Smart LED Driver

Design and Quality EASEIC of USA

LNA154 BC

Smart E-Dim 0/1-10V DRIVER

SPEC SHEET

54W 12-42V 1050-1750mA 0/1-10V Dim
LNA154 BC
682154

SELV RoHS

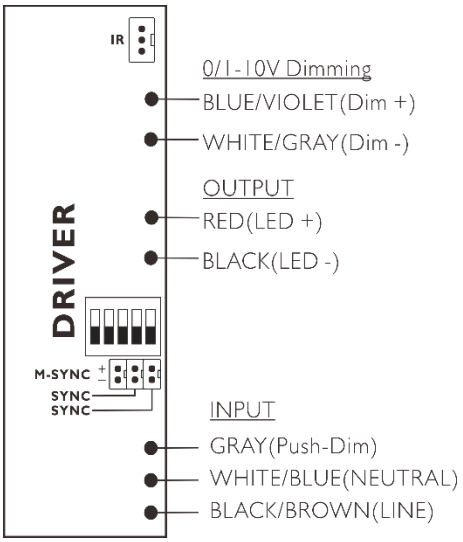
Features

- Multilevel current output, Constant current output 1050-1750mA
- Multi-power driver supplied with dip-switch for the selection of the output current
- Built-in infrared remote control dimming control.
- Built-in 3 in 1 dimming function(0/1-10V,PWM or Resistance)
- Dimming range from 0 -100%.
- SYNC Dim, On/off Dim and PUSH-Dim, dimming and switching via push-button with memory function.
- Universal AC input (90~265Vac)
- Designed for LED lighting applications
- UL Class 2 output, Class 2 protection against electric shock for direct or indirect contact
- Supplied with terminal cover and cable retainer.
- Can be switched on and off on secondary circuit for power LED.
- Protections: Short circuit , Over voltage, Over Current
- 5 year warranty

Benefits

- Enables design of low profile and compact fixtures
- Helps to maximize energy savings and allows application specific light levels
- Supports majority of available dimming solutions

Wire Diagram



Note:

Install in accordance with National and Local Electrical Codes.

Use 16-24 AWG solid copper wire rated >=300V/85°C.

Strip wire 3/8".

Please pay special attention to wiring installation guidelines, Wrong wiring will cause damage to the LED driver.

Before connection the power, make sure you have access to the LED load.

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Electrical Specifications

Ordering Information			
Type	LNA154 BC		
Order Code	682154		
Full product name	Smart 54W 12-42V 1050-1750mA 0/1-10V Dim		
Input Information			
Line Voltage	100-240Vac_rms		
Line Current	0.65A@100VAC	0.54A@120VAC	0.29A@230VAC
Line Frequency	50/60Hz		
Min, Mains Voltage operational	90[min]		
Max, Mains Voltage operational	265[max]		
THD(total)	<20%		
Power Factor(PF)	>0.95		
Input Power (Max.)	64.6W		
Efficiency @Max Load and 70℃ case	87%@100VAC	87%@120VAC	88%@230VAC
Inrush Current(Typ.)	Cold Start 70A(twidth=270us measured at 50% Ipeak) at 230VAC		
Leakage Current(Typ.)	<0.75mA/230VAC		
Output Information			
Output Power	12-54W(See Output current settings table)		
Output voltage	12V to 42V		
Output Constant Current	1050-1750mA ±5%(See Output current settings table)		
Maximum open circuit voltage	<60V		
Output Current Ripple (ripple=peak to peak)	2% of nominal output voltage (whichever is greater), measured at 20Mhz bandwidth with 0.1uf ceramic capacitor in parallel with 10uf electrolytic capacitor connected at the end of the output connector.		
Protections	Over Current, Over Voltage, Short Circuit and Open Circuit Protection for LED+ and LED-		
Ambient Temp Range	-20℃ to +50℃, 20-95% RH non-condensing		
Max Case Temperature(Tc)	75℃ for Life & 85℃ for UL Safety		
Dimming Features			
Dimming Interface	0/1-10V, Push-Dim, On/off Dim, 10K PWM, Resistance, IR, SYNC		
0/1-10V Dimming Specifications	Sink Current <0.5mA		
Dimming range	0-100%		
Environment & Approbation			
Environmental Protection Rating	UL damp and dry		
Agency Approbations	UL8750,UL1310, CSA-C22.2 No.250.0-08,ENEC EN61347-1,EN61347-2-13 independent, EN62384,TUV EN60950-1		
Electromagnetic Compliance	FCC Title 47 Part 15 Class A Compliance to EN55015,EN61000-3-2 Class C(@100% Load);en6100-3-3 Compliance to EN61000-4-2,3,4,5,6,8,11;EN61547,EN55024, light industry level(surge 2KV), criteria A		
Audible noise	<24dB Class A		
Other information			
Dimension	118x67x30mm (LxWxH)		
Packing	0.17Kg(0.37lbs); 30Pcs/5.1kg(11.2Lbs)		

