



### ■ 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

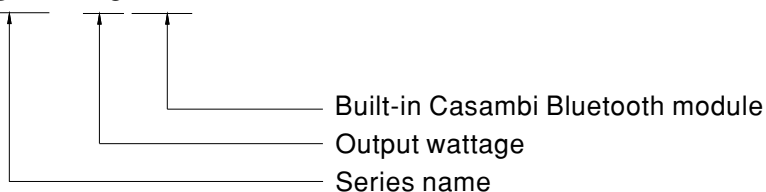
- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting

### ■ 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**



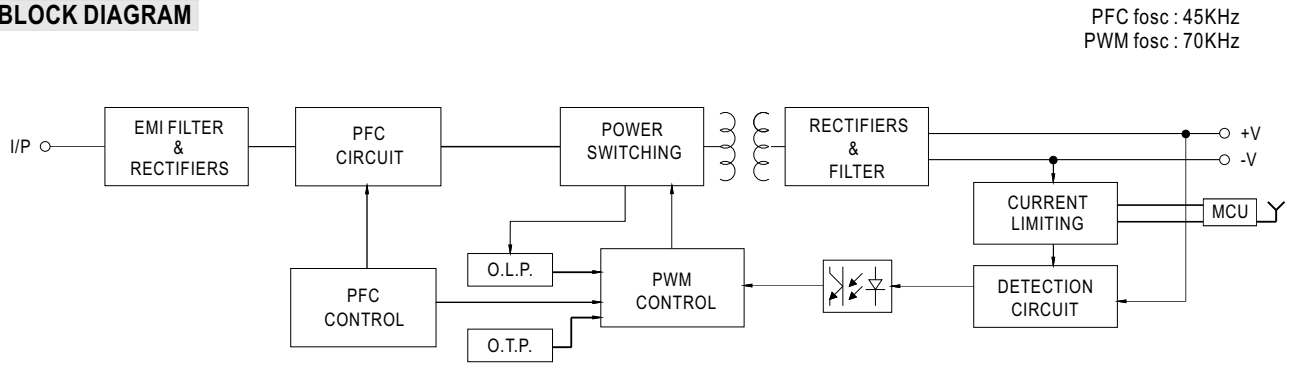
Type	Function	Note
BLE	Casambi Bluetooth control protocol	By request



**SPECIFICATION**

<b>MODEL</b>		<b>LCM-25BLE</b>					
<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> Note.3	500ms / 230VAC					
<b>INPUT</b>	<b>VOLTAGE RANGE</b> Note.2	180 ~ 277VAC 254 ~ 392VDC (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> Note.4	86%					
	<b>AC CURRENT (Typ.)</b>	0.17A/230VAC 0.15A/277VAC					
	<b>INRUSH CURRENT (Typ.)</b>	COLD START 20A(twidth=260µs measured at 50% Ipeak) 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> Note.8	<0.6W						
<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>WIRELESS PROTOCOL</b>	Casambi Bluetooth low energy 2.4GHz protocol					
	<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>	Tcase=-30 ~ +85°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)					
	<b>MAX. CASE TEMP.</b>	Tcase=+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>	EN61347-1, EN61347-2-13, EN62384 independent approved					
	<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3.75KVAC					
	<b>ISOLATION RESISTANCE</b>	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH					
	<b>EMC EMISSION</b> Note.6	Compliance to EN55015, EN61000-3-2 Class C(@load ≥ 50%) ; EN61000-3-3					
	<b>EMC IMMUNITY</b>	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level(surge immunity Line-Line 2KV)					
<b>OTHERS</b>	<b>MTBF</b>	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.</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>The standby power consumption does not need to meet ErP due to the integrated wireless transmitter which is working all the time.</li> </ol>						

**■ BLOCK DIAGRAM**



**■ DIP SWITCH TABLE**

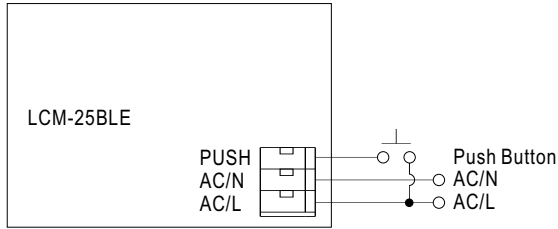
• LCM-25BLE is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.

