



Features

- Constant Current mode output with multiple levels selectable by dip switch
- Flicker free design
- Plastic housing with class II design
- Built-in active PFC function
- Functions: Casambi Bluetooth low energy protocol, freely assignable input, synchronization up to 10 units
- 3 years warranty

Applications

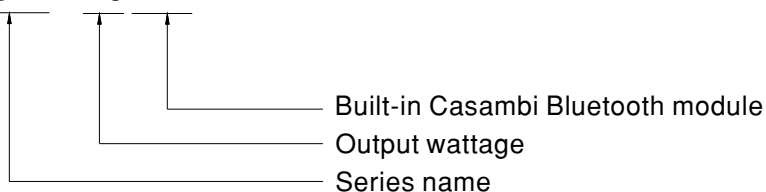
- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting

Description

LCM-25BLE series is a 25W AC/DC constant current mode output LED driver featuring the multiple levels selectable by dip switch and integration of Casambi Bluetooth control so that the installation is greatly simplified. LCM-25BLE 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-25BLE is equipped with freely assignable input and synchronization so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

LCM - 25BLE



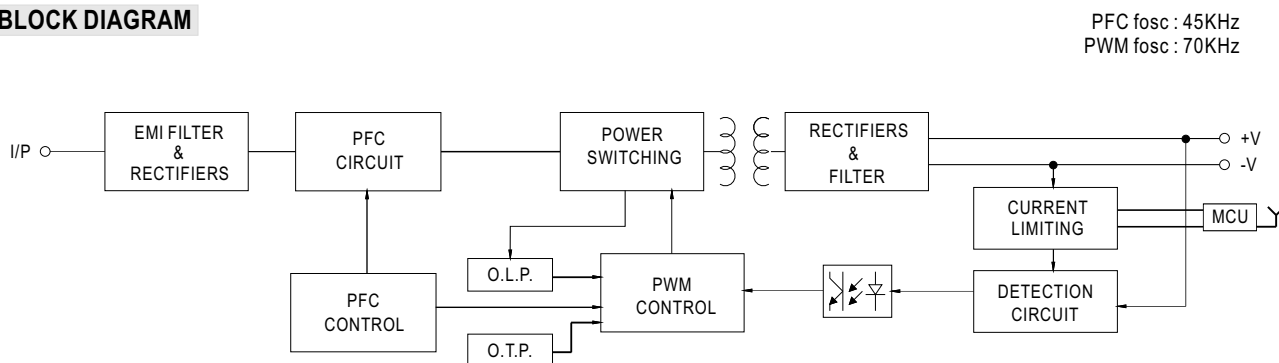
Type	Function	Note
BLE	Casambi Bluetooth control protocol	By request



SPECIFICATION

MODEL		LCM-25BLE					
OUTPUT	CURRENT LEVEL	Current level selectable via DIP switch, please refer to "DIP SWITCH TABLE" section					
		350mA	500mA	600mA	700mA(default)	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	500ms / 230VAC				
INPUT	VOLTAGE RANGE	Note.2	180 ~ 277VAC 254 ~ 392VDC (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.8	<0.6W				
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	WIRELESS PROTOCOL	Casambi Bluetooth low energy 2.4GHz protocol					
	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	EN61347-1, EN61347-2-13, EN62384 independent approved					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC					
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Note.6	Compliance to EN55015, EN61000-3-2 Class C(@load ≥ 50%); EN61000-3-3				
	EMC IMMUNITY		Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level(surge immunity Line-Line 2KV)				
OTHERS	MTBF	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. 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. The standby power consumption does not need to meet ErP due to the integrated wireless transmitter which is working all the time.						

BLOCK DIAGRAM



DIP SWITCH TABLE

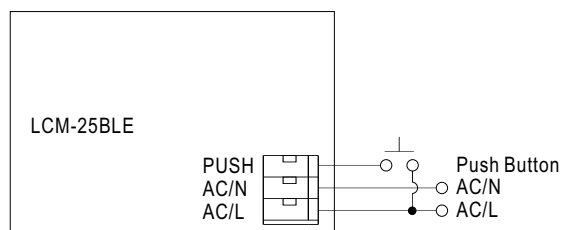
- LCM-25BLE is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.

