



User's Manual



SELV



## Features

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

## Applications

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

## Description

IDPC-65 series is a 65W PCB type LED AC/DC driver featuring the constant current mode output with flicker free design. IDPC-65 operates from 180~295VAC and offers models with different rated current ranging between 700mA and 1750mA. Thanks to the efficiency up to 89%, with the fanless design, the entire series is able to operate for -20°C~+40°C ambient temperature under free air convection. IDPC-65 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for lighting system.

## Model Encoding

IDPC - 65 A - 1400 □

Function options

Rated output current(700/1050/1400/1750mA)

{ A:Auxiliary DC output(12V@50mA)

{ □:None

Rated wattage

Series name

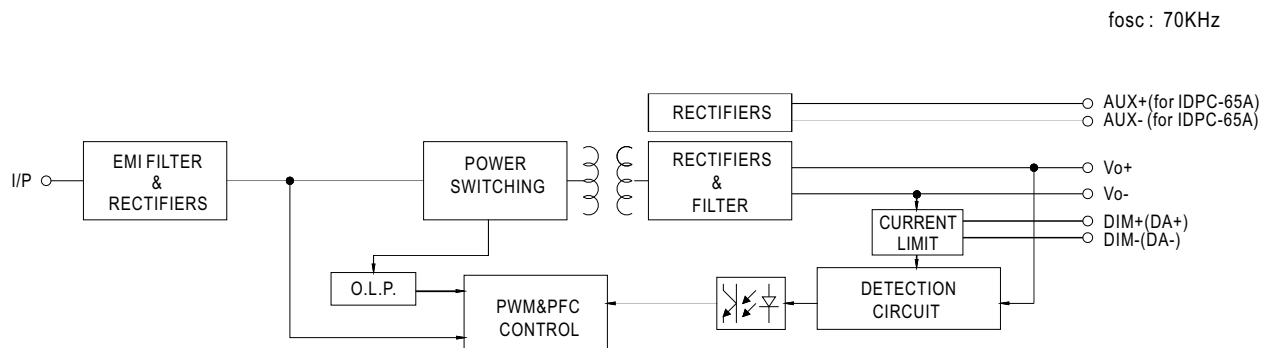
| Type  | Function                             |
|-------|--------------------------------------|
| Blank | 2 in 1 dimming (0~10VDC and 10V PWM) |
| DA    | DALI control technology              |

Note: The DALI control model(DA Type) only for IDPC-65 Non Auxiliary DC output models.

