





### **■** Features

- · Constant Power mode output
- · Metal housing design
- Full Power at 70~100% max Current
- Built-in active PFC function
- · Flicker Free design
- No load / Standby power consumption < 0.5W
- · Output current level pre-settable
- Function options: 3 in 1 dimming (dim-to-off); DALI interface, push dimming
- Typical lifetime>50000 hours
- · SELV and Isolated
- · Class 2 power supply
- 5 years warranty

# ■ Description

LDC-35 series is a 35W AC/DC LED driver featuring the constant power mode output. LDC-35 operates from  $180 \sim 295$  VAC and output current can be adjust between 300mA to 1000mA. Thanks to the efficiency up to 88%, with the fanless design, the entire series is able to operate for -25°C  $\sim +80$ °C case temperature under free air convection.LDC-35 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

## ■ Model Encoding



Туре	Function	Note
Blank	Non dimming	In Stock
В	3 in 1 dimming function (0~10Vdc and10V PWM signal and resistance)	In Stock
DA	DALI, push dimming	In Stock

## Applications

- LED panel lighting
- Indoor LED lighting
- · Linear LED lighting

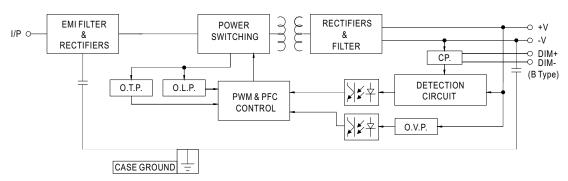
## **SPECIFICATION**

	ATION							
MODEL		LDC-35						
	OUTPUT CURRENT REGION							
OUTPUT	RATED POWER Note.2	35W						
	CONSTANT CURRENT REGION Note.2							
	FULL POWER CURRENT RANGE	625 ~ 1000mA						
	OPEN CIRCUIT VOLTAGE(max.)	60V						
	LOW FREQUENCY CURRENT RIPPLE	3.0% max. @rated current						
	CURRENT TOLERANCE	±5.0%						
	SET UP TIME Note.4	500ms/230VAC						
	VOLTAGE RANGE Note.3	180 ~ 295VAC 254 ~ 420VDC (Please refer to "STATIC CHARACTERISTIC" section)						
	FREQUENCY RANGE	47 ~ 63Hz						
	POWER FACTOR (Typ.)	$\label{eq:problem} \begin{split} PF & \geq 0.95/230 VAC@load \geq 50\%;  PF \geq 0.92/277 VAC@load \geq 75\% \\ (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) \end{split}$						
INPUT	TOTAL HARMONIC DISTORTION	THD< 10%(@load≧50%/230VAC; @load≧75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)						
	EFFICIENCY (Typ.)	88%(230VAC@Full load)						
	AC CURRENT (Typ.)	0.2A / 230VAC						
	INRUSH CURRENT(Typ.)	COLD START 30A(twidth=250µs measured at 50% Ipeak)/230VAC; Per NEMA 410						
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	17 units (circuit breaker of type B) / 29 units (circuit breaker of type C) at 230VAC						
	LEAKAGE CURRENT	<0.75mA / 277VAC						
	SHORT CIRCUIT	Hiccup mode or constant current limiting ,recovers automatically after fault condition is removed						
DDOTECTION	OVED VOLTA OF	61 ~ 80V						
PROTECTION	OVER VOLTAGE	Shut down o/p voltage with auto-recovery or re-power on to recovery						
	OVER TEMPERATURE	Shut down o/p voltage, with auto-recovery						
FUNCTION	DIMMING	Please refer to "DIMMING OPERATION" section						
FUNCTION	TEMP. COMPENSATION	By external NTC, please refer to "TEMPERATURE COMPENSATION OPERATION" section						
	WORKING TEMP.	Tcase=-25 ~ +80°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)						
	MAX. CASE TEMP.	Tcase=+80°C						
	WORKING HUMIDITY	20 ~ 95% RH non-condensing						
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH						
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)						
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes						
	SAFETY STANDARDS Note.5	UL8750, CSA C22.2 No. 250.13-12; ENEC EN61347-1, EN61347-2-13, EN62384; GB19510.14, GB19510.1 approved						
	DALI STANDARDS	Compliance to IEC62386-101.102.207 for DA-Type only						
SAFETY &	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC						
EMC	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25 $^{\circ}\mathrm{C}$ / 70% RH						
	EMC EMISSION Note.5	Compliance to EN55015, EN61000-3-2 Class C (@load $\geq$ 50%) ; EN61000-3-3; GB/T17743, GB17625.1						
	EMC IMMUNITY	$Compliance \ to \ EN61000-4-2, 3, 4, 5, 6, 8, 11; \ EN61547, \ light \ industry \ level (surge \ immunity: Line-Earth: 2KV, Line-Line: 1KV) \ criteria \ And the line of the$						
	MTBF	1097K hrs min. Telcordia SR-332 (Bellcore) 286Khrs min. MIL-HDBK-217F ( $25^{\circ}$ C)						
OTHERS	DIMENSION	280*30*21mm (L*W*H)						
	PACKING	0.22Kg; 54pcs/12.88Kg/0.91CUFT						
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.  2. Please refer to "OUTPUT CURRENT SETTING".  3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.  4. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.  5. 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.  6. This series meets the typical life expectancy of >50000 hours of operation when Tcase, particularly to point (or TMP, per DLC), is about 70°C or less.  7. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a> 8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).							



