





### ■ Features

- · Constant Current mode output
- Flicker free design
- · Plastic housing with class II 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

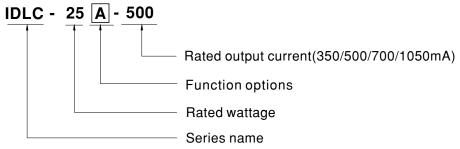
# ■ Applications

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

### Description

IDLC-25 series is a 25W LED AC/DC driver featuring the constant current mode output with flicker free design. IDLC-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  $-20^{\circ}$  case temperature under free air convection. IDLC-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 |



### 25W Constant Current Mode LED Driver

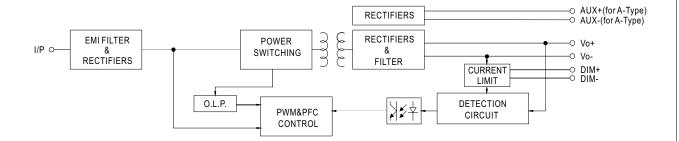
### **SPECIFICATION**

| PECIFIC         | ATION                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |              |               |  |  |
|-----------------|--------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|---------------|--|--|
| MODEL           |                                                                                                                          | IDLC-25□-350                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IDLC-25□-500 | IDLC-25□-700 | IDLC-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    |  |  |
| DUTPUT          | 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)<br>(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<br>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                                                                                                | <0.5W for Blank-Type, <1.2W for A-Type                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |              |               |  |  |
| ROTECTION       | SHORT CIRCUIT                                                                                                            | Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                                                                                                                                                                                                                                                                                     |              |              |               |  |  |
|                 | WORKING TEMP.                                                                                                            | Tcase=-20 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)                                                                                                                                                                                                                                                                                                                                                                                                                 |              |              |               |  |  |
|                 | MAX. CASE TEMP.                                                                                                          | Tcase=+90°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |              |               |  |  |
|                 | WORKING HUMIDITY                                                                                                         | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |              |               |  |  |
| ENVIRONMENT     | STORAGE TEMP., HUMIDITY                                                                                                  | -40 ~ +80°C, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |              |               |  |  |
|                 | TEMP. COEFFICIENT                                                                                                        | ±0.03%/°C (0 ~ 45°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,<br>GB19510.1,GB19510.14 approved                                                                                                                                                                                                                                                                                                                                                                       |              |              |               |  |  |
|                 | WITHSTAND VOLTAGE                                                                                                        | I/P-O/P:3.75KVAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |              |               |  |  |
| SAFETY &<br>EMC | ISOLATION RESISTANCE                                                                                                     | I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |              |               |  |  |
|                 | 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)                                                                                                                                                                                                                                                                                                                                                                                      |              |              |               |  |  |
| OTHERS          | MTBF                                                                                                                     | 418.9Khrs min. MIL-HDBK-217F (25°C)                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |              |               |  |  |
|                 | DIMENSION                                                                                                                | 110*75*22mm(L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |               |  |  |
|                 | PACKING                                                                                                                  | 0.196Kg; 63pcs / 13.348Kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                | / 0.88CUFT   |              |               |  |  |
| NOTE            | Please refer to "DRIVING M     De-rating may be needed u     Length of set up time is me     There is no design of short | ally 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.  easured at cold first start. Turning ON/OFF the driver may lead to increase of the set up time.  t circuit protection for the Auxiliary DC output; this function can not be used when dimming input terminals(DIM+,DIM-)  is no load or short circuit at output (Vo+ Vo-) |              |              |               |  |  |



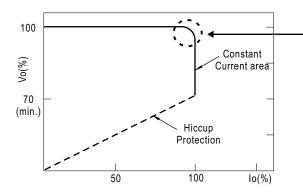
### ■ Block Diagram

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 (%)

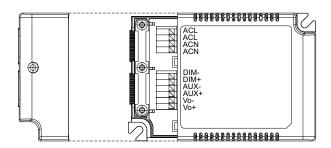
In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

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



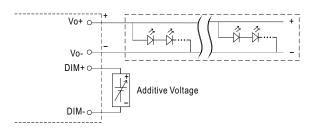
### **■ DIMMING OPERATION**

### imes 2 in 1 dimming function



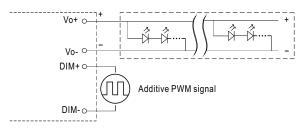
- · Output constant current level can be adjusted by applying one of the two methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.

