



MEAN WELL LCM-25DA Series 25W Multiple Stage Constant Current Mode LED Driver Owner's Manual

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MEAN WELL LCM-25DA Series 25W Multiple Stage Constant Current Mode LED Driver



FAQ

Frequently Asked Questions

- **Q:** How do I know which current level to select?
 - **A:** The current level selection should be based on the requirements of your LED setup. Consult with a professional if unsure.
- **Q:** What should I do if the LED driver does not power up?
 - **A:** Check the input power connections and ensure they are correct. If the issue persists, contact customer support for assistance.
- **Q:** Can I connect multiple LED drivers to a single circuit breaker?
 - **A:** The maximum number of units that can be connected to a circuit breaker is specified in the manual. Do not exceed this limit to avoid overloading the circuit.

Features

- Constant Current mode output with multiple levels selectable by dip switch
- Emergency lighting application is available according to IEC61347-2-13
- Built-in active PFC function and class II design
- Standby power consumption <0.5W
- **Functions:** DALI interface(logarithm or linear dimming curve selectable), push dimming synchronization up to 10 units
- 3 years warranty

Applications

- LED indoor lighting
- LED office lighting
- LED commercial lighting
- LED panel lighting
- Industrial lighting

GTIN CODE

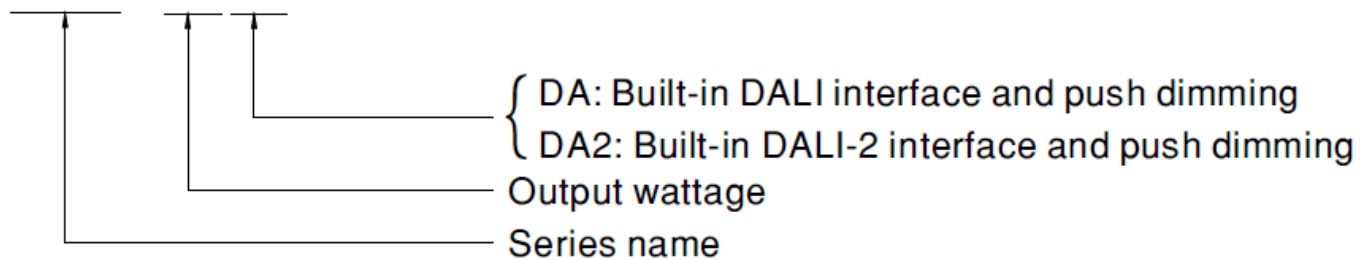
- MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

Description

LCM-25DA series is a 25W AC/DC constant current mode output LED driver featuring the multiple levels selectable by dip switch and the DALI interface with the compliance to IEC62386. LCM-25DA operates from 180~277VAC and offers different current levels ranging between 350mA and 1050mA. Thanks to the efficiency up to 86%, with the fanless design, the entire series is able to operate for -30°C~+85°C case temperature under free air convection. In addition, LCM-25DA is equipped with push dimming and synchronization functions, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

LCM - 25DA



SPECIFICATION

MODEL		LCM-25					
OUTPUT	CURRENT LEVEL	Current level selectable via DIP switch, please refer to”DIP SWITCH TABLE” section					
		350mA	500mA	600mA	700mA(def ault)	900mA	1050mA
	RATED POWER	18.9W	25.2W				
	DC VOLTAGE RANGE	6 ~ 54V	6 ~ 50V	6 ~ 42V	6 ~ 36V	6 ~ 28V	6 ~ 24V
	OPEN CIRCUIT VOLTAGE (max.)	59V			41V		
	CURRENT RIPPLE	5.0% max. @rated current					

	CURRENT TOLERANCE	±5%
	SETUP TIME Note.3 Note.8	500ms / 230VAC
INPUT	VOLTAGE RANGE Note.2	180 ~ 277VAC 254 ~ 380VDC(254~375VDC for DA2-Type) (Please refer to “STATIC CHARACTERISTIC” section)
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR (Typ.)	PF≥0.94/230VAC, PF≥0.91/277VAC@full load (Please refer to “POWER FACTOR (PF) CHARACTERISTIC” section)
	TOTAL HARMONIC DISTORTION	THD< 20%(@load≥50%/230VAC; @load≥75%/277VAC) (Please refer to “TOTAL HARMONIC DISTORTION(THD)” section)
	EFFICIENCY (Typ.) Note.4	86%
	AC CURRENT (Typ.)	0.17A/230VAC 0.15A/277VAC
	INRUSH CURRENT (Typ.)	COLD START 20A(twidth=260μs measured at 50% Ipeak) at 230VAC ; Per NEMA 410
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	26 units (circuit breaker of type B) / 44 units (circuit breaker of type C) at 230VAC
	LEAKAGE CURRENT	<0.5mA / 240VAC
	STANDBY POWER CONSUMPTION Note.5	<0.5W
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down
FUNCTION	DIMMING	Please refer to “DIMMING OPERATION” section
	SYNCHRONIZATION	Please refer to “SYNCHRONIZATION OPERATION” section