## SPECIFICATION

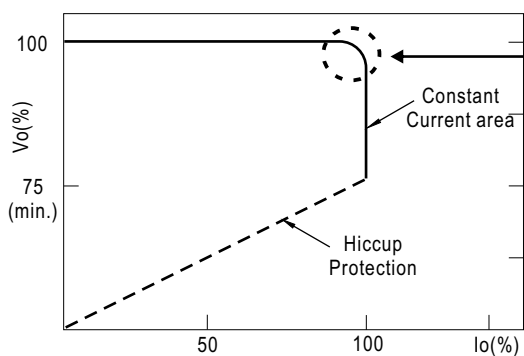
| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | IDPC-65□-700□                                                                                                                   | IDPC-65□-1050□ | IDPC-65□-1400□ | IDPC-65□-1750□ |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|----------------|
| OUTPUT       | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 700mA                                                                                                                           | 1050mA         | 1400mA         | 1750mA         |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 65.1W                                                                                                                           | 65.1W          | 64.4W          | 63W            |
|              | CONSTANT CURRENT REGION <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 69 ~ 93V                                                                                                                        | 46 ~ 62V       | 34 ~ 46V       | 27 ~ 36V       |
|              | OPEN CIRCUIT VOLTAGE <sub>(max.)</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 118V                                                                                                                            | 82V            | 60V            | 53V            |
|              | CURRENT RIPPLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5% max. @rated current                                                                                                          |                |                |                |
|              | CURRENT TOLERANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±7.0%                                                                                                                           |                |                |                |
|              | SETUP TIME <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 500ms / 230VAC                                                                                                                  |                |                |                |
|              | AUXILIARY DC OUTPUT <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nominal 12V(deviation 11.4~12.6)@50mA for IDPC-65A only                                                                         |                |                |                |
| INPUT        | VOLTAGE RANGE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 180 ~ 295VAC      254 ~ 417VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)                                             |                |                |                |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 47 ~ 63Hz                                                                                                                       |                |                |                |
|              | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PF>0.95/230VAC, PF>0.9/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)                         |                |                |                |
|              | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | THD< 20%@load≥75%/230VAC, 277VAC<br>(Please refer to "TOTAL HARMONIC DISTORTION" section)                                       |                |                |                |
|              | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 89%                                                                                                                             | 87%            | 86.5%          | 86%            |
|              | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.4A/230VAC      0.3A/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 / STANDBY POWER CONSUMPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No load power consumption <0.5W for Blank-Type, <0.5W for IDPC-65A<br>Standby power consumption <0.5W for DA-Type               |                |                |                |
| PROTECTION   | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Hiccup mode,auto-recovery after fault condition is removed for DA type;<br>Hiccup mode,re-power on to recovery for other type   |                |                |                |
| ENVIRONMENT  | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ta= -20 ~ +40°C (ambient temperature)                                                                                           |                |                |                |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20 ~ 90% RH non-condensing                                                                                                      |                |                |                |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -40 ~ +80°C, 10 ~ 95% RH                                                                                                        |                |                |                |
|              | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.03%/°C (0 ~ 40°C)                                                                                                            |                |                |                |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                         |                |                |                |
| SAFETY & EMC | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | UL8750, CSA C22.2 NO.250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384, EAC TP TC 004 approved                 |                |                |                |
|              | DALI STANDARDS <small>Note.7</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Compliance to IEC62386-101,102 for DA-Type only                                                                                 |                |                |                |
|              | 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 BS EN/EN55015, BS EN/EN61000-3-2 Class C (≥75% load) ; BS EN/EN61000-3-3,GB17743, GB17625.1, EAC TP TC 020        |                |                |                |
|              | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level(surge immunity: Line-Line:1KV), EAC TP TC 020 |                |                |                |
| OTHERS       | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 380.7Khrs min.      MIL-HDBK-217F (25°C)                                                                                        |                |                |                |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 130*67.5*20.5mm(L*W*H)                                                                                                          |                |                |                |
|              | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.15Kg; 81pcs/ 13Kg/ 1.46CUFT                                                                                                   |                |                |                |
| NOTE         | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.<br>2. Please refer to "DRIVING METHODS OF LED MODULE".<br>3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.<br>4. Length of set up time is measured at cold first start. Turning ON/OFF the driver may lead to increase of the set up time or set up failure.<br>5. Aux. 12V will be damaged with short circuit; It will not be available when output voltage is not in constant current region or output no load condition.<br>6. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.<br>7. The DALI version driver does not support the bit 1: Lamp failure in the Command 144 Query status of the DALI standard.<br>8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                 |                |                |                |

## BLOCK DIAGRAM



## DRIVING METHODS OF LED MODULE

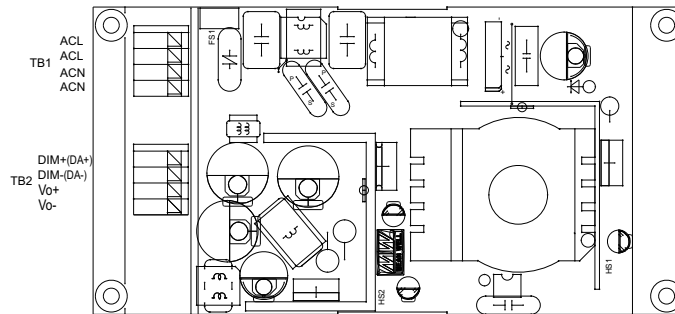
※ This series works in constant current mode to directly drive the LEDs.



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.

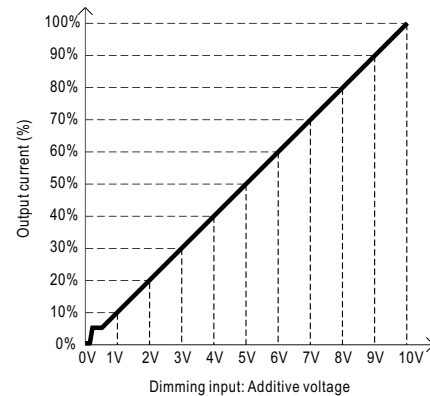
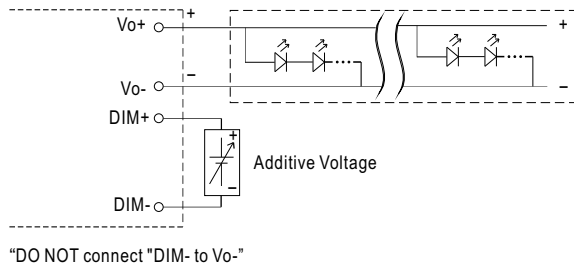
## ■ DIMMING OPERATION



