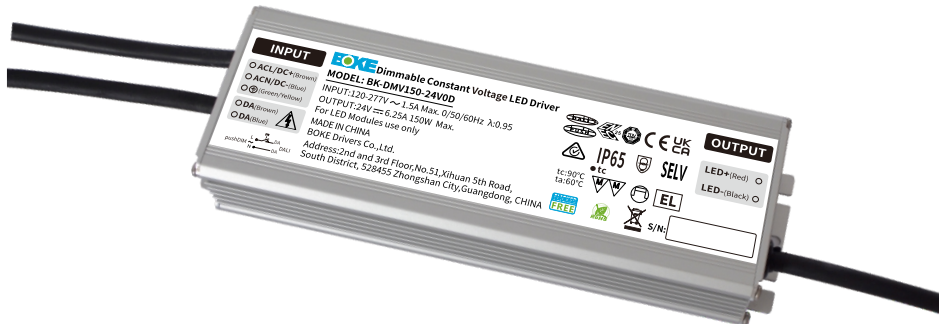


Constant voltage linear dimmable driver DMV Series suffix D(DALI-2+pushDIM)



Features

- Support DALI-2+pushDIM dimming mode
- High PF, high efficiency, low THD
- Dimming range 1%~100%, output current accuracy 3%
- Soft dimming and flicker-free at any brightness, meets the new requirements of ErP certification
- Using HPC patented technology, at any dimming level, the brightness of the lights is the same
- Suitable for working at -20-60°C
- Aluminum metal housing design
- Power input on stand-by < 0.5 W, compatible with ERP.
- IP67 design for indoor or outdoor installation.
- Compliance with CE, ENEC, UKCA, RCM, DALI-2, CCC, EL certifications.
- Nominal life-time up to 100,000 h
- 5-year guarantee

Interfaces

- DALI-2(DALI-2 DT6)
- PUSH(pushDIM)

Functions

- Support central emergency application (dimming normal in DC input)
- Support self-contained emergency application
- Protective features (short-circuit, overload protection)

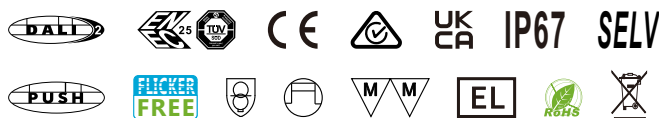
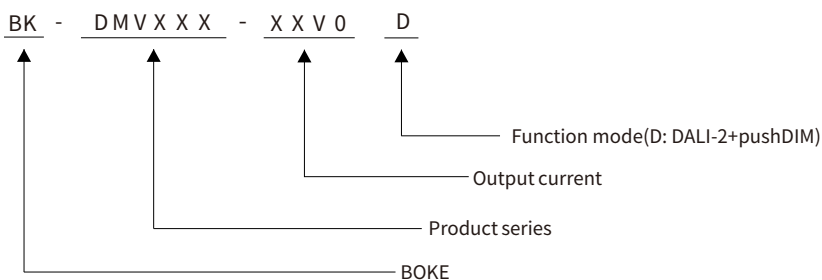
Suitable for lights

- Suitable for lights with outdoor or humid environment, such as street lamps, projection lamps, industrial and mining lamps, floodlights, courtyard lamps, etc

Typical applications

- LED outdoor lighting
- LED Industrial lighting
- LED rail-transit lighting
- LED Subway station lighting

