350	IDPC-25□-500	IDPC-25 -700	IDPC-25□-1050	
	RATED CURRENT	350mA	500mA	700mA	1050mA	
	RATED POWER	24.5W	25W	25.2W	25.2W	
	CONSTANT CURRENT REGION Note.2	49 ~ 70V	35 ~ 50V	25.2 ~ 36V	16.8 ~ 24V	
OUTPUT	OPEN CIRCUIT VOLTAGE(max.)	100V	75V	63V	36V	
	CURRENT RIPPLE	5.0% max. @rated current				
	CURRENT TOLERANCE	±7.0%				
	SETUP TIME Note.4	500ms / 230VAC 1200ms/115VAC				
	AUXILIARY DC OUTPUT Note.5	Nominal 12V(deviation 11.4~12.6)@50mA for A-Type only				
	VOLTAGE RANGE Note.3	90 ~ 295VAC 127 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section)				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF>0.95/115VAC, PF>0.92/230VAC, PF>0.9/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)				
INPUT	TOTAL HARMONIC DISTORTION	THD< 20%(@load≧70%/115VAC,230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION" section)				
	EFFICIENCY (Typ.)	82%	81.5%	81.5%	80%	
	AC CURRENT	0.4A/115VAC 0.16A/230VAC 0.13A/277VAC				
	INRUSH CURRENT (Typ.)	COLD START 30A(twidth=100µs measured at 50% Ipeak) at 230VAC; Per NEMA 410				
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	32 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
	NO LOAD POWER CONSUMPTION	UMPTION <0.5W for Blank-Type, <1.2W for A-Type				
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed				
	WORKING TEMP.	Ta=-20 ~ +50°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
	SAFETY STANDARDS	UL8750,CSA C22.2 NO.250.13-12;ENEC EN61347-1 & EN61347-2-13 independent, EN62384, GB19510.1,GB19510.14 approved				
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC				
SAFETY &	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH				
EMC	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (@load ≥ 70%) ; EN61000-3-3,GB17743,GB17625.1				
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Line:1KV)				
	MTBF	418.9Khrs min. MIL-HDBK-217F (25°C)				
OTHERS	DIMENSION	114.5*72.5*20mm(L*W*H)				
	PACKING	0.12Kg; 72pcs / 9.64Kg / 1.1	I3CUFT			
NOTE	Please refer to "DRIVING N     De-rating may be needed u     Length of set up time is me     There is no design of short are short circuit or when it is     The driver is considered as	ially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.  METHODS OF LED MODULE".  under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.  leasured at cold first start. Turning ON/OFF the driver may lead to increase of the set up time.  It circuit protection for the Auxiliary DC output; this function can not be used when dimming input terminals(DIM+,DIM-) to so load or short circuit at output(Vo+,Vo-).  It is no load or short circuit at output(Vo+,Vo-).  It is a component that will be operated in combination with final equipment. Since EMC performance will be installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.				



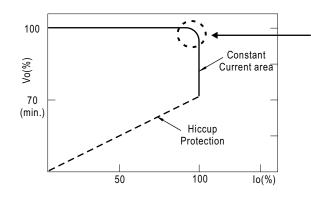
## ■ Block Diagram

fosc: 70KHz



## ■ DRIVING METHODS OF LED MODULE

 $\ensuremath{\mathbb{X}}$  This series works in constant current mode to directly drive the LEDs.



Typical output current normalized by rated current (%)

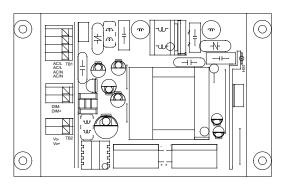
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

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



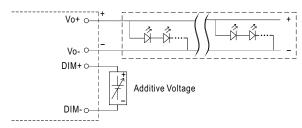
#### **■ DIMMING OPERATION**

## imes 2 in 1 dimming function



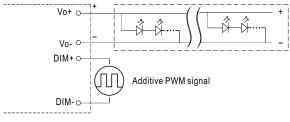
- · Output constant current level can be adjusted by applying one of the two methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.