All the specifications are typical and at 25 ℃ Tcase unless specified otherwise

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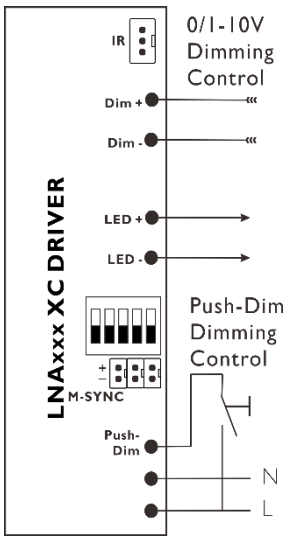
Output Current Settings

LNA154 BC, Constant Current output 1050-1750mA.
Multi-power driver supplied with dip-switch for the selection of the output current.
Factory default setting is 1050mA.

LNA154 BC		DIP-Switch Settings				
Pout Max.	Vout DC	Iout DC	1	2	3	4
44W	12-42V	1050mA	--	--	--	--
51W	12-42V	1200mA	ON	--	--	--
54W	12-42V	1300mA	--	ON	--	--
54W	12-39V	1400mA	--	--	ON	--
54W	12-35V	1550mA	--	--	--	ON
54W	12-34V	1600mA	--	ON	ON	--
54W	12-31V	1750mA	--	ON	--	ON
Constant Voltage						
15W	12V(Cost.)	0-1250mA	ON	ON	--	--
30W	24V(Cost.)	0-1250mA	ON	ON	--	ON
40W	36V(Cost.)	0-1100mA	ON	ON	ON	--

Dimming Control Wiring Diagrams

➢ Push-dim 0-100% dimming control



By pressing the push button for less than one second the LEDs turn on or off.
By pressing the push button for more than one second the light intensity of the LEDs is dimmed according to the following modalities:

- ✧ If the light intensity is not at maximum, by pressing the key there will be an increase of this to maximum or to the corresponding level at the moment the key is released;
- ✧ A further pressure on the key inverts the dimming direction to the minimum value or to the corresponding level at the moment the key is released;
- ✧ If light intensity is at maximum by pressing the key there will be a decrease to the minimum value or to the corresponding level at the moment the key is released.

Total length of PUSH cables <20m. Factory dimming setting at 100%.

Note: Only use self-reset push button without indicator light.
Risk of short circuit. The self-reset button can only be linked between the Push-dim and the L(AC).
Do Not connect the self-reset button to the N(AC)

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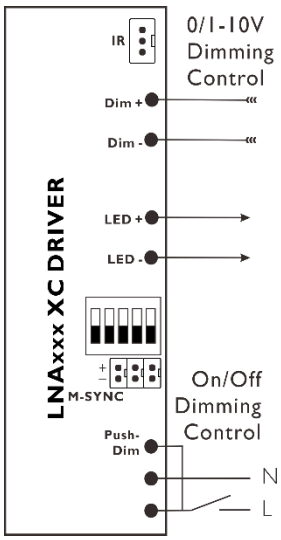
➢ On/Off sectional dimming control



By pressing the push button for less than one second the LEDs turn on or off. By pressing the push button for more than one second the light intensity of the LEDs is dimmed according to the following modalities:

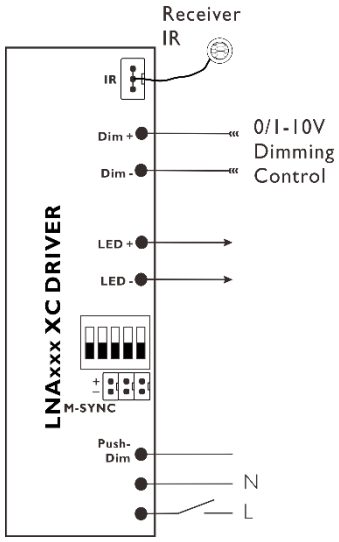
- ✧ If the light intensity is not at maximum, by pressing the key there will be an increase of this to maximum or to the corresponding level at the moment the key is released;
- ✧ A further pressure on the key inverts the dimming direction to the minimum value or to the corresponding level at the moment the key is released;
- ✧ If light intensity is at maximum by pressing the key there will be a decrease to the minimum value or to the corresponding level at the moment the key is released.

