

# DALI Dimming LED Driver

EUM-12D



## Features



- Dimmable constant current driver
- Flicker-free
- DALI-2 certified (incl. Parts 251,252,253)
- Configurable constant current output via dip-switch
- Switch-Dim function
- Dimming range 0.1...100%
- Push wire connections
- Protections: opencircuit, shortcircuit, overload, overtemperature
- DC input compatible (176-250VDC)
- SELV equivalent
- Suitable for protection class II luminaires
- Protection class II



## Selection Guide

Model No.	Nominal Voltage (V)	Nominal Current (A)	Power Factor (λ)	THD Full load (%)	Max. Output (W)	Output Current (mA)	Output Voltage (V)	No Load Voltage (V)	Efficiency Full Load (%)
EUM-12D	220-240	0.08	0.95	15	6.3	150	2-42	54	80
					8.4	200	2-42	54	82
					10.5	250	2-42	54	82
					12	300	2-40	54	83
					11.9	350	2-34	54	82
					12	500	2-24	54	81
					12	600	2-20	54	81
					11.9	700	2-17	54	80

## Input Parameters

Parameter	Condition	Min.	Typ.	Max.																				
Input Voltage Range	AC Input	198VAC	--	264VAC																				
	DC Input	176VDC	--	250VDC																				
Rated Input Frequency	AC Input	--	50/60Hz	--																				
No-load Power Consumption		--	--	N/A																				
Standby Power Consumption		--	--	0.5W																				
Inrush Current	Cold Start@230V	10A/100us																						
Max.units Per Circuit Breaker	<table border="1"> <thead> <tr> <th>Circuit Breaker</th> <th colspan="4">Circuit Breaker Current</th> </tr> <tr> <th>Typ.</th> <th>10A</th> <th>13A</th> <th>16A</th> <th>20A</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>70</td> <td>91</td> <td>112</td> <td>140</td> </tr> <tr> <td>C</td> <td>125</td> <td>162</td> <td>200</td> <td>250</td> </tr> </tbody> </table>				Circuit Breaker	Circuit Breaker Current				Typ.	10A	13A	16A	20A	B	70	91	112	140	C	125	162	200	250
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## Output Parameters

Parameter	Condition	Min.	Typ.	Max.
Output Accuracy	Full Load@230V	--	±5%	±10%
Ripple & Noise	Low Frequency < 120Hz, Full Load@230VAC	--	--	20%
Pst LM		--	--	1
SVM		--	--	0.4
Galvanic Isolation	SELV			
Short-Circuit Protection (SCP)	Re-power on to Recover If Fault Is Removed			
Over-Voltage Protection (OVP)	Re-power on to Recover If Fault Is Removed			
Over-Current Protection (OCP)	N/A			

## General Parameters

Parameter	Condition	Value
Ambient Temperature Range $t_a$		-20...+45°C
Maximum Case Temperature $t_c$	Measured on $t_c$ point indicated of the product label	90°C
Max.Case Temp.In Fault Condition		110°C
Storage Temperature Range		-20...+70°C
Relative Humidity	Non Condensing	5...85%
Withstand Voltage	I/P-O/P	3.75kVAC, I leakage < 5mA, 60s
Surge Transient Protection	L-N, L/N-PE	1 2kV
Environmental Rating		Indoor
IP Rating		IP20
Mains Switching Cycles		> 100,000
Expected Lifetime	$t_{cmax}=90^{\circ}C$ , 0.2%/1000h failure rate	50,000h

## Dimming Parameters

Dimmable	Yes
Dimming control	DALI-2/Switch-Dim
Dimming range	0.1-100%
Dimming method	PWM+Amplitude
PWM frequency	20kHz

## Physical Parameters

Housing Material	PC
Type of connection	Push terminal
Dimensions (LxWxH)	127x30x20mm
Mounting hole spacing	111.3mm
Weight	60±5g