ENVIRONMENT	WORKING TEMP.	Tcase=-30 ~ +85°C (Please refer to “ OUTPUT LOAD vs TEMPERATURE” section)
	MAX. CASE TEMP.	Tcase=+85°C
	WORKING HUMIDITY	20 ~ 90% RH non-condensing
	STORAGE TEMP. , HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes
SAFETY & EMC	SAFETY STANDARDS	UL8750(except for DA2-Type), CSA C22.2 NO.250.0-08, ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent,GB19510.14,GB19510.1,BIS IS15885(except for DA2-Type), EAC TP TC 004 approved; According to BS EN/EN61347-2-13 appendix J suitable for emergency installations(EL)(AC Input: 200-240Vac)(for DA2-Type only)
	DALI STANDARDS	IEC62386-101, 102, 207,251
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC ; I/P-DA:1.5KVAC ; O/P-DA:1.5KVAC
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH
	EMC EMISSION Note.6	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C(@load≥50%) ; BS EN/EN61000-3-3; GB/T 17743, 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 2KV), EAC TP TC 020
OTHERS	MTBF	2661.8K hrs min. Telcordia SR-332 (Bellcore) ; 213.3K hrs min. MIL-HDBK -217F (25°C)
	DIMENSION	105*68*23mm (L*W*H)
	PACKING	0.17Kg ; 72pcs/13.2Kg/1.04CUFT

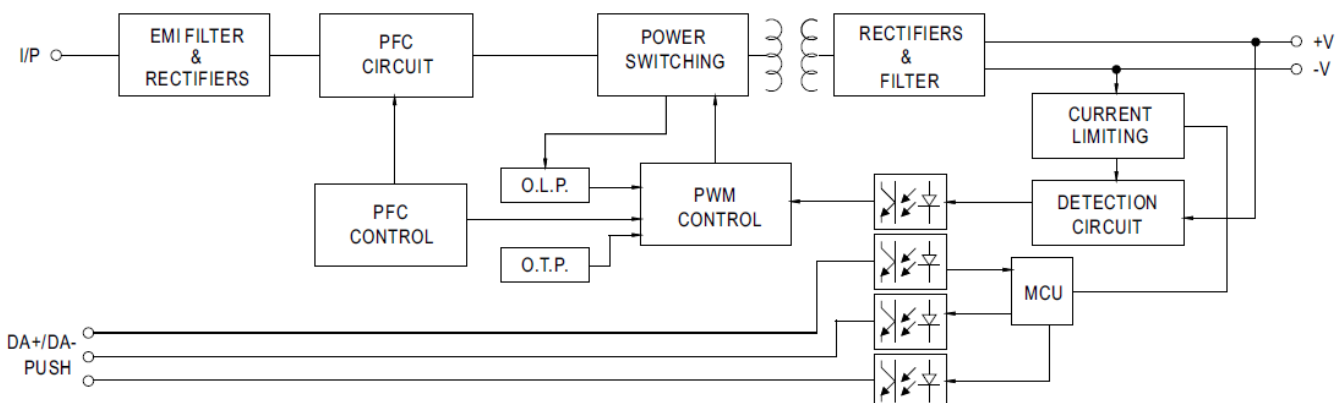
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.
2. De-rating may be needed under low input voltages. Please refer to “STATIC CHARACTERISTIC” sections for details.
3. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
4. Efficiency is measured at 500mA/50V output set by DIP switch.
5. Standby power consumption is measured at 230VAC.
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.
(as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
7. 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).
8. Based on IEC 62386-101/102 DALI power on timing and interruption regulations, the set up time needs to test with a DALI controller which can support for DALI power on function, otherwise the set up time will be higher than 0.5 second for DA2-type.
9. 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.