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

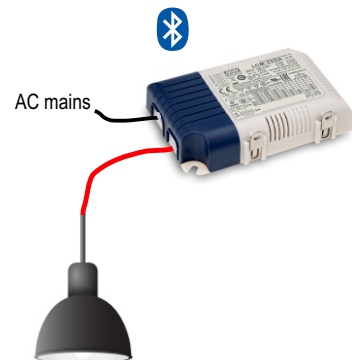
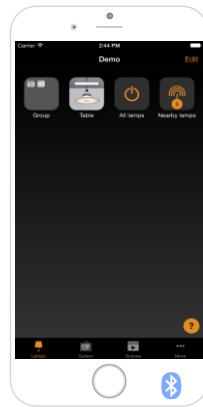
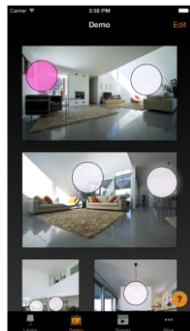


### ※Freely assignable (push) input

- 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.

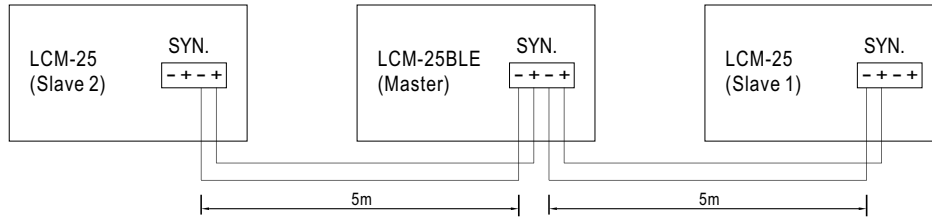
In case the units is cooled down, it can be manually turn ON and back to normal operation again.

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.

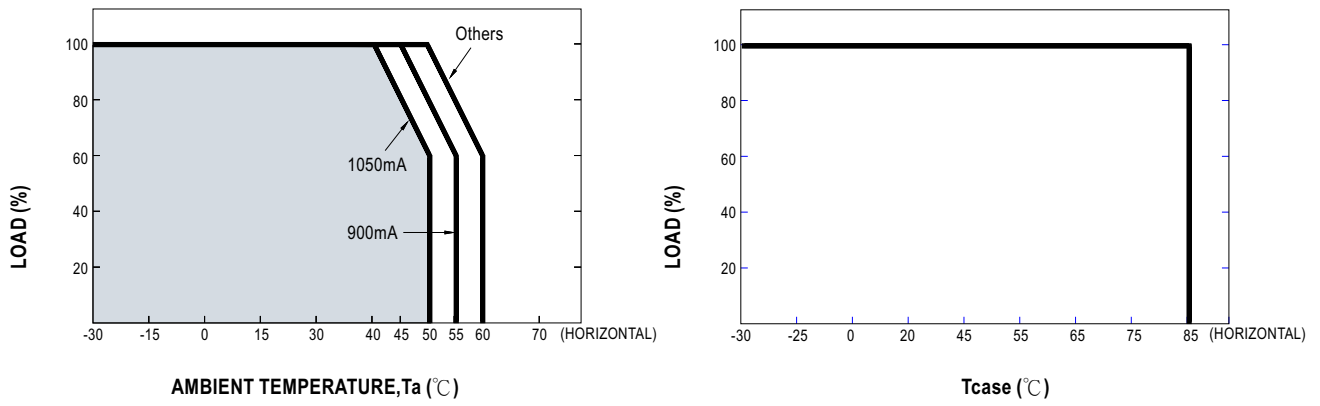
## ■ SYNCHRONIZATION OPERATION

- 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 (0.2~0.3mm<sup>2</sup>)

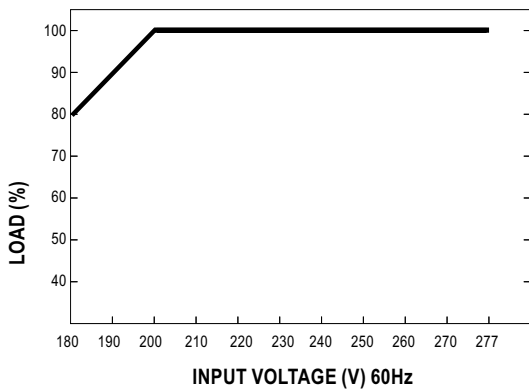


- NOTE : 1. Please make sure all units are set to 100% dimming setting (factory default) before synchronizing.  
 2. Min. Dimming operating range depends on dimmer setting.