# DALI Dimming LED Driver

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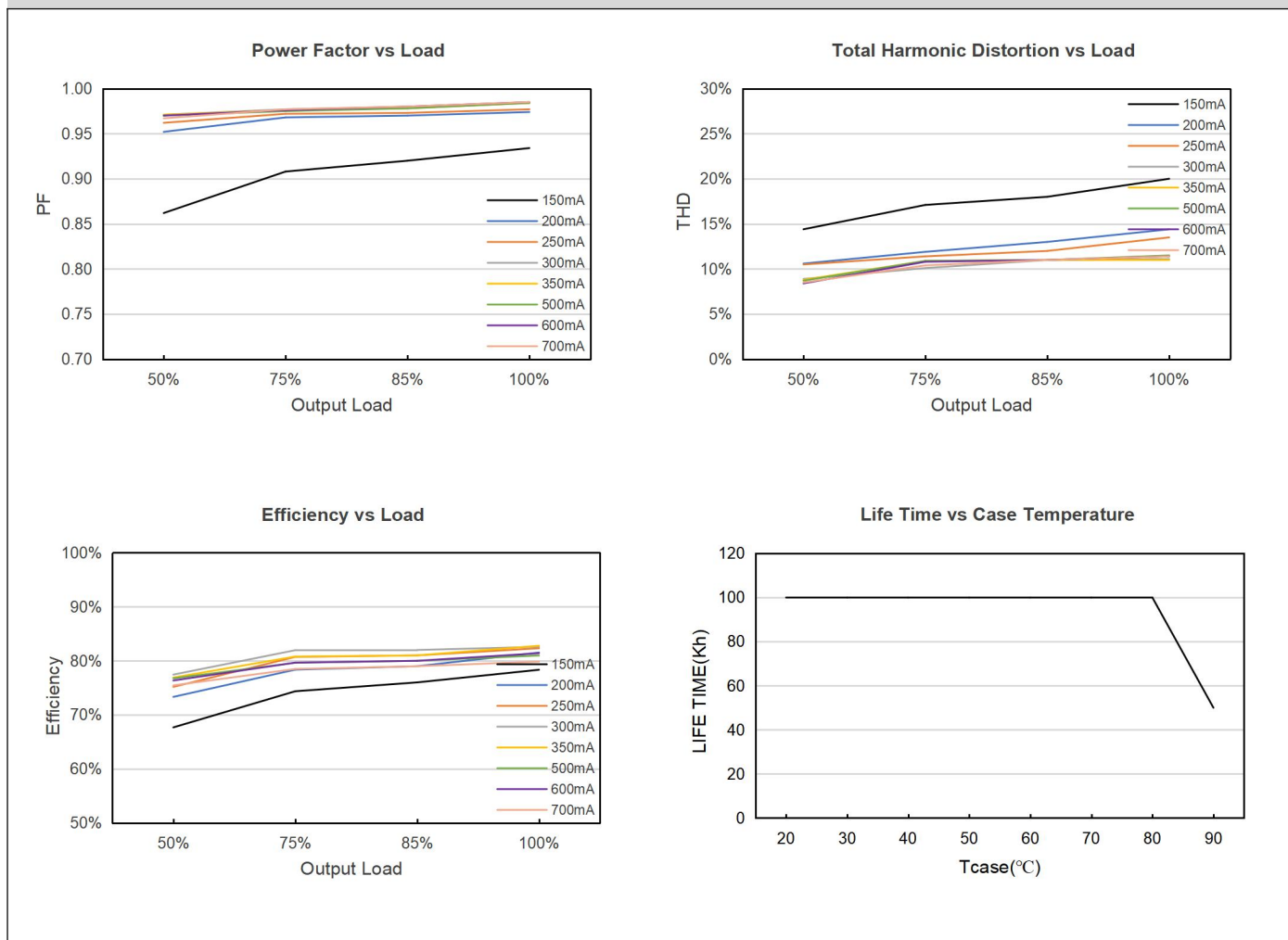


## Standards

Safety Standards	EN 61347-1, EN 61347-2-13
EMC Standards	EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547
DALI Standards	EN 62386-101, EN 62386-102, EN 62386-207, EN 62386-251, EN 62386-252, EN 62386-253

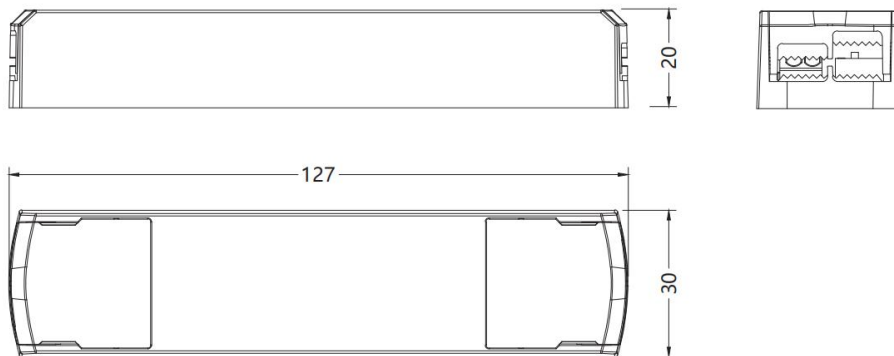
\*ALL parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.