Model coding rules of DMV series



Technical data

Product model	BK-DMV150-24V0D	BK-DMV150-48V0D	
Output parameters			
Regulation method	Constant voltage	Constant voltage	
Rated output current range	6.25A	3.12A	
Rated output voltage range	24VDC	48VDC	
Rated output power	150W Max	150W Max	
Output current adjustment	Fixed output	Fixed output	
Output current ripple LF	±2%	±2%	
Voltage accuracy	±3%	±3%	
Linear regulation	±3%	±3%	
Load regulation	±5%	±5%	
Flicker-free(typical)	Pst LM=0.004, SVM=0.008,(The above parameters are obtained by testing with constant voltage light strip)		
Input parameters			
Rated input voltage range	120-277VAC 170-390VDC		
Input voltage range	108-305VAC 150-430VDC		
Input votage shock	<380 V AC		
Input current	<1.5A (AC 120V),0.85A(AC 230V)		
Input frequency	0/50/60Hz		
Input PF/Input DF	PF: 0.99,DF: 0.99,see the electrical values below for details		
Input THD	3% ,see the electrical values below for details		
Efficiency(Max)	93% ,see the electrical values below for details		
In-rush current	47A peak ,590us duration(50 % Ipeak), see the description below for details		
Start/Switchover/Turn off	<0.7s(AC start),<0.7s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)		
Switching cycles	> 50,000 switching cycles		
Power consumption	Full load(Pin):161.3W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A		
Safety			
Withstand voltage	I/P-O/P:3000VAC,I/P-FG:1500VAC,O/P-FG:500VAC ,I/P-DALI: 1500V AC ,O/P-DALI: 1500V AC.		
Mains surge capability	L-N:4KV,L-FG/N-FG:6KV(Performance criterion:A)		
Leakage current	0.4mA (230V AC & Full load)		
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH		
Control interface			
DALI dimming port	Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA		
pushDIM dimming port	Voltage range: AC180-264V 50/60Hz		
1-10V 3in1 dimming port	N/A		
Auxiliary power supply	N/A		
Dimming range	1%-100%		
Dimming drive mode	AM(amplitude modulation)		
Emergency support			
Central emergency system	Supported(dimming normal in DC input)		
Self-contained emergency	Supported		
Environment & Life time			
Operating temperature	Ta=-20-60°C		
Case temperature	Tc=90°C		
Operating humidity	5-85% RH, not condensed		
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed		
IP grade	IP67		
MTBF	500,000H,MIL-HDBK-217F(25°C)		
Life-time	Nominal life-time up to 100,000 h, see the description below for details		
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes		
Acoustic Noise	<25dB(30cm, Normal operation)		
Environmental protection	RoHS		
Certifications and standards			
Certification	CE,ENEC,UKCA,RCM,DALI-2,CCC,EL		
Safety	EN61347-1, EN61347-2-13, EN62384		
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547		
DALI-2	IEC 62386-101(DALI-2), IEC 62386-102(DALI-2), IEC 62386-207(DALI-2)		
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172		
RF	N/A		

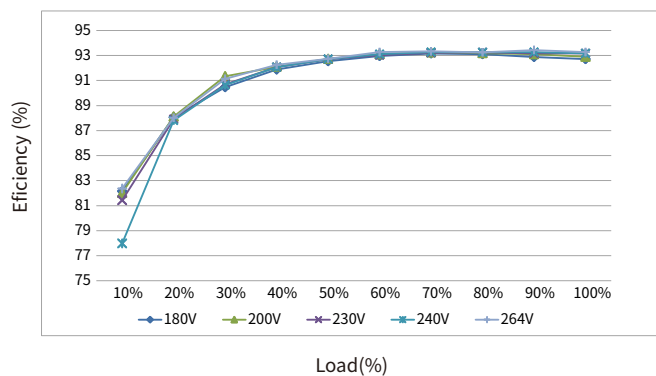
Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.