※ **Product Liability Disclaimer:** For detailed information, please refer to <https://www.meanwell.com/serviceDisclaimer.aspx>

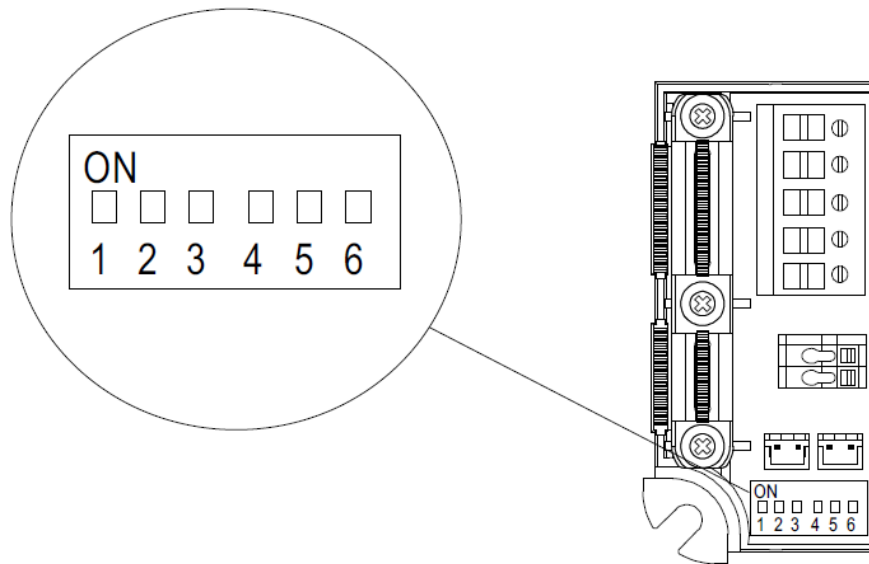
BLOCK DIAGRAM

- **PFC fosc:** 45KHz
- **PWM fosc:** 70KHz



DIP SWITCH TABLE

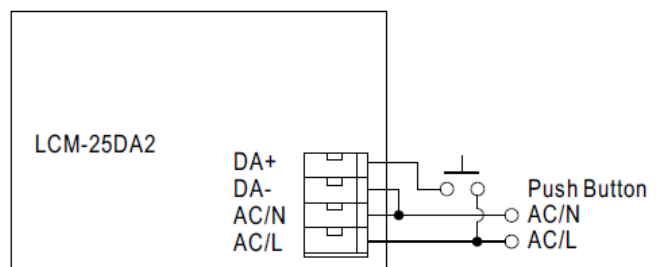
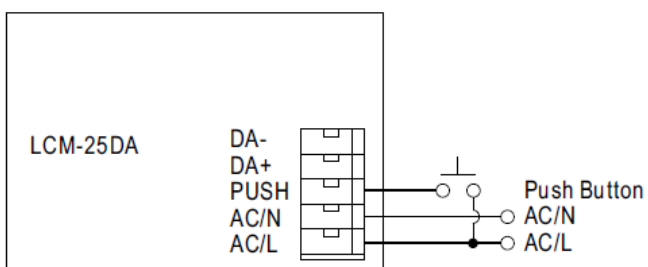
LCM-25DA/DA2 is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.



Io / DIP S.W.	1	2	3	4	5	6
350mA	---	---	---	---	---	---
500mA	ON	---	---	---	---	---
600mA	ON	ON	---	---	---	---
700mA(factory default)	ON	ON	ON	---	---	ON
900mA	ON	ON	ON	ON	---	ON
1050mA	ON	ON	ON	ON	ON	ON

Note: For more current setting, please contact MW's sales.

DIMMING OPERATION



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%.