Total length of PUSH cables <20m. Factory dimming setting at 100%.

Note: Only use self-reset push button without indicator light. Risk of short circuit. The self-reset button can only be linked between the Push-dim and the L(AC).

Do Not connect the self-reset button to the N(AC)

➢ IR 0-100% scenes dimming control



LNA series drive with an external infrared receiver, 6 scenes can be easily set up and call a quick scene, but also to be completed by 0-100% stepless infrared wireless dimming control.

Remote Accessories

Name	Model	Article number
Remote Control	DLR613S	530613
Receiver	IR01	530614

Remote Control
DLR613S

Receiver
IR01

➢ Synchronization dimming control

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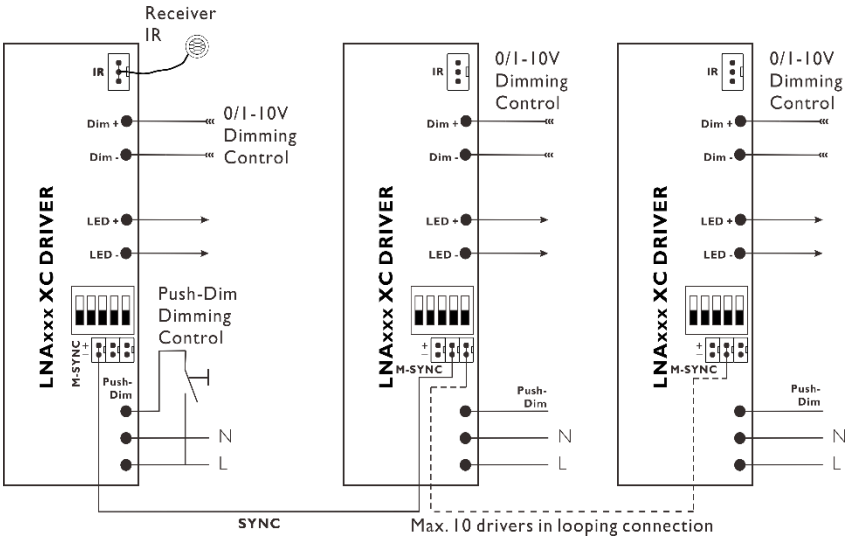
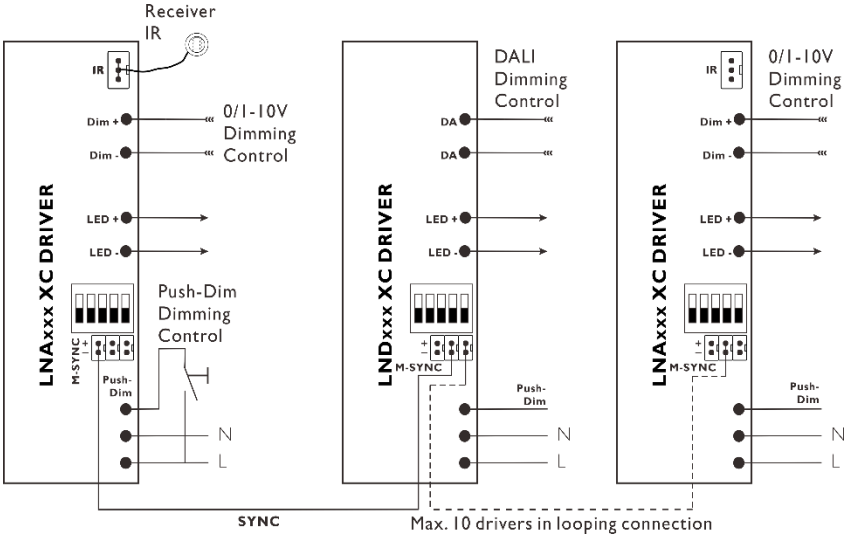
W1:



W2:



The lights driver by LNX units(slaves) can be dimmed synchronously through a LNX unit(master) directly controlled via IR remote control, 0/1-10V,10V PWM, DALI, Push-dim, On/Off sectional dimming control function.

Wiring diagram as shown on the right. note the following:

- ✧ According SYNC instructions on wiring housing wiring distinguish SYNC + and -;
- ✧ Max. number of the LNX units,10(1 master + 9 Slaves);
- ✧ Max. cable length between each units,20m(based on a cable with cross-section of 0.15mm2 - 0.3mm2);
- ✧ Don not connect dimming circuit to slaves.
- ✧ Please make sure all units are set to 100% dimming setting (factory default) before synchronizing.