#### O Applying additive 0 ~ 10VDC

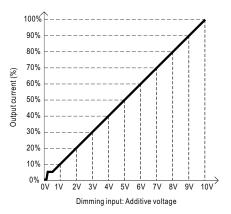


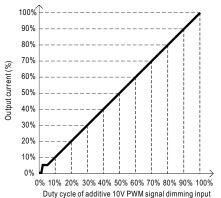
"DO NOT connect "DIM- to Vo-"

O Applying additive 10V PWM signal (frequency range 300Hz ~ 3KHz):



"DO NOT connect "DIM- to Vo-"

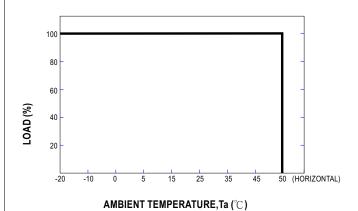




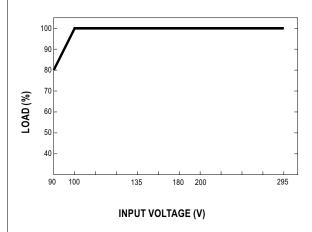
Note: 1. Min. dimming level is about 8% and the output current is not defined when 0%< Iout<8%.
2. The output current could drop down to 0% when dimming input is about 0Vdc or 10V PWM signal with 0% duty cycle.



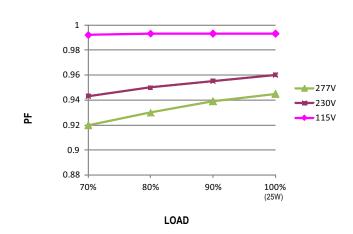
#### ■ OUTPUT LOAD vs TEMPERATURE



#### ■ STATIC CHARACTERISTIC

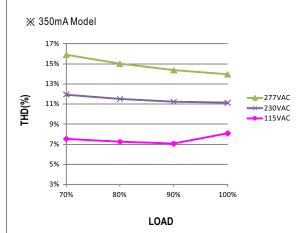


## **■ POWER FACTOR (PF) CHARACTERISTIC**



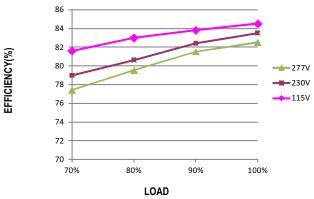
 $\frak{\%}$  De-rating is needed under low input voltage.

## ■ TOTAL HARMONIC DISTORTION (THD)



#### **■** EFFICIENCY vs LOAD

 $\ensuremath{\mathsf{IDPC\text{-}25}}$  series possess superior working efficiency that up to 82% can be reached in field applications.

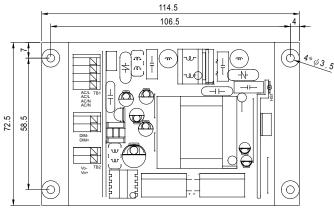


Unit:mm



## ■ MECHANICAL SPECIFICATION

※ Blank-Type



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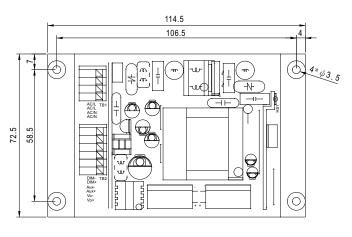
Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	ACL
2	ACL
3	ACN
4	ACN

Terminal Pin No. Assignment(TB2)

Pin No.	Assignment
1	DIM-
2	DIM+
3	Vo-
4	Vo+

**※ A-Type** 





Terminal Pin No. Assignment(TB1)

Pin No.	Assignment	
1	ACL	
2	ACL	
3	ACN	
4	ACN	

Terminal Pin No. Assignment(TB2)

	•	` '	
Pin No.	Assignment	Pin No.	Assignment
1	DIM-	4	AUX+
2	DIM+	5	Vo-
3	AUX-	6	Vo+

#### **■** Installation Manual

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

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