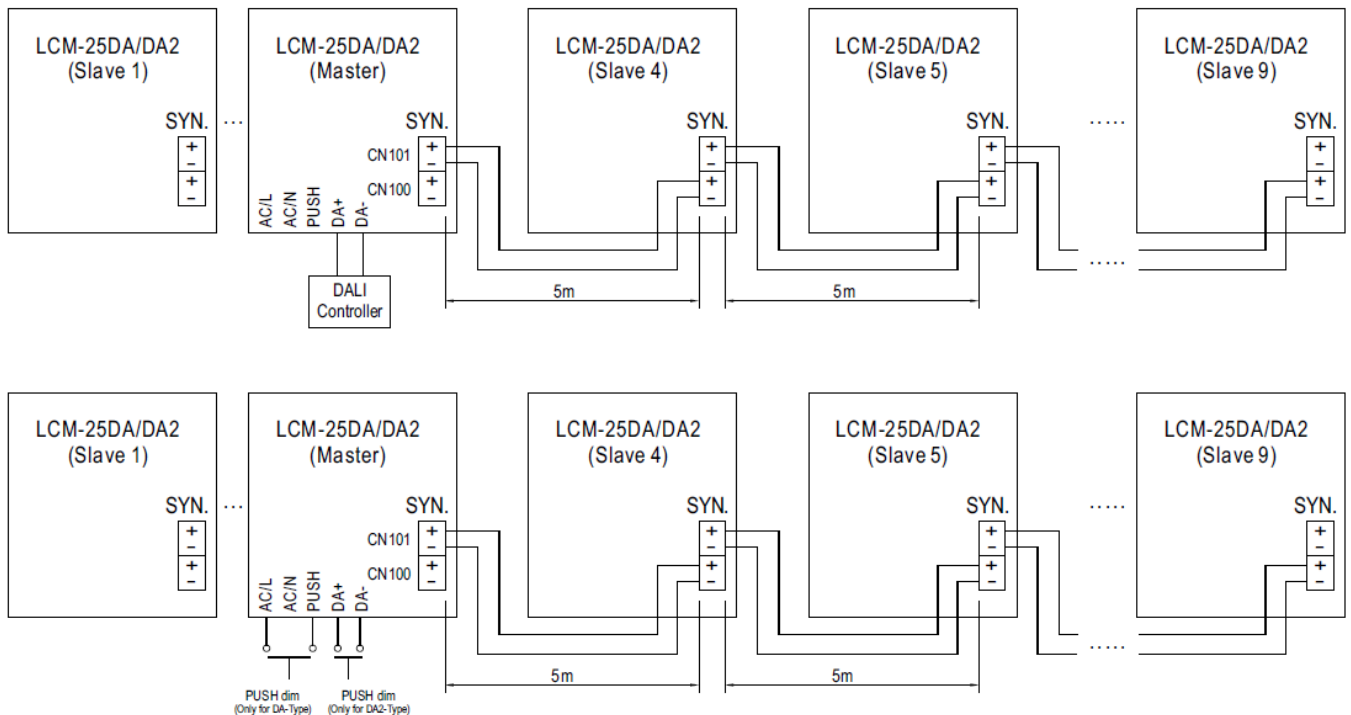
- If the push action lasts less than 0.05 sec., it will not lead to a change for the status of the driver.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the push button to the last driver is 20 meters.
- The additive push button can be connected only between the PUSH 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; for DA/DA2-Type)

- Apply DALI signal between DA+ and DA-
- DALI protocol comprises 16 groups and 64 addresses.
- First step is fixed at 6% of output.

SYNCHRONIZATION OPERATION

- Synchronization up to 10 drivers (1 master + 9 slaves)
- **Dimming operating range:** 10%~100%
- **Sync cable length:** < 5m
- **Sync cable type:** Flat cable
- **Sync cable cross section area:** 22 – 24 AWG (0.2~0.3mm*)



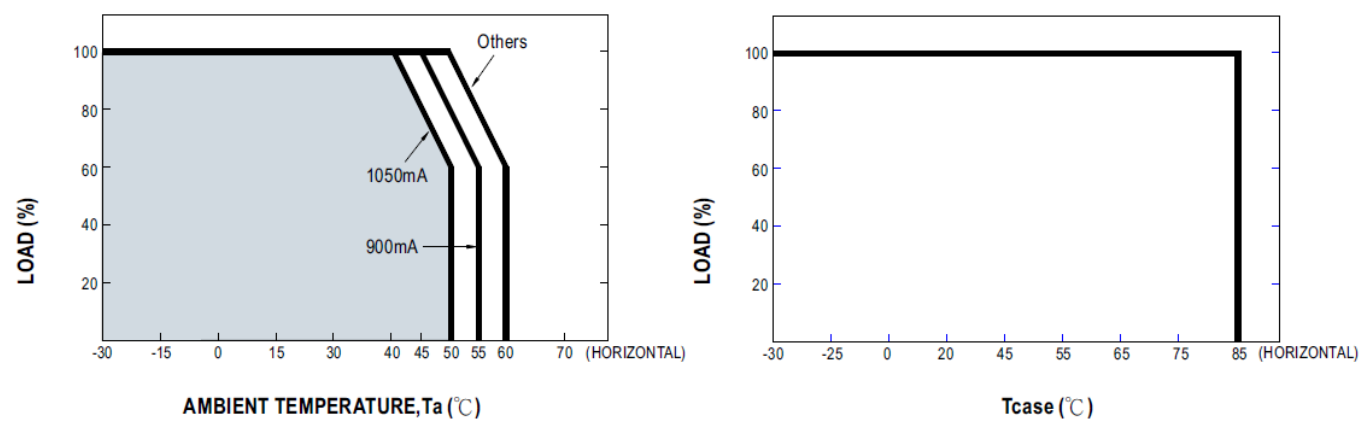
- **CN100, CN101:** used to synchronously control the LCM units in parallel.