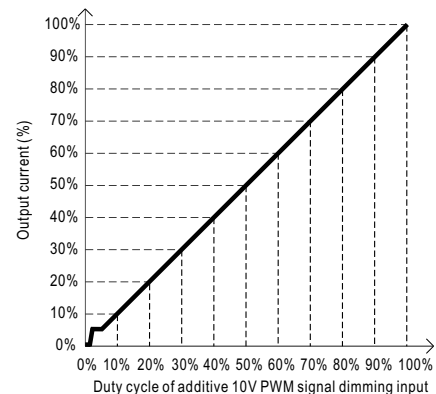
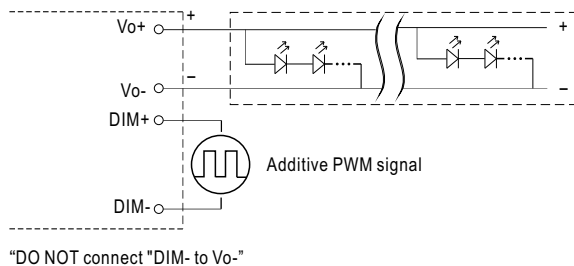
### ※ 2 in 1 dimming function

- 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.

#### ◎ Applying additive 0 ~ 10VDC



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

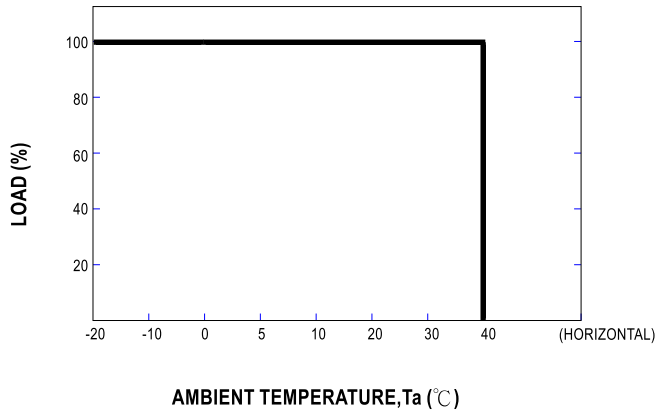


- Note : 1. Min. dimming level is about 8% and the output current is not defined when  $0\% < I_{out} < 8\%$ .  
2. The output current could drop down to 0% when dimming input is about 0Vdc or 10V PWM signal with 0% duty cycle.

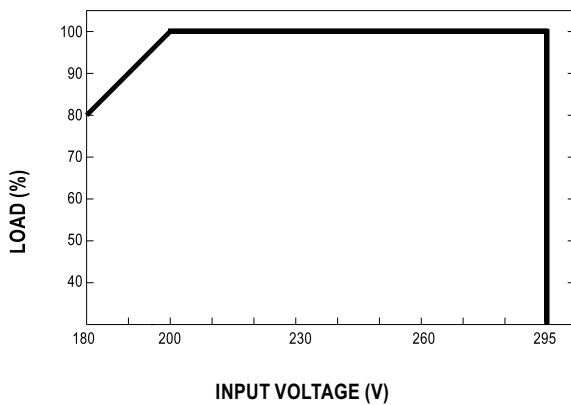
### ※ DALI Interface (primary side; for DA-Type)

- Apply DALI signal between DA+ and DA-.
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 8% of output.