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

- More current options through DIP switch are listed below. Note that max.LED voltage connected at the output should be always less than the table below

Io \ DIP S.W.	1	2	3	4	5	6	Max.LED voltage
450mA	----	ON	----	----	----	----	54V
550mA	----	----	----	ON	----	----	46V
800mA	ON	ON	----	ON	----	----	31V

■ DIMMING OPERATION

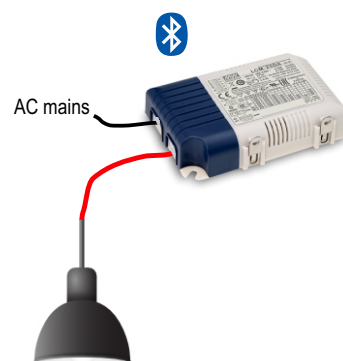
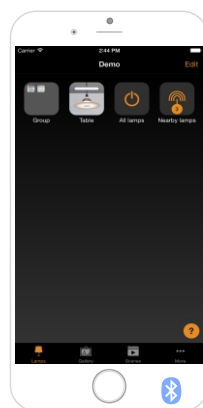
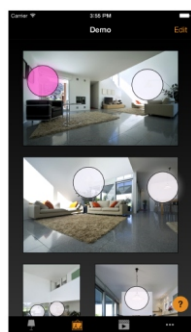


※Freely assignable (push) input

- The LCM BLE series also has one freely assignable AC mains (push) input. As with a CASAMBI sensor module, control pulses can be defined here (e.g. "controls a luminaire"; "controls an element"; "controls a group"; "controls scenes"; "controls all luminaires"; "change scenes"). See the reference connection figure in the above.

※Casambi Bluetooth control

- To be used through APP available on Apple Store and Play Store for iOS and Android.



■ APP SOFTWARE OVER TEMPERATURE PROTECTION

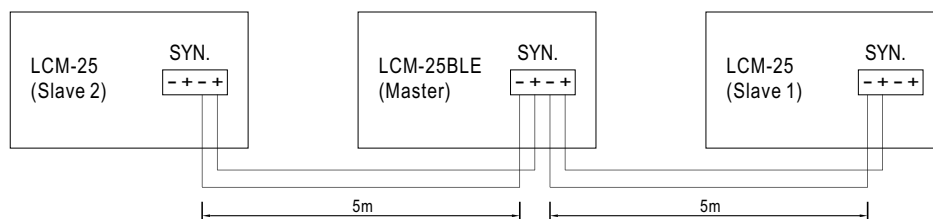
The real time Bluetooth IC temperature is shown in the APP. In case it reaches above 72 °C (equivalent to Tc 85°C), the driver will be turn off to provide a protection. In case the units is cooled down, it can be manually turn ON and back to normal operation again.

NOTE: 1.This software temperature protection is an extra independent function from driver its own hardware over temperature protection(when it is enabled, it needs re-AC power on to recover).

2.In general the software temperature protection is triggered before the hardware one when in over temperature.

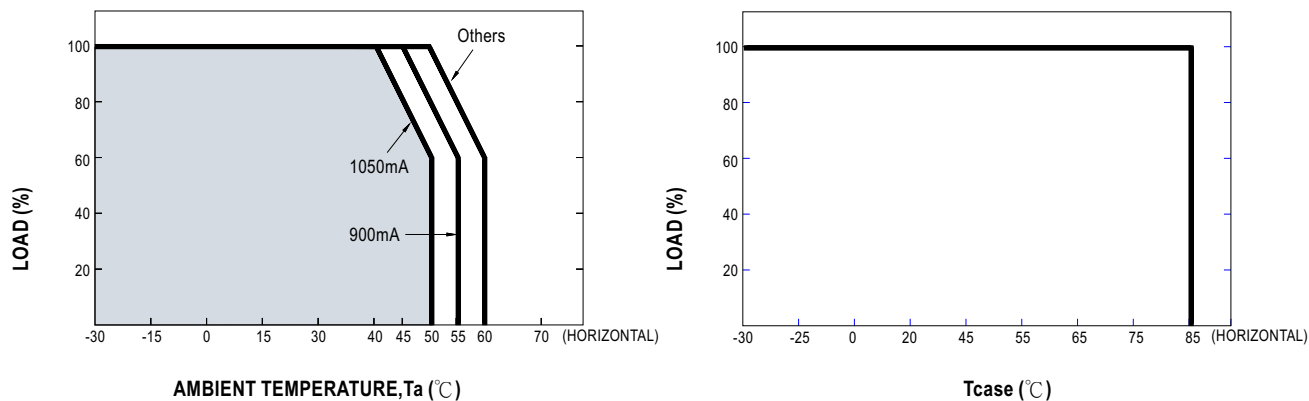
■ SYNCHRONIZATION OPERATION

- 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 (0.2~0.3mm²)

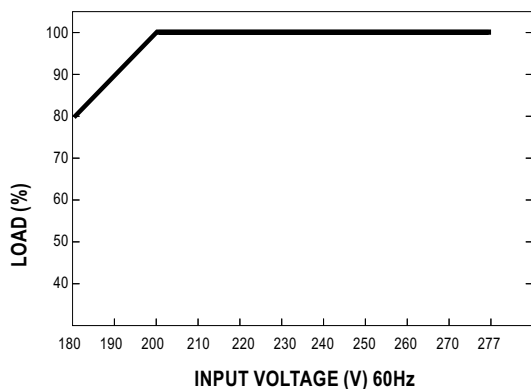


NOTE : 1. Please make sure all units are set to 100% dimming setting (factory default) before synchronizing.
2. Min. Dimming operating range depends on dimmer setting.