NOTE

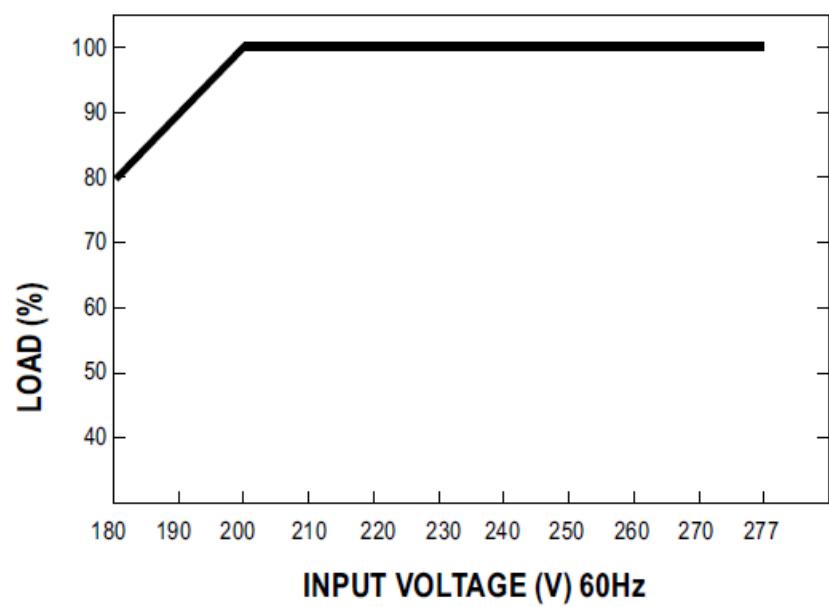
1. Please make sure all units are set to 100% dimming setting (factory default) before synchronizing.
2. Min. Dimming operating range depends on dimmer setting.

MORE INFORMATION

OUTPUT LOAD vs TEMPERATURE



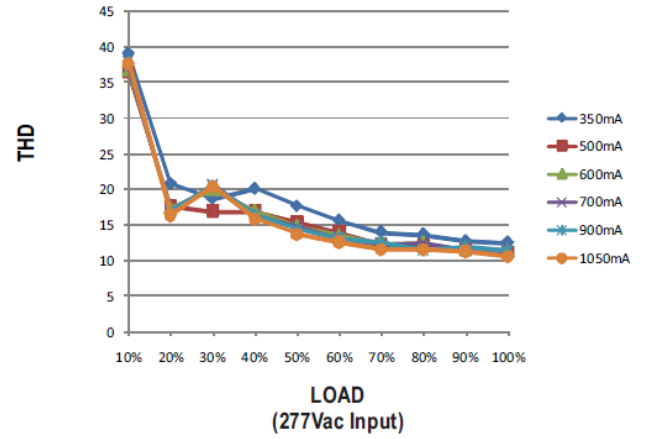
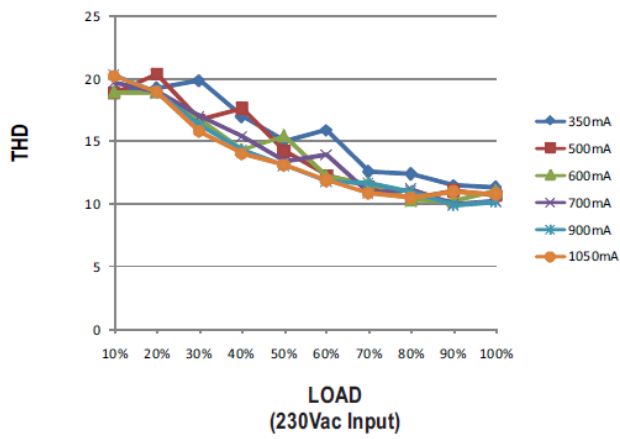
STATIC CHARACTERISTIC



- De-rating is needed under low input voltage.