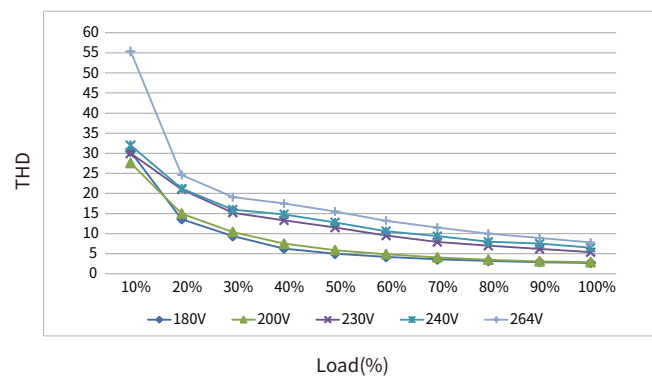
Electrical values

BK-DMV150

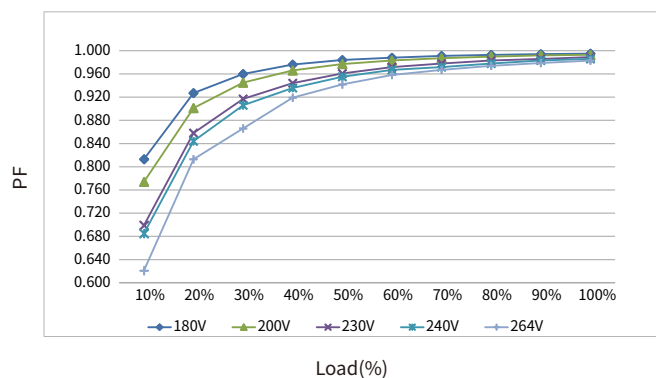
Efficiency vs load



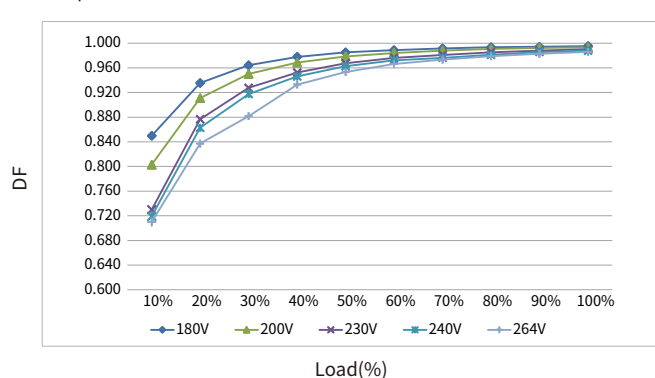
THD vs. Load



Power factor vs. Load

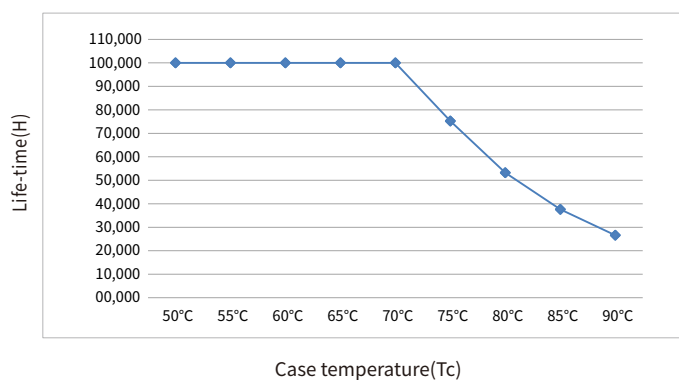


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



- The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

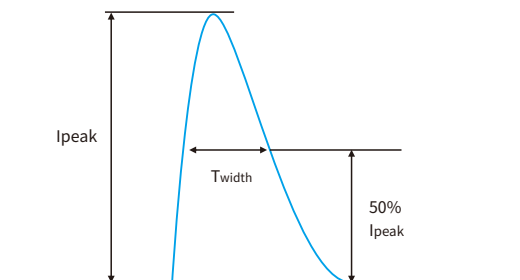
- The relation of t_c to t_a temperature depends also on the luminaire design.