#### O Applying additive 0 ~ 10VDC

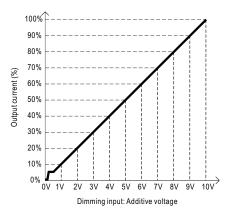


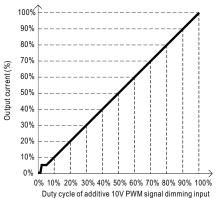
"DO NOT connect "DIM- to Vo-"

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



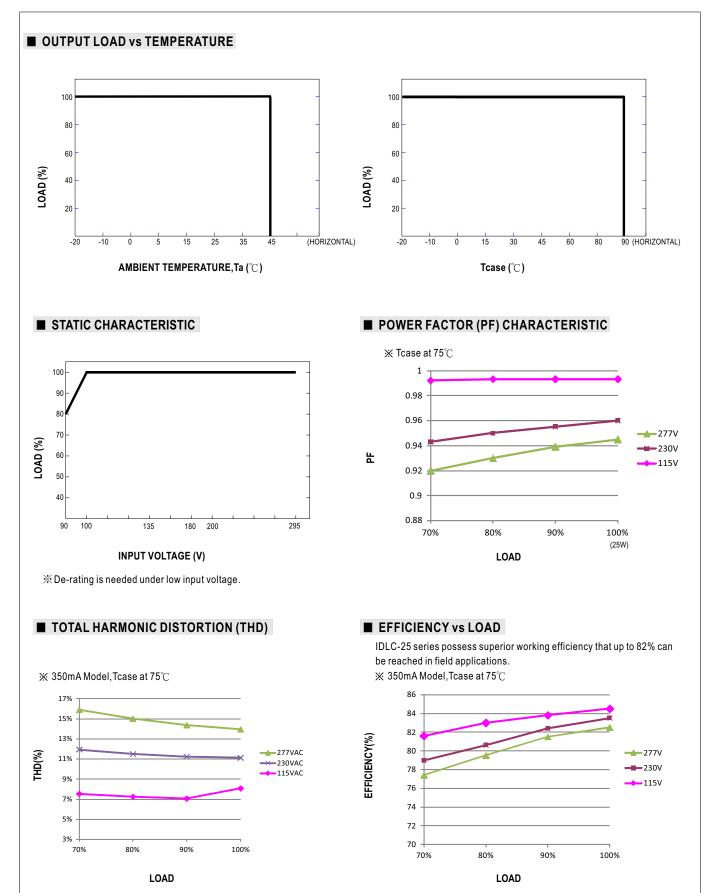
"DO NOT connect "DIM- to Vo-"





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.





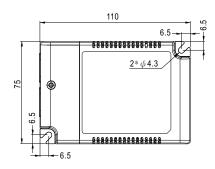
Unit:mm

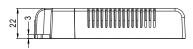


### ■ MECHANICAL SPECIFICATION

#### ※ Blank-Type





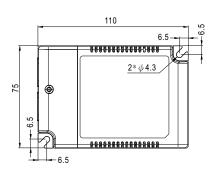


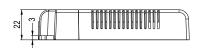
Terminal Pin No. Assignment(TB1)

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

#### ※ A-Type







#### Terminal Pin No. Assignment(TB1)

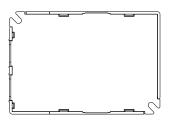
| Terminari ili No. Assignin |            |  |
|----------------------------|------------|--|
| Pin No.                    | Assignment |  |
| 1                          | ACL        |  |
| 2                          | ACL        |  |
| 3                          | ACN        |  |
| 4               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

### **■** Installation Manual

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

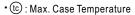
#### Case No.IDLC-25A

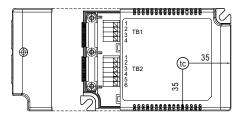
• (to : Max. Case Temperature



Terminal Pin No. Assignment(TB2)

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







Terminal Pin No. Assignment(TB2)

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

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