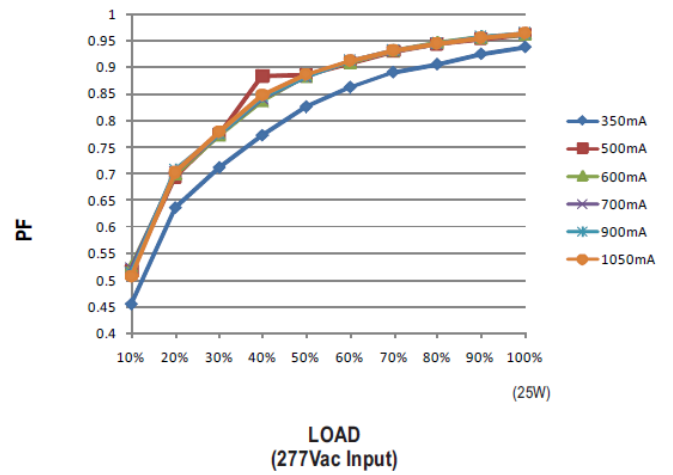
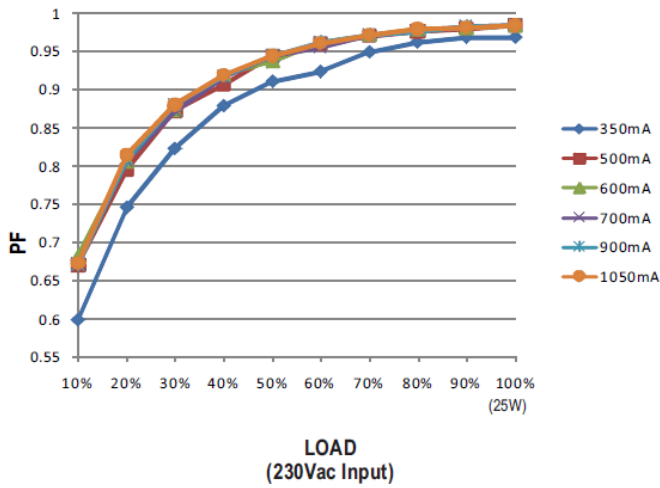
TOTAL HARMONIC DISTORTION (THD)

Tcase at 75°C



POWER FACTOR (PF) CHARACTERISTIC

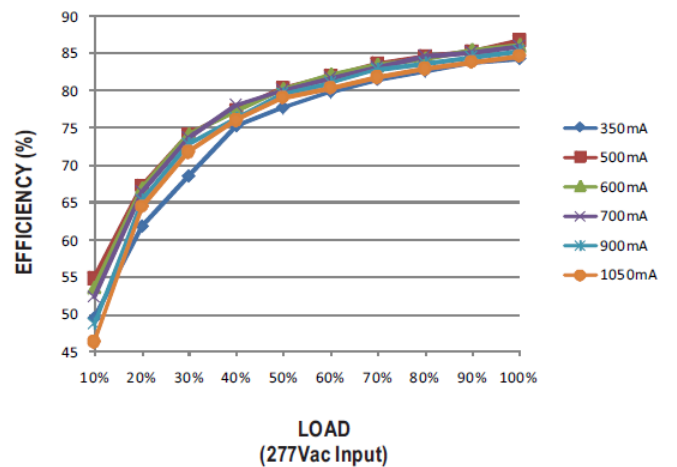
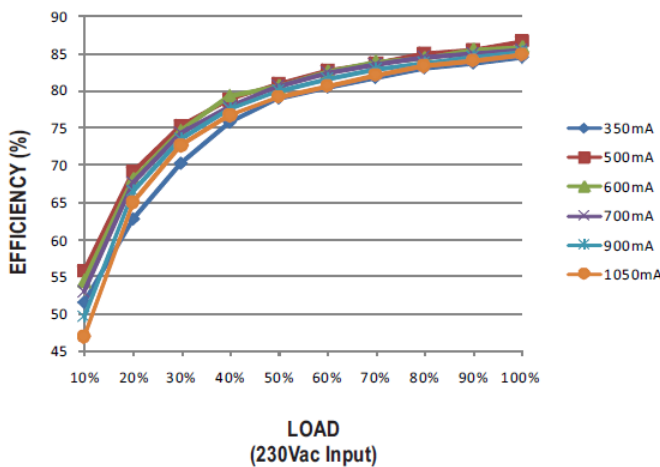
Tcase at 75°C



EFFICIENCY vs LOAD

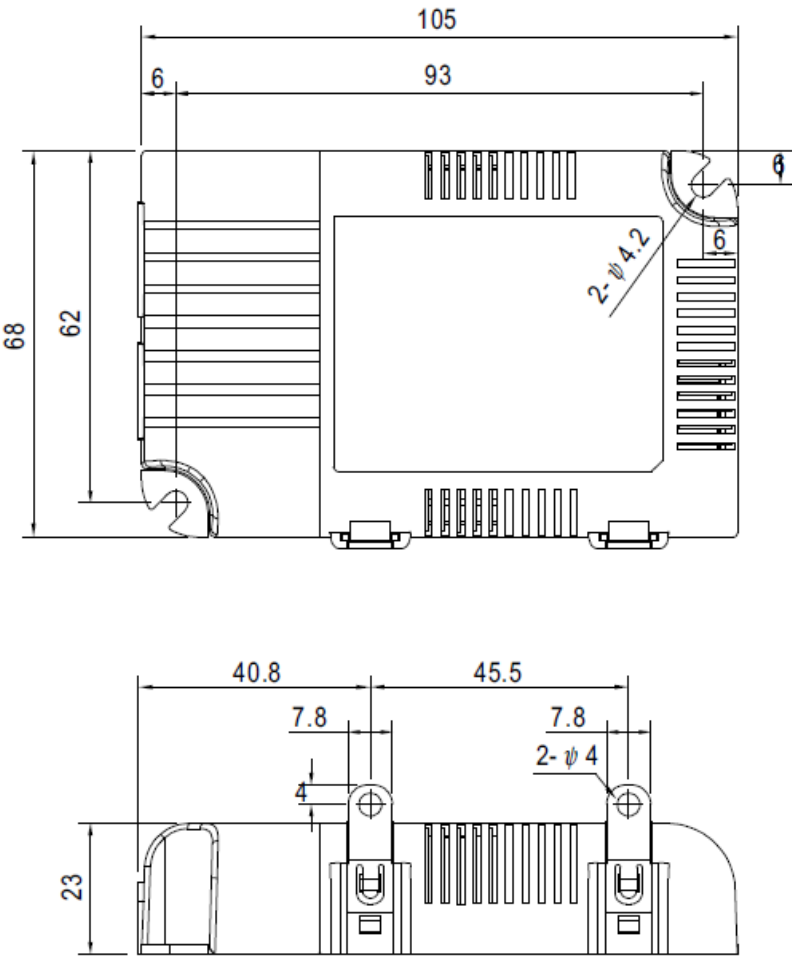
LCM-25DA series possess superior working efficiency that up to 86% can be reached in field applications.