Surge

Model	Ipeak	Twidth	Condition	Relative number of MCB/pcs														
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
BK-DMV150	47A	590us	AC 230V, Full load, Cold start, $T_a \leq 30^\circ\text{C}$, MCB is not installed side by side	2	3	3	4	5	3	4	5	7	8	7	9	11	13	17

Remarks

- The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
- Calculation uses typical values from ABB series S200 as a reference.
- Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.
- If the ambient temperature of the MCB installation exceeds 30°C or multiple MCBs are installed side by side, the number of drives mounted will be reduced and the calculation needs to be recalculated.
- Electrician's usually consider Type B for household lighting and Type C for commercial lighting application.



Functions

Output short-circuit protection

- When the output of the driver is short-circuited, the driver will enter the protection state, disconnect the AC for more than 1 minute, and the output will return to normal.

Output overload protection

- When the load connected to the driver exceeds the rated power, the driver will enter a hiccup state. After reducing the load power, the driver will resume normal output.

Insulation between circuits

Isolation	Input	Output	Case	DALI	PUSH
Input	-	Double	Basic	Basic	-
Output	Double	-	Basic	Basic	Double
Case	Basic	Basic	-	Basic	Basic

Label

BK-DMV150

INPUT

- ACL/DC+ (Brown)
- ACN/DC- (Blue)
- (Green/Yellow)
- DA (Brown)
- DA (Blue)

pushDIM L DA DALI N

BOKE Dimmable Constant Voltage LED Driver
MODEL: BK-DMV150-24V0D
 INPUT: 120-277V ~ 1.5A Max. 0/50/60Hz $\lambda: 0.95$
 OUTPUT: 24V = 6.25A 150W Max.
 For LED Modules use only
 MADE IN CHINA
 BOKE Drivers Co., Ltd.
 Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road,
 South District, 528455 Zhongshan City, Guangdong, CHINA

OUTPUT

- LED+ (Red)
- LED- (Black)

INPUT

- ACL/DC+ (Brown)
- ACN/DC- (Blue)
- (Green/Yellow)
- DA (Brown)
- DA (Blue)