### ■ OUTPUT LOAD vs TEMPERATURE

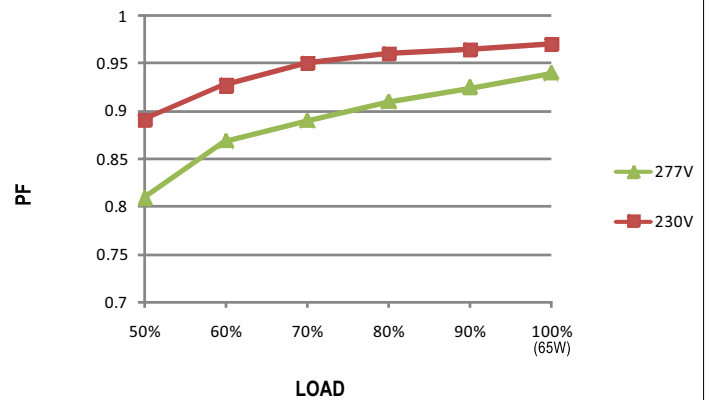


### ■ STATIC CHARACTERISTIC



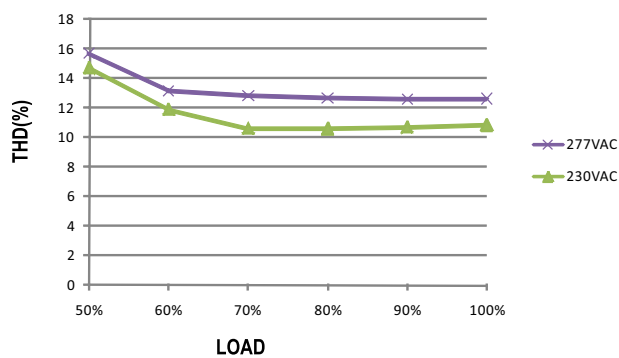
※ De-rating is needed under low input voltage.

### ■ POWER FACTOR (PF) CHARACTERISTIC



### ■ TOTAL HARMONIC DISTORTION (THD)

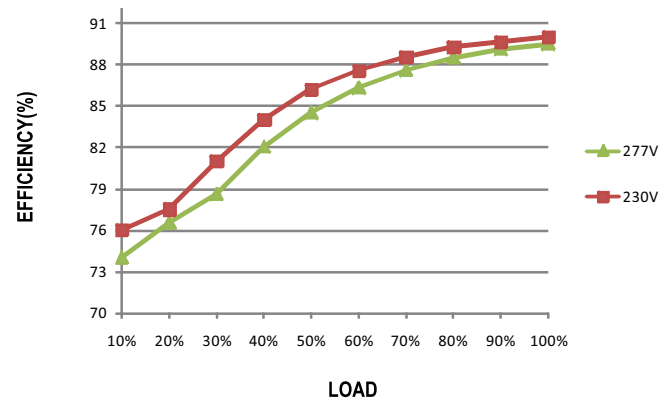
※ 700mA Model



### ■ EFFICIENCY vs LOAD

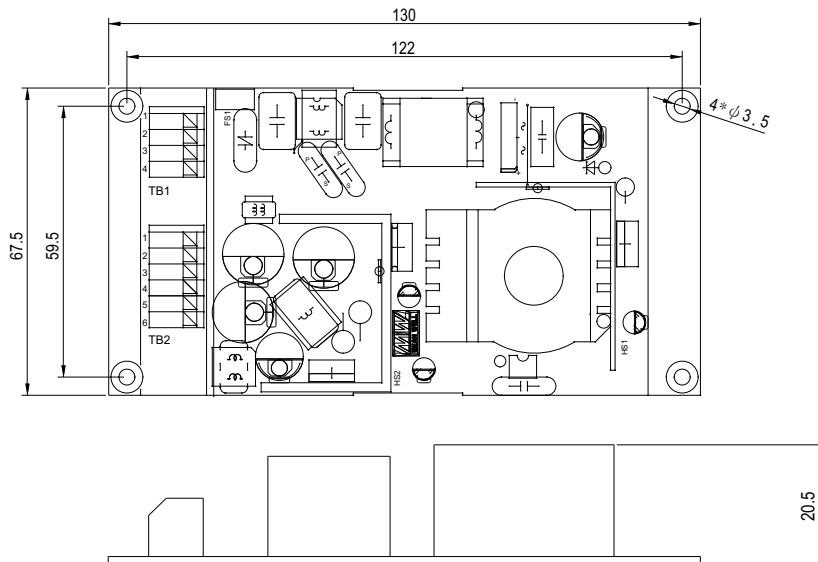
IDPC-65 series possess superior working efficiency that up to 89% can be reached in field applications.

※ 700mA Model



## MECHANICAL SPECIFICATION

Unit:mm



Terminal Pin No. Assignment(TB1)

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

IDPC-65

Terminal Pin No. Assignment(TB2)

| Pin No. | Assignment |
|---------|------------|
| 1       | DIM+ (DA+) |
| 2       | DIM- (DA-) |
| 3       | Vo+        |
| 4       | Vo-        |

IDPC-65A

Terminal Pin No. Assignment(TB2)

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1       | DIM+       | 4       | Vo-        |
| 2       | DIM-       | 5       | AUX+       |
| 3       | Vo+        | 6       | AUX-       |

## INSTALLATION MANUAL

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