## Product Characteristic Curve

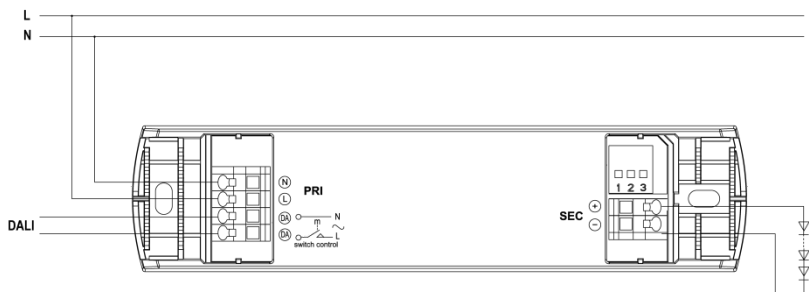


### Appearance of Size

Dimension Drawing(mm)



Wiring Diagram (DALI Connection)



**PRI**

Cable cross-section: 0.75-1.5mm<sup>2</sup>

Stripping: 8mm

**DALI**

Cable cross-section: 0.75-1.5mm<sup>2</sup>

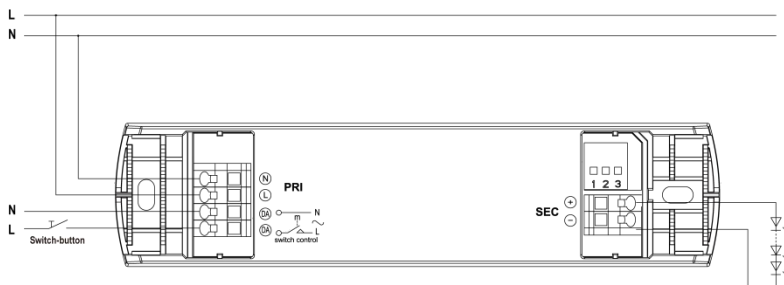
Stripping: 8mm

**SEC**

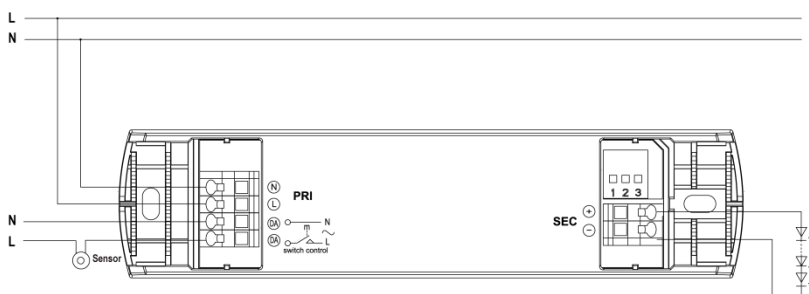
Cable cross-section: 0.5-1.5mm<sup>2</sup>

Stripping: 8mm

Wiring Diagram (Switch-DIM)



Wiring Diagram (Corridor Function)



Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs.

## Functions

### DALI

In this operating mode the light level of the device is controlled via its DALI address.

### Switch-DIM

Alternatively the device can be controlled using switch-inputs for mains voltage, the dim level is saved at power-down and restored at power-up.

-Short press(<1S): switches LED driver ON and OFF

-Long press: LED modules are dimmed. After repush the LED modules are dimmed in the opposite direction.

### Synchronization

In installations with LED drivers with different dimming levels or opposite dimming directions, all LED drivers can be synchronized to 50% dimming level by a 15S push, switch off the light by short press one time, then long press. Up to 25 LED drivers can be controlled via direct switch-button use. The number of switch-button is limited by the sum of the overall cable length between switch(es) and the connected LED drivers, which may not exceed 20m.

### Corridor Function

#### Activating the Corridor Function

-By supply voltage: Activate the Corridor Function by permanently applying the supply voltage (220-240V, 50/60Hz) to the DALI input of the driver for at least 5 minutes, the light up 100%(under the default setting).

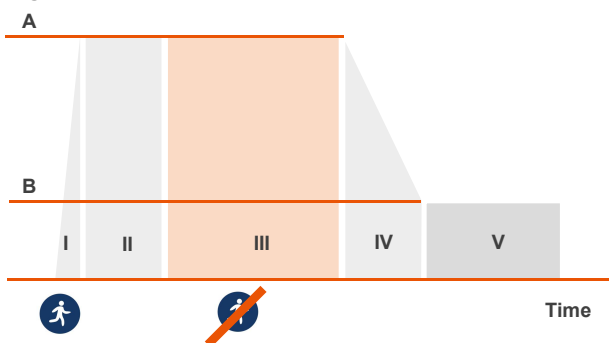
-By sensor: Activate the Corridor Function by keeping the movement in the effective sensing area for at least 5 minutes, the light up 100%(under the default setting).

#### Changing from the Corridor Function to the Switch-DIM function

-By briefly pressing a push-button 5 times (at the DALI input, 220-240V, 50/Hz) within 3 seconds.

#### Corridor Function Phasing

Light value



#### Factory-set parameters:

A: Presence value=100%

B: Absence value=10%

I: Fade-in time=1s

II: By sensor setting

III: Run-on time=2min

IV: Fade time=30s

V: Unlimited

### Notice

The compatibility with other devices must be tested in advance to the installation.

DALI application and switch-control application can not apply to the system at the same time.