### ■ OUTPUT LOAD vs TEMPERATURE



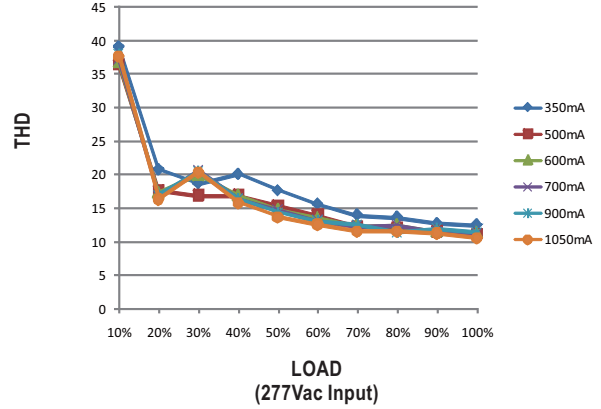
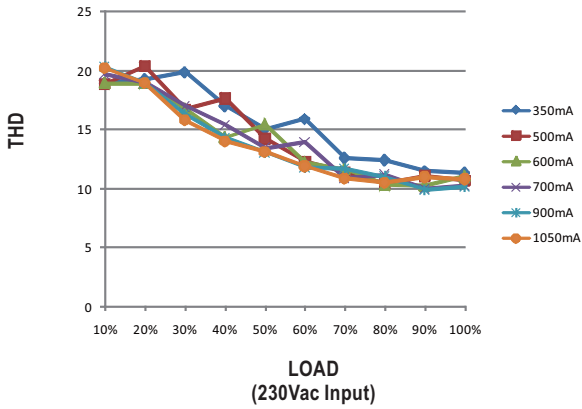
### ■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

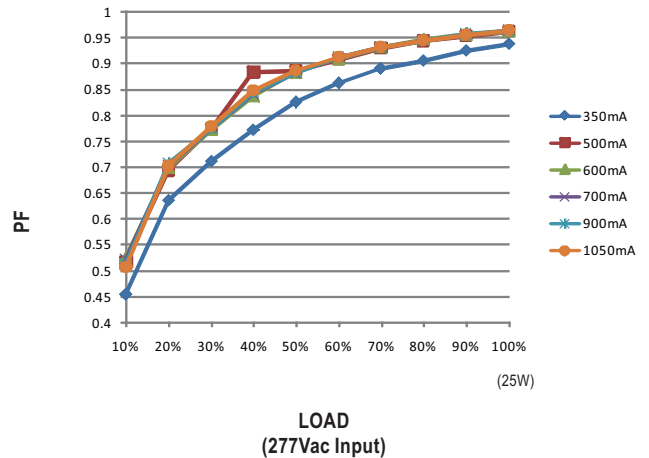
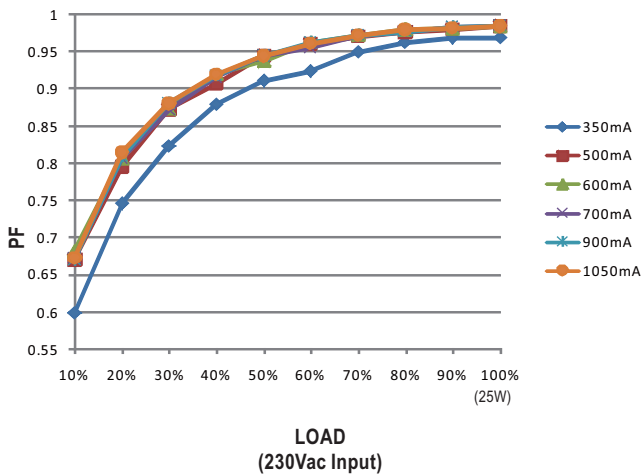
### TOTAL HARMONIC DISTORTION (THD)