## **■** BLOCK DIAGRAM

PFC fosc: 50~400KHz PWM fosc: 30~200KHz

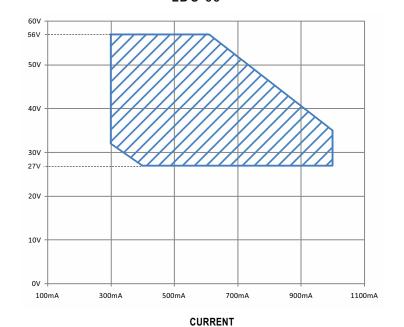


## ■ OUTPUT CURRENT SETTING

## OI-V Operating Area.

Output rated current level can be adjusted by a additive resistance.



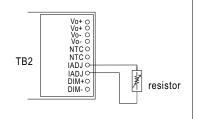


— LDC-35

## Rated current setting table

15.2K	19K	24.5K	32.5K	43K	46K	72.5K	100K	150K	300K	NC
1A	0.9A	0.8A	0.7A	0.62A	0.6A	0.5A	0.45A	0.4A	0.35A	0.3A

Note: output power≤35W



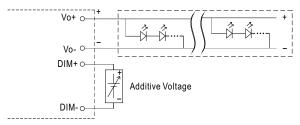


#### **■ DIMMING OPERATION**



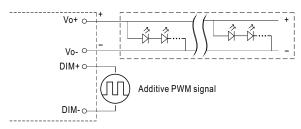
#### \* 3 in 1 dimming function(for B-Type)

- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
   0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply:  $100\mu A$  (typ.)
- O Applying additive 0 ~ 10VDC



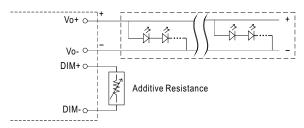
"DO NOT connect "DIM- to Vo-"

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

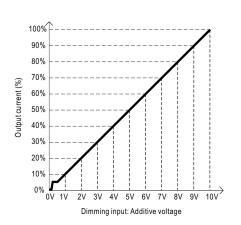


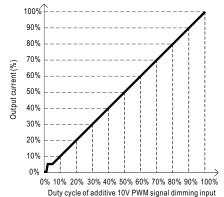
"DO NOT connect "DIM- to Vo-"

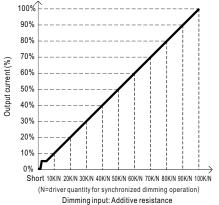
O Applying additive resistance:



"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.
- 3. To ensure the dimming performance at low dimming level, output current must be over 45mA.



#### **X** DALI interface



#### O PUSH dimming(primary side)

Action	Action duration	Function	
Short push	0.1~1 sec.	Turn ON-OFF the driver	
Long push	1.5~10 sec.	Every Long Push changes the dimming direction, dimming up or down	
Reset	>11 sec.	Set up the dimming level to 100%	

- The factory default dimming level is at 100%.
- If the push action lasts less than 0.05 sec., it will not lead to a change for the status of the driver.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the push button to the last driver is 20 meters.
- The additive push button can be connected only between the LS terminal, as displayed in the diagram, and AC/L (in brown or black); it will lead to short circuit if it is connected to AC/N.

#### DALI interface(primary side)

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

NOTE: DALI, Push dimming can not be used in the same time! (The factory setting defaults to DA)



#### ■ TEMPERATURE COMPENSATION OPERATION

LDC-35 have the built-in temperature compensation function; by connecting a temperature sensor (NTC resistor) between the +NTC /-NTC terminal of LDC-35 and the detecting point on the lighting system or the surrounding environment, output current of LDC-35 could be correspondingly changed, based on the sensed temperature, to ensure the long life of LED.