■ OUTPUT LOAD vs TEMPERATURE



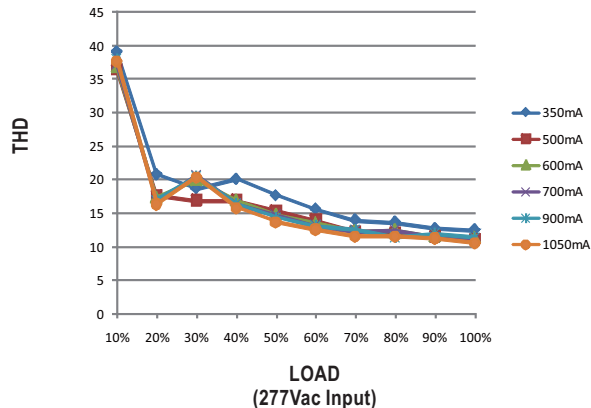
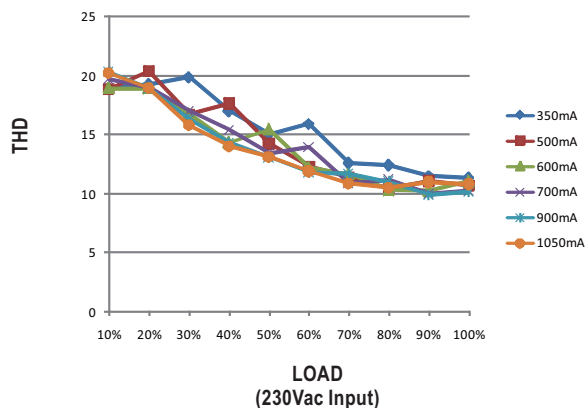
■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

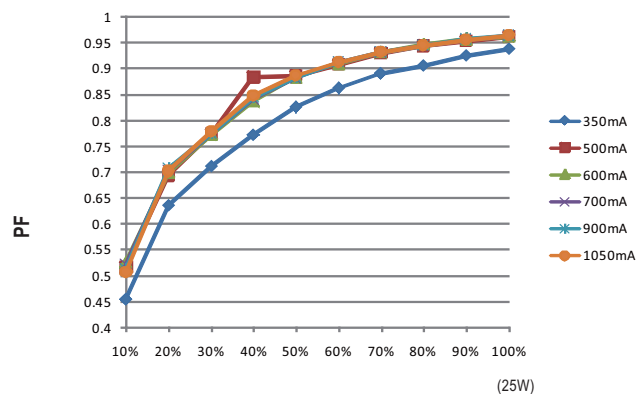
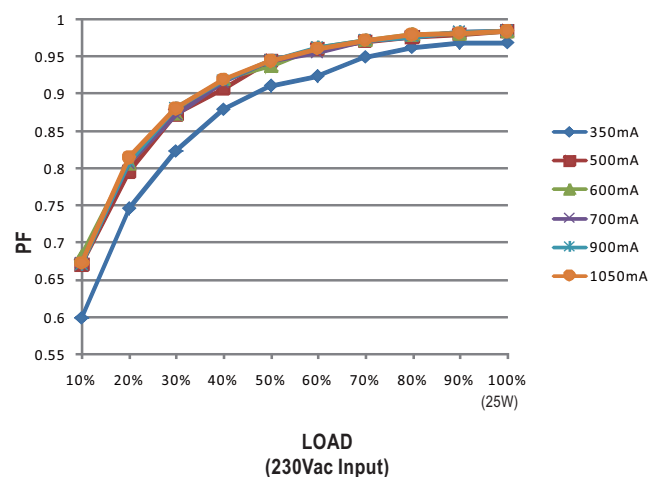
TOTAL HARMONIC DISTORTION (THD)