※ Tcase at 75°C



### POWER FACTOR (PF) CHARACTERISTIC

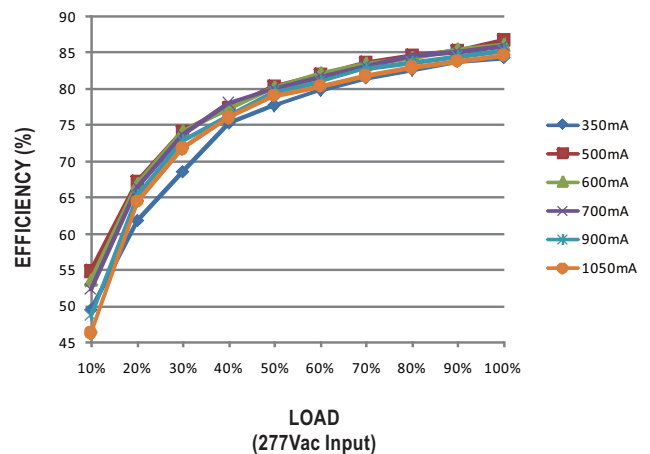
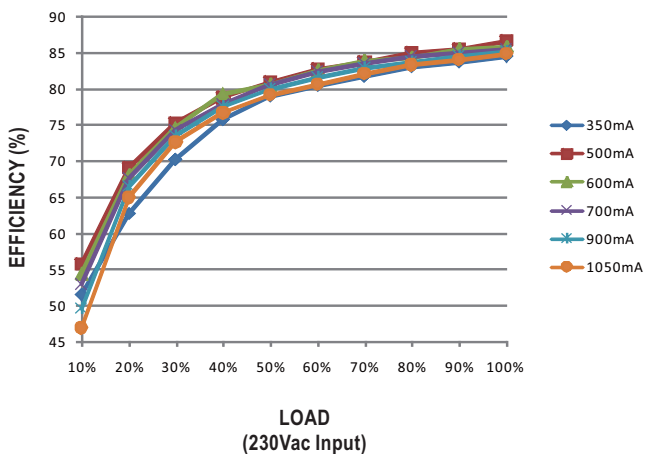
※ Tcase at 75°C



### EFFICIENCY vs LOAD

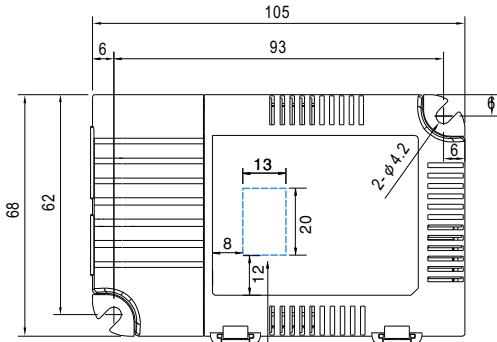
LCM-25BLE series possess superior working efficiency that up to 86% can be reached in field applications.

※ Tcase at 75°C

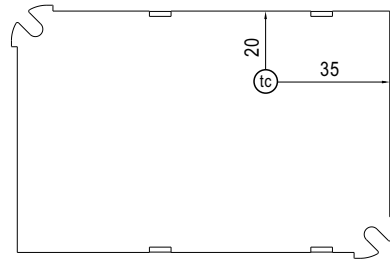
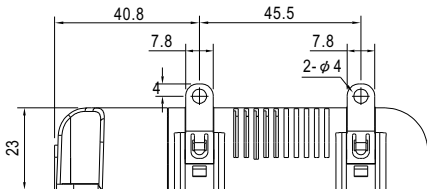
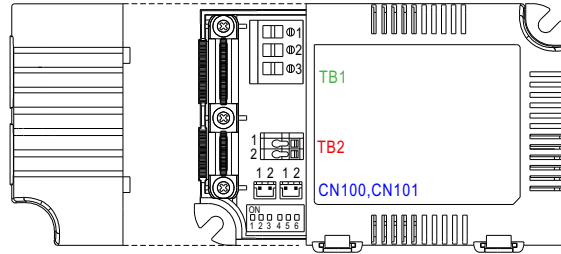


Case No.LCM-25 Unit:mm

## MECHANICAL SPECIFICATION



The position of antenna  
Keep it free from metal or  
any material that stops RF signal



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 0.5~2.5mm<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>