Tcase at 75°C

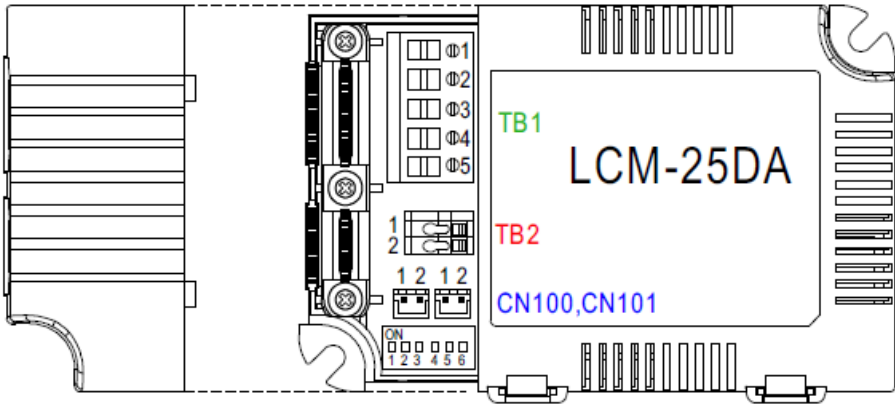


MECHANICAL SPECIFICATION

- **Case No.** LCM-25
- **Unit:** mm

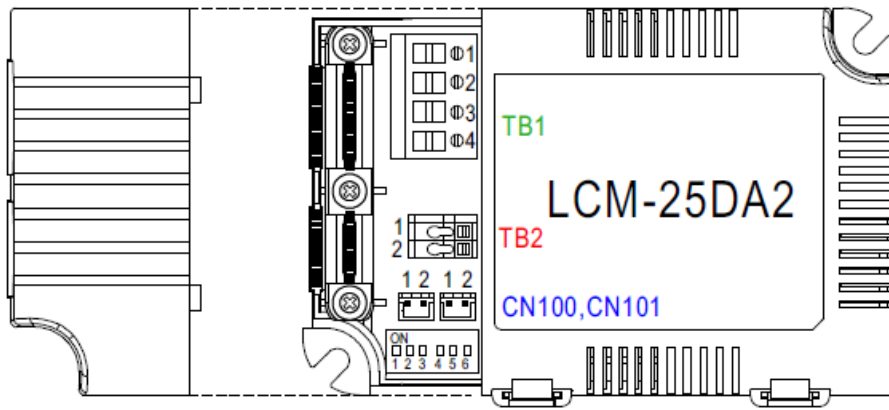


Terminal Pin No. Assianment(TB1YLCM-25DA)



Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DA+
2	AC/N	5	DA-
3	PUSH		

Terminal Pin No. Assignment(TB1)(LCM-25DA2)



Pin No.	Assignment
1	AC/L
2	AC/N
3	DA-
4	DA+

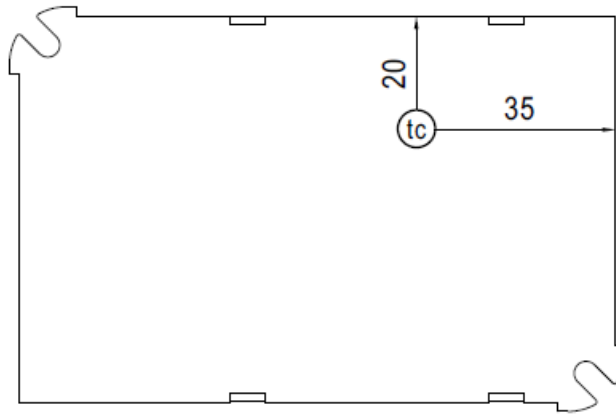
Terminal Pin No. Assignment(TB2)

Pin No.	Assignment
1	+V
2	-V

SYN. Connector(CN100/CN101): JST B2B-PH-KL or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	—	JST PHR-2 or equivalent	JST SPH-002T-P0.5S or equivalent
2	+		

Bottom View



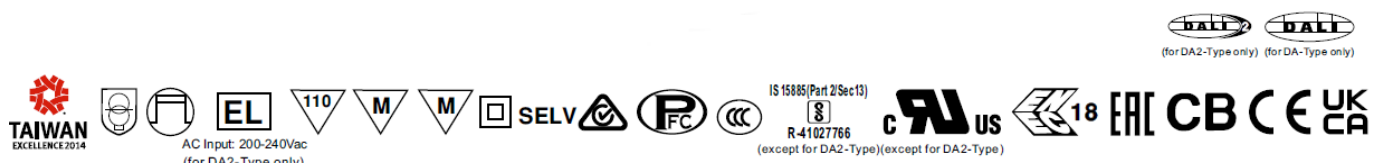
- **tc:** Max. Case Temperature

Note: Please use wires with a cross section of 0.5~2.5mm (14~20AWG) for TB1 and wires with a cross section of 0.5~1.5 mm'(16~20AWG) for TB2
Please use wires with a cross section of 0.126~0.205mm (24~26AWG) for CN100/CN101

INSTALLATION MANUAL

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

User's Manual



Documents / Resources

	<p>MEAN WELL LCM-25DA Series 25W Multiple Stage Constant Current Mode LED Driver [pdf] Owner's Manual</p> <p>LCM-25DA Series, LCM-25DA Series 25W Multiple Stage Constant Current Mode LED Driver, 25W Multiple Stage Constant Current Mode LED Driver, Multiple Stage Constant Current Mode LED Driver, Stage Constant Current Mode LED Driver, Current Mode LED Driver, LED Driver, Driver</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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