➢ 0/1-10V interface dimming control

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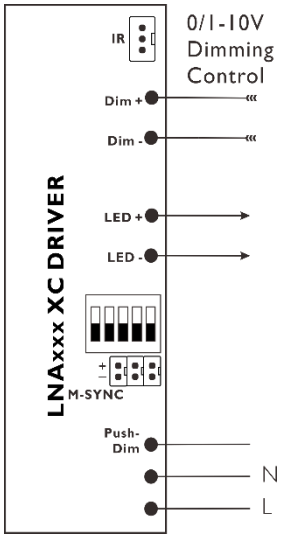

DC 0/1-10V interface dimming function, output constant current level can be adjusted through output terminal by DC 0/1-10V or 10V PWM signal between dimming control interface + and -.

✧ 0/1-10V dimming function for output current adjustment (Typical)

Dim-control Value	0V	1V	2V	3V	4V	5V
Output Current	0%	10%	20%	30%	40%	50%
Dim-control Value	6V	7V	8V	9V	10V	Open
Output Current	60%	70%	80%	90%	100%	100%

✧ Each 0 / 1-10V LED dimming drivers will consume 0.5mA control terminal of the current.

✧ 10V PWM signal for output current adjustment (Typical):
Frequency range :1KHz - 3KHz

Duty Value	0%	10%	20%	30%	40%	50%
Output Current	0%	10%	20%	30%	40%	50%
Duty Value	60%	70%	80%	90%	100%	100%
Output Current	60%	70%	80%	90%	100%	100%

0/1-10V Interface Lighting Controller


EID110EA


DRF02E


DRF01E


DRFK1


DALI RGBW


DRF CCTE


DBC410A


DRF02U


DRF CCTU

More 0/1-10V Lighting control modules and details , please browse www.easeic.com

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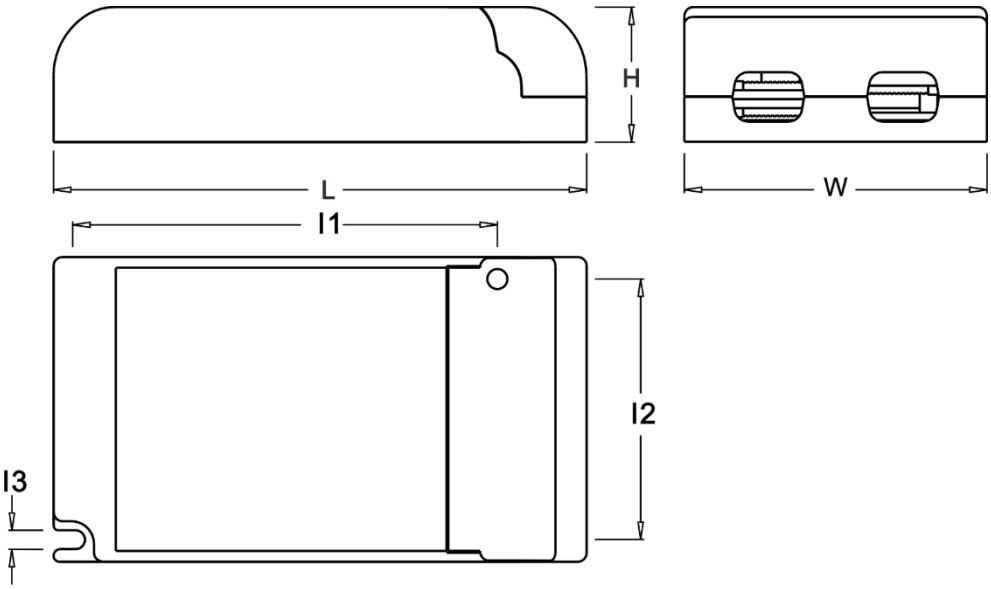
Mechanical Specifications

Mechanical Drawing:



Dimensions

	In.	mm
Case Length(L)	4.6	118
Case Width(W)	2.6	67
Case Height(H)	1.2	30
Mounting Holes(I1)	3.7	94
Mounting Holes(I2)	2.3	58
Mounting Holes(I3)	0.19	4.8
Overall Length	4.6	118

Suggested max. number of the LNX units that can be connected to a MCB@230VAC

MCB	B10	B16	C10	C16
LNA154 BC	9	15	16	26

Note: These calculated values are based on MCB S201 series manufactured by ABB

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