※ Tcase at 75°C



POWER FACTOR (PF) CHARACTERISTIC

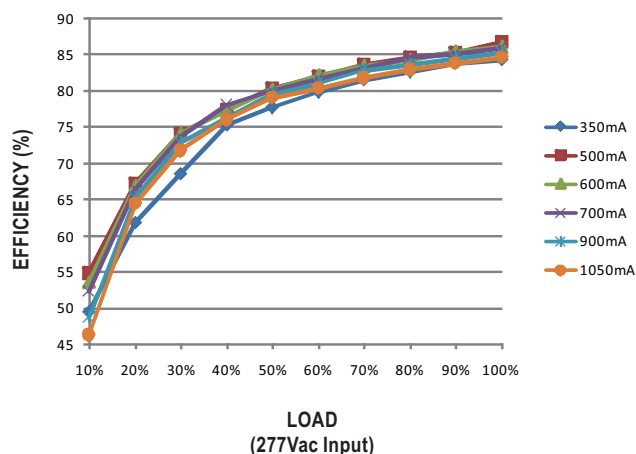
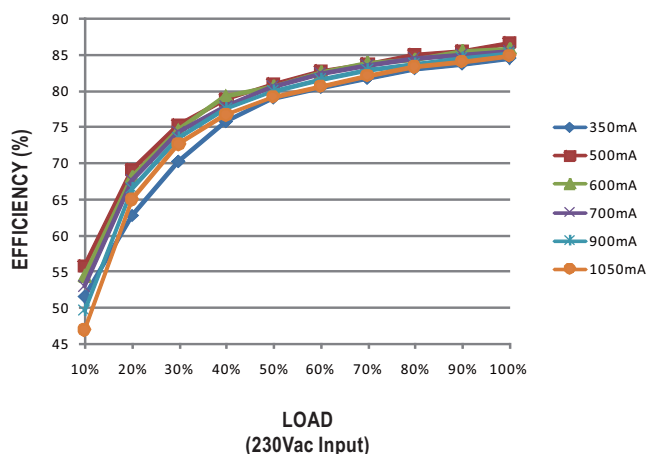
※ Tcase at 75°C



EFFICIENCY vs LOAD

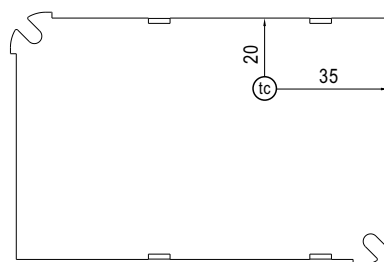
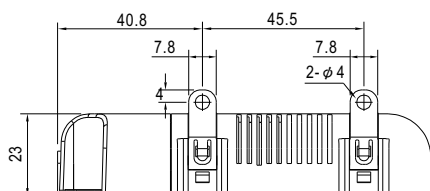
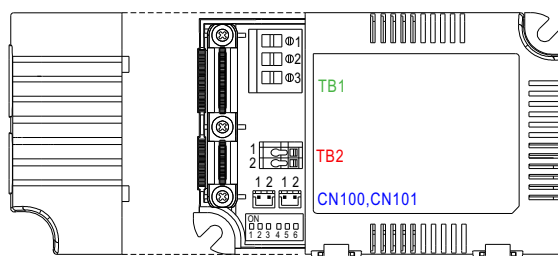
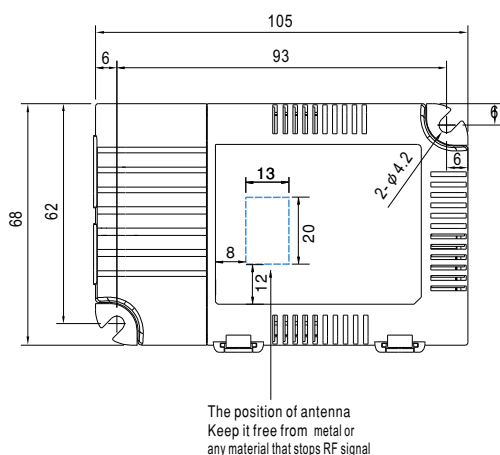
LCM-25BLE series possess superior working efficiency that up to 86% can be reached in field applications.

※ Tcase at 75°C



MECHANICAL SPECIFICATION

Case No.LCM-25 Unit:mm



Bottom View

• (tc) : Max. Case Temperature

※ Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	AC/L
2	AC/N
3	PUSH

※ 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	+		

Note:Please use wires with a cross section of $0.5\sim 2.5\text{mm}^2$ (14~20AWG) for TB1 and wires with a cross section of $0.5\sim 1.5\text{mm}^2$ (16~20AWG) for TB2.
Please use wires with a cross section of $0.126\sim 0.205\text{mm}^2$ (24~26AWG) for CN100/CN101

INSTALLATION MANUAL

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