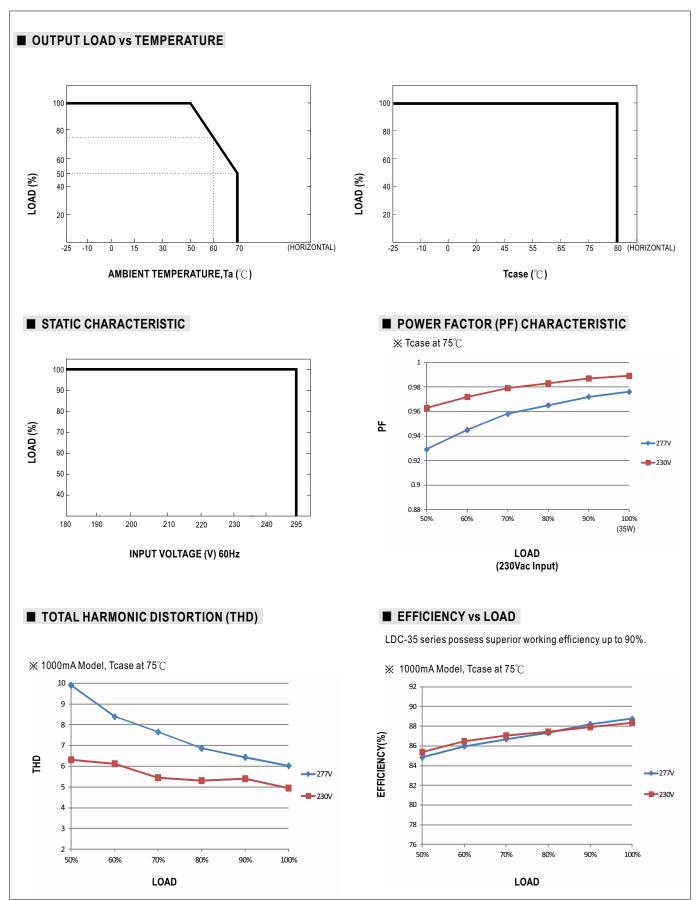
- © LDC-35 can still be operated normally when the NTC resistor is not connected and the value of output current will be the current level selected through the IADJ. pin
- NTC reference:

NTC resistance	Output Current
<20K	Output current reduce as the resistance decreases
>20K	Normal output current

Notes: 1. MEAN WELL does not offer the NTC resistor and all the data above are measured by using resistor.

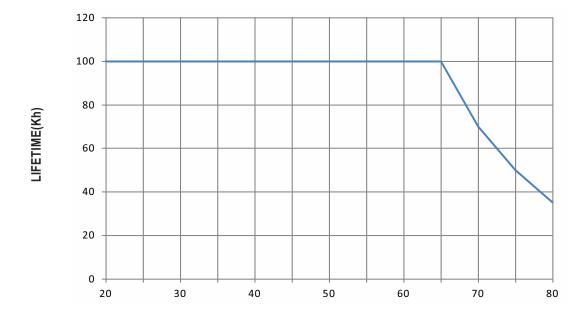
- 2. If new brand of NTC resistor is applied, please check the temperature curve first.
- $\bigcirc$  Dimming function of the driver will be invalid when the "temperature compensation" function is in use.







# ■ LIFE TIME

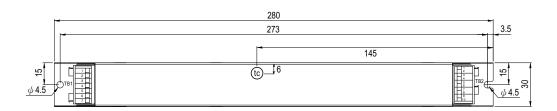


Tcase ( $^{\circ}$ C)

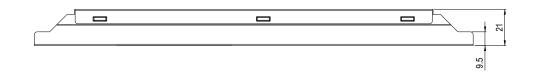


## **■ MECHANICAL SPECIFICATION**

CASE NO.: 263A Unit:mm



• tc : Max. Case Temperature

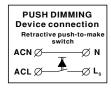


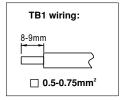
Terminal Pin No. Assignment (TB1):

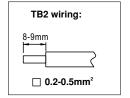
Pin No.	Assignment
1	ACL
2	ACN
3	NC
4	FG
5	NC(for DA-type only )
6	DA-/N(for DA-type only)
7	DA+/Ls(for DA-type only)

#### Terminal Pin No. Assignment (TB2):

Pin No.	Assignment
1	Vo+
2	Vo+
3	Vo-
4	Vo-
5	NTC
6	NTC
7	IADJ
8	IADJ
9 DIM+(for B-type only)	
10	DIM-(for B-type only)







## **■** Installation Manual

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

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