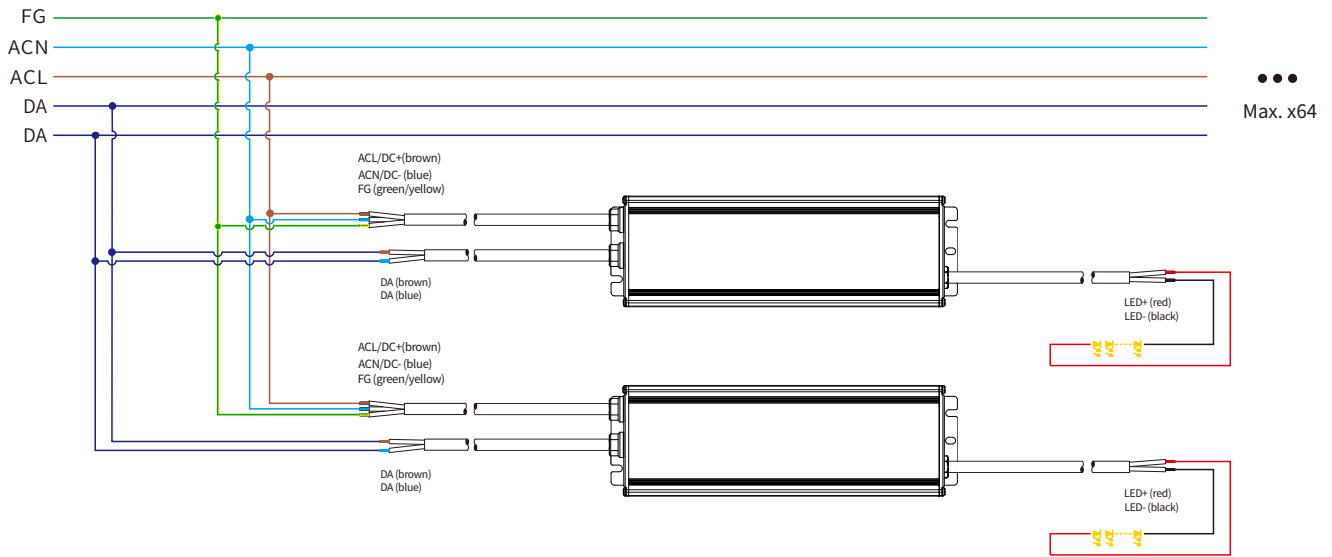
pushDIM L DA DALI N

BOKE Dimmable Constant Voltage LED Driver
MODEL: BK-DMV150-48V0D
 INPUT: 120-277V ~ 1.5A Max. 0/50/60Hz $\lambda: 0.95$
 OUTPUT: 48V = 3.12A 150W Max.
 For LED Modules use only
 MADE IN CHINA
 BOKE Drivers Co., Ltd.
 Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road,
 South District, 528455 Zhongshan City, Guangdong, CHINA

OUTPUT

- LED+ (Red)
- LED- (Black)

DALI dimming application



Switch to the DALI dimming mode

- After installation according to the wiring diagram of DALI dimming application, the driver will automatically switch to the DALI control mode after receiving any DALI command.

Remarks:

- Standard DALI control line voltage range: 9.5V to 22.5V, type 16V.
- The two DALI control lines polarity-reversible.
- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at $2 \times 1.5\text{mm}^2$.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.
- The configuration parameters of the driver can be set through the DALI configuration tool or DALI application controller during installation, such as setting device address, group address, power-on level, bus-failure level, scene level, fade time, dimming curve, etc.

Please refer to the table below

Cable size	Distance
$2 \times 0.50\text{mm}^2$	max.100m
$2 \times 0.75\text{mm}^2$	max.150m
$2 \times 1.00\text{mm}^2$	max.200m
$\geq 2 \times 1.50\text{mm}^2$	max.300m

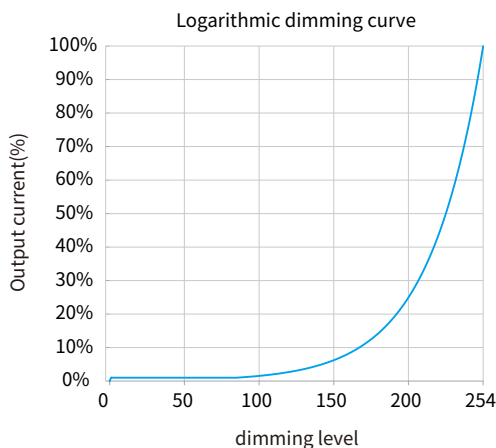
Power-on level :

When the driver is in DALI-2 dimming mode, the factory default level after each power-on is the brightest.

The power-on level can be set through the DALI configuration tool or DALI application controller during installation, and can be set to memory or fixed any brightness (such as off, darkest, 50%, etc.).

Note: The recommended setting for the default factory power-on level of the DALI-2 driver is the brightest in the DALI-2 standard.

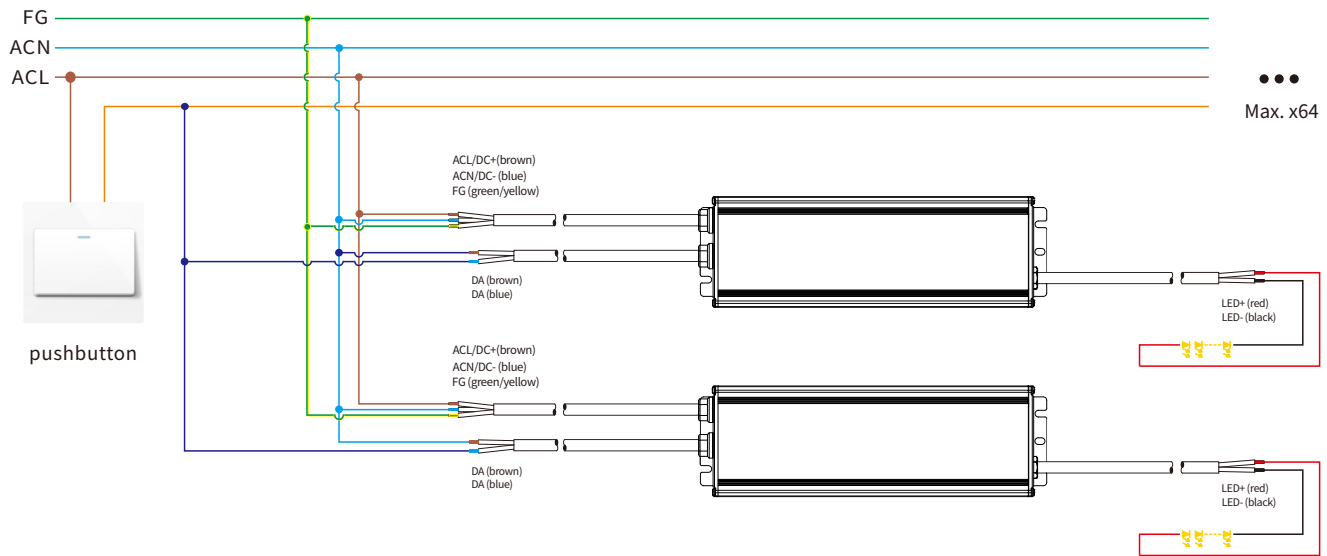
Dimming curve



Remarks: The dimming curve can be selected by DALI configuration. The default is logarithmic dimming curve.

pushDIM dimming application

Wiring diagram



Switch to the pushDIM dimming mode

After installation according to the wiring diagram of pushDIM dimming application, long press the pushbutton 3 times ,then the driver will automatically switch to the pushDIM dimming mode.

Remarks:

Max. 50 drivers per pushDIM control line.

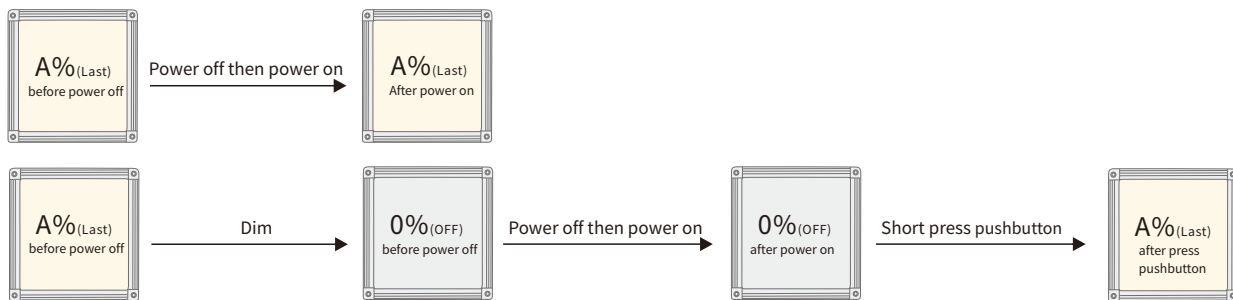
Turn on or turn off:short press pushbutton for 0.2-1s.

Dimming: long press pushbutton for 1-5s.

Power on status: after power on,the light state will be the same as the lighting on state.

If the light is on before power on,the light will be on after power on again,brightness will be the same as the last lighting on brightness.

If the light is off before power off,the light will be off after power on again,short press the pushbutton,then the light will be on,the brightness will be the same as the last brightness.



Multiple lights synchronize control operation

method 1:

Step 1:long press the pushbutton,confirm each light is on.

Step 2:short press the pushbutton,confirm each light is off.

Step 3:long press the pushbutton,confirm each light is from darkest to brightest and all the lights are synchronous.

method 2:

