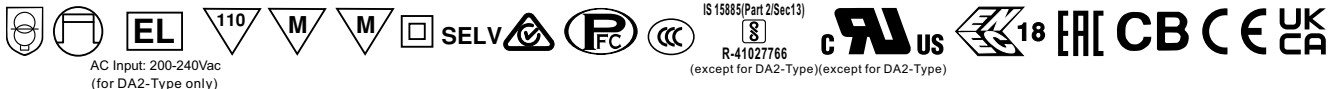




25W Multiple-Stage Constant Current Mode LED Driver

LCM-25DA series



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 10units
• 3 years warranty

Applications

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

GTIN CODE

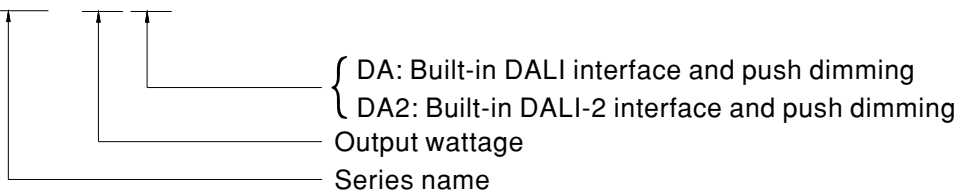
MW Search: https://www.meanwell.com/serviceGTIN.aspx

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



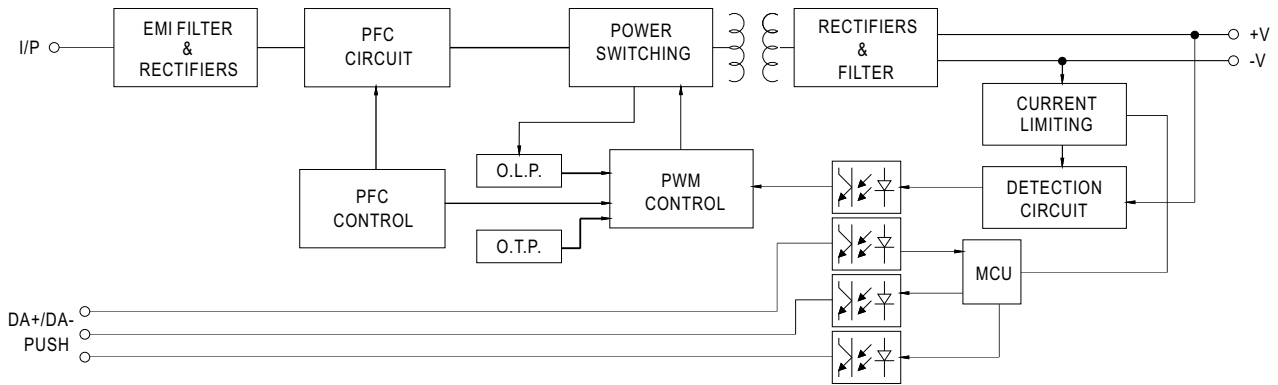


**SPECIFICATION**

<b>MODEL</b>		LCM-25□					
<b>OUTPUT</b>	<b>CURRENT LEVEL</b>	Current level selectable via DIP switch, please refer to "DIP SWITCH TABLE" section					
		350mA	500mA	600mA	700mA(default)	900mA	1050mA
	<b>RATED POWER</b>	18.9W	25.2W				
	<b>DC VOLTAGE RANGE</b>	6 ~ 54V	6 ~ 50V	6 ~ 42V	6 ~ 36V	6 ~ 28V	6 ~ 24V
	<b>OPEN CIRCUIT VOLTAGE (max.)</b>	59V			41V		
	<b>CURRENT RIPPLE</b>	5.0% max. @rated current					
	<b>CURRENT TOLERANCE</b>	±5%					
	<b>SETUP TIME</b> <small>Note.3 Note.8</small>	500ms / 230VAC					
<b>INPUT</b>	<b>VOLTAGE RANGE</b> <small>Note.2</small>	180 ~ 277VAC 254 ~ 380VDC(254~375VDC for DA2-Type) (Please refer to "STATIC CHARACTERISTIC" section)					
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz					
	<b>POWER FACTOR (Typ.)</b>	PF ≥ 0.94/230VAC, PF ≥ 0.91/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)					
	<b>TOTAL HARMONIC DISTORTION</b>	THD < 20% (@load ≥ 50%/230VAC; @load ≥ 75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)					
	<b>EFFICIENCY (Typ.)</b> <small>Note.4</small>	86%					
	<b>AC CURRENT (Typ.)</b>	0.17A/230VAC 0.15A/277VAC					
	<b>INRUSH CURRENT (Typ.)</b>	COLD START 20A(t <sub>width</sub> =260μs measured at 50% I <sub>peak</sub> ) at 230VAC; Per NEMA 410					
	<b>MAX. No. of PSUs on 16A CIRCUIT BREAKER</b>	26 units (circuit breaker of type B) / 44 units (circuit breaker of type C) at 230VAC					
<b>LEAKAGE CURRENT</b>	<0.5mA / 240VAC						
<b>STANDBY POWER CONSUMPTION</b> <small>Note.5</small>	<0.5W						
<b>PROTECTION</b>	<b>SHORT CIRCUIT</b>	Constant current limiting, recovers automatically after fault condition is removed					
	<b>OVER TEMPERATURE</b>	Shut down o/p voltage, recovers automatically after temperature goes down					
<b>FUNCTION</b>	<b>DIMMING</b>	Please refer to "DIMMING OPERATION" section					
	<b>SYNCHRONIZATION</b>	Please refer to "SYNCHRONIZATION OPERATION" section					
<b>ENVIRONMENT</b>	<b>WORKING TEMP.</b>	T <sub>case</sub> = -30 ~ +85°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)					
	<b>MAX. CASE TEMP.</b>	T <sub>case</sub> = +85°C					
	<b>WORKING HUMIDITY</b>	20 ~ 90% RH non-condensing					
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +80°C, 10 ~ 95% RH					
	<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 50°C)					
	<b>VIBRATION</b>	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
<b>SAFETY &amp; EMC</b>	<b>SAFETY STANDARDS</b>	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, GB/T19510.1, GB/T19510.213, 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)					
	<b>DALI STANDARDS</b>	IEC62386-101, 102, 207,251					
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3.75KVAC ; I/P-DA:1.5KVAC ; O/P-DA:1.5KVAC					
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH					
	<b>EMC EMISSION</b> <small>Note.6</small>	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					
<b>EMC IMMUNITY</b>	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						
<b>OTHERS</b>	<b>MTBF</b>	2661.8K hrs min. Telcordia SR-332 (Bellcore) ; 213.3K hrs min. MIL-HDBK-217F (25°C)					
	<b>DIMENSION</b>	105*68*23mm (L*W*H)					
	<b>PACKING</b>	0.17Kg ; 72pcs/13.2Kg/1.04CUFT					
<b>NOTE</b>	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>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.</li> <li>Efficiency is measured at 500mA/50V output set by DIP switch.</li> <li>Standby power consumption is measured at 230VAC.</li> <li>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 <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</li> <li>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).</li> <li>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.</li> <li>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.</li> </ol> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>						

**■ BLOCK DIAGRAM**

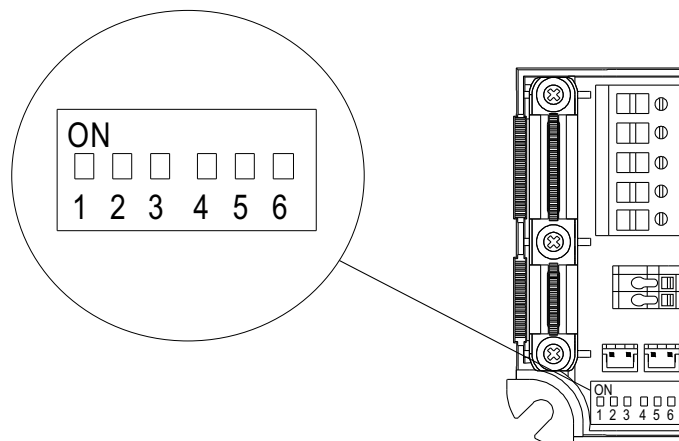
PFC fosc : 45KHz  
PWM fosc : 70KHz



**■ DIP SWITCH TABLE**

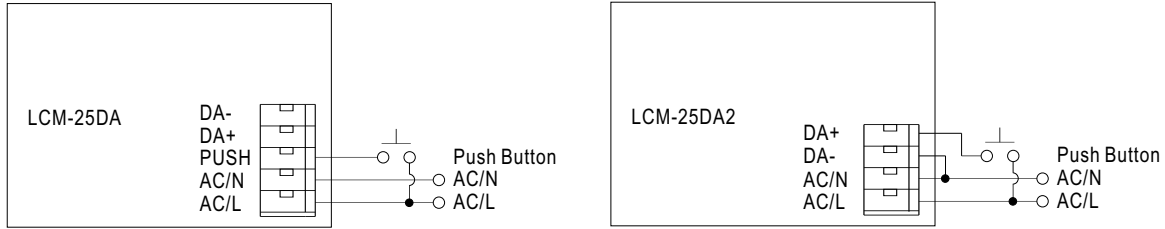
LCM-25DA/DA2 is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.

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%

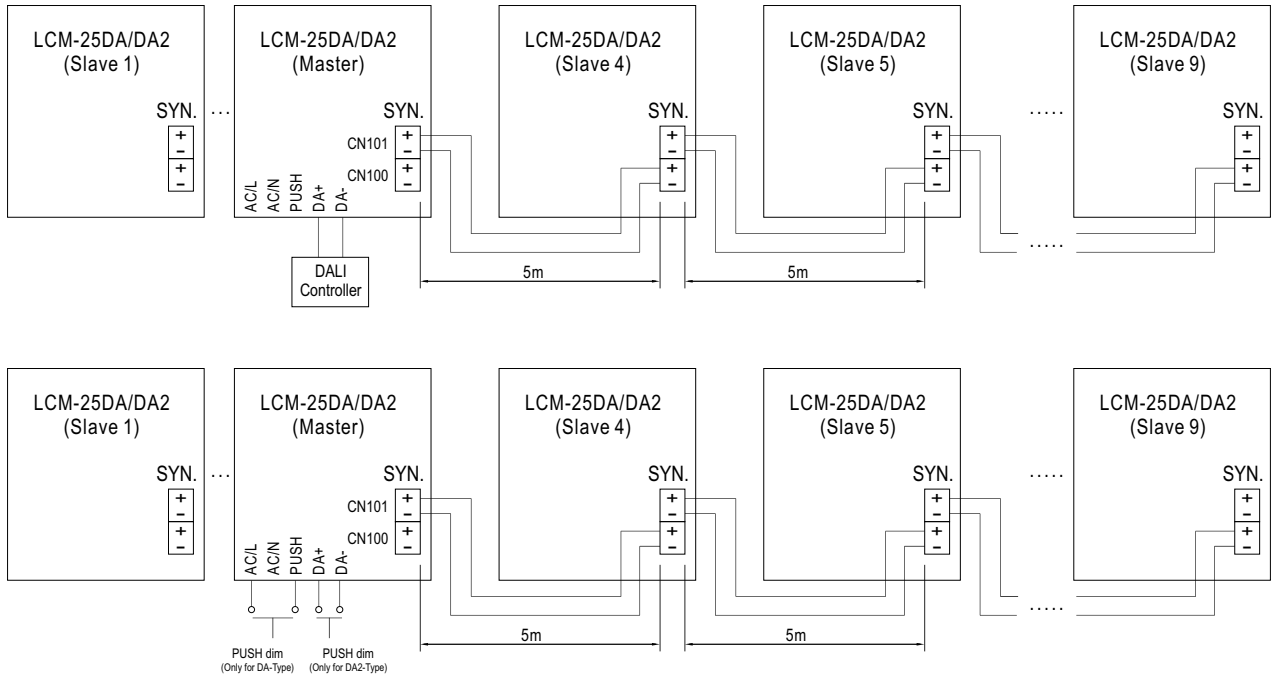
- The factory default dimming level is at 100%.
- If the push action lasts less than 0.05 sec., it will not lead to a change for the status of the driver.
- Up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- The maximum length of the cable from the 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**

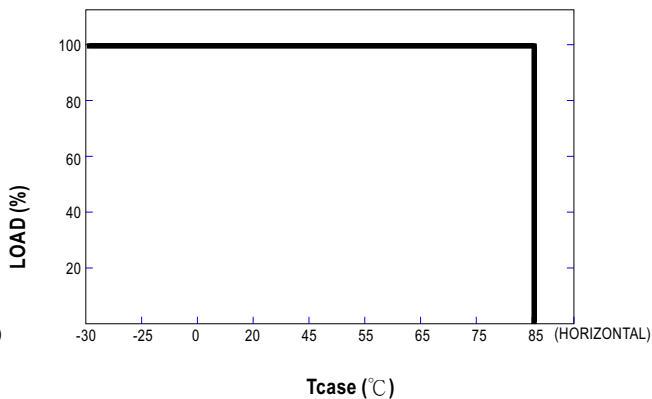
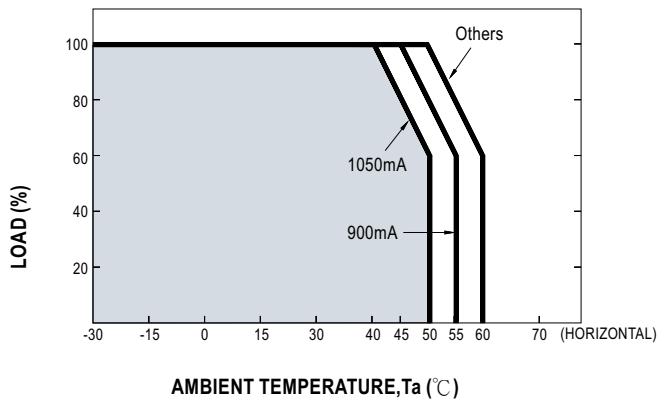
- Synchronization up to 10 drivers (1 master + 9 slaves)
- Dimming operating range : 10%~100%
- Sync cable length : < 5m
- Sync cable type : Flat cable
- Sync cable cross section area : 22 – 24 AWG (0.2~0.3mm<sup>2</sup>)



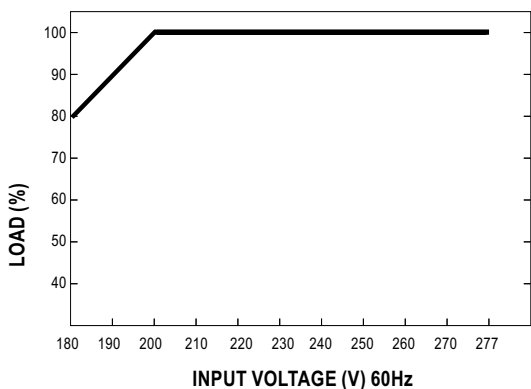
- CN100, CN101 : used to synchronously control the LCM units in parallel.

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.

■ **OUTPUT LOAD vs TEMPERATURE**



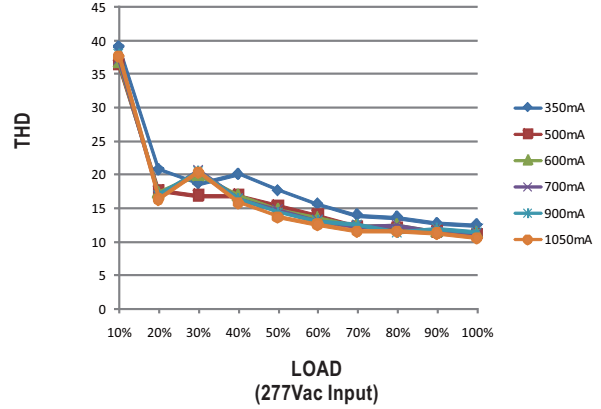
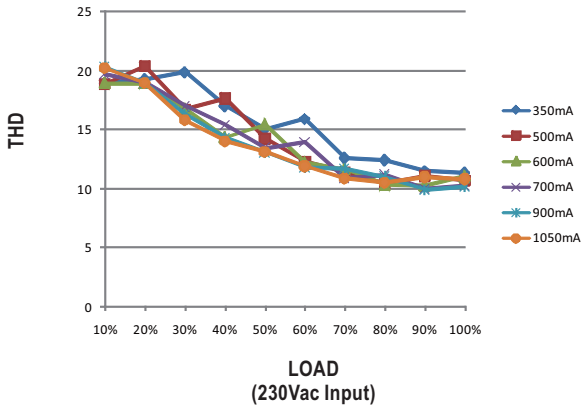
■ **STATIC CHARACTERISTIC**



※ De-rating is needed under low input voltage.

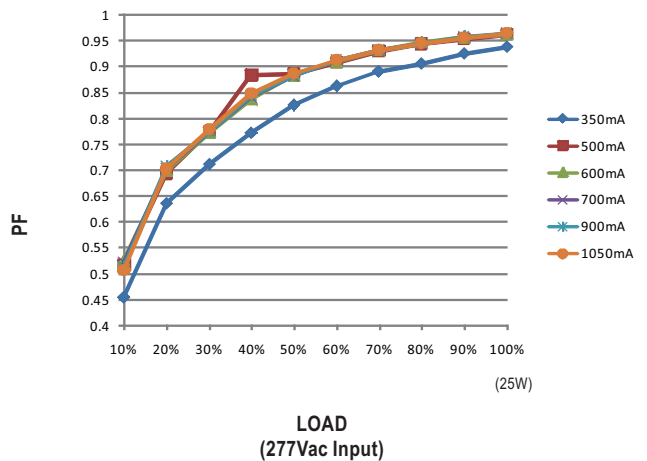
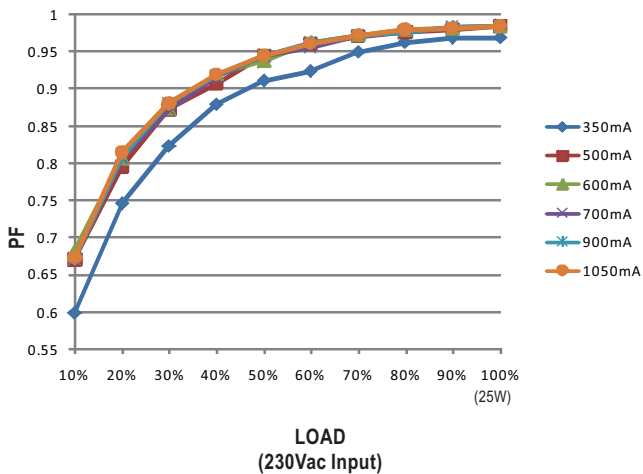
**TOTAL HARMONIC DISTORTION (THD)**

※ Tcase at 75°C



**POWER FACTOR (PF) CHARACTERISTIC**

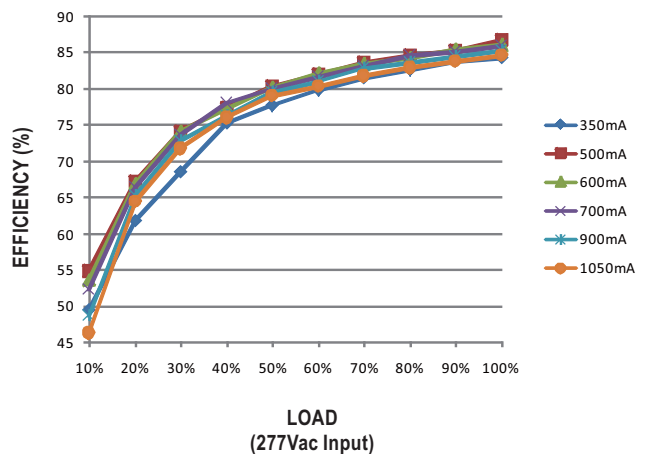
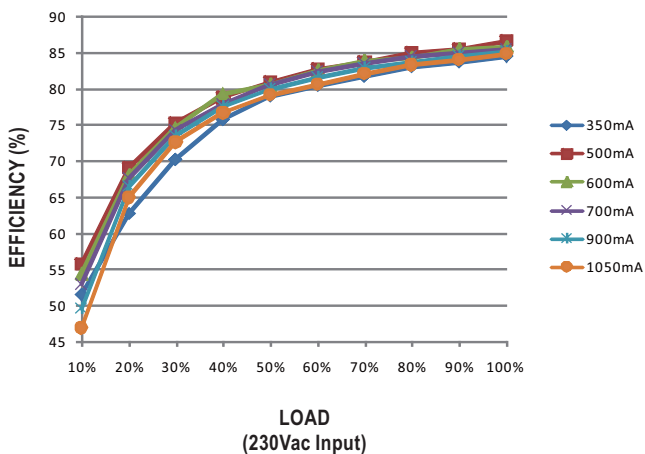
※ Tcase at 75°C



**EFFICIENCY vs LOAD**

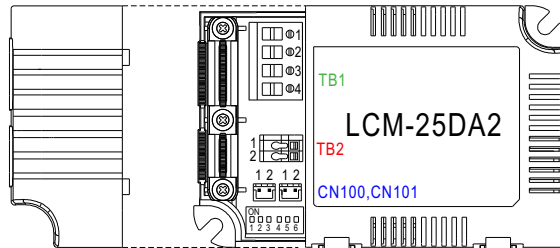
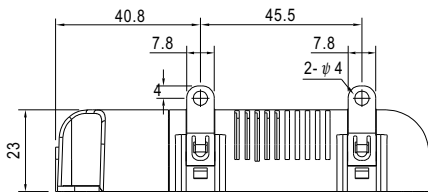
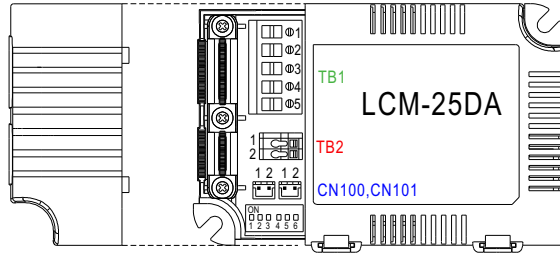
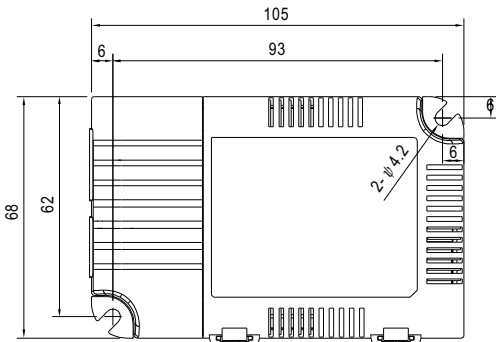
LCM-25DA series possess superior working efficiency that up to 86% can be reached in field applications.

※ Tcase at 75°C



## MECHANICAL SPECIFICATION

Case No. LCM-25 Unit:mm Tolerance:±1



※ Terminal Pin No. Assignment(TB1)(LCM-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)

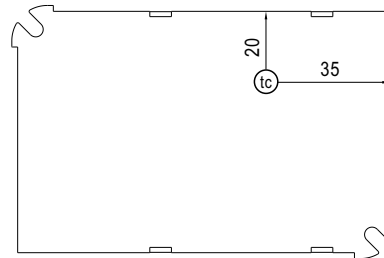
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4	DA+
2	AC/N		
3	DA-		

※ 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<sup>2</sup>(14~20AWG) for TB1 and wires with a cross section of 0.5~1.5 mm<sup>2</sup>(16~20AWG) for TB2. Please use wires with a cross section of 0.126~0.205mm<sup>2</sup>(24~26AWG) for CN100/CN101

## INSTALLATION MANUAL

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

 [www.simpex.ch](http://www.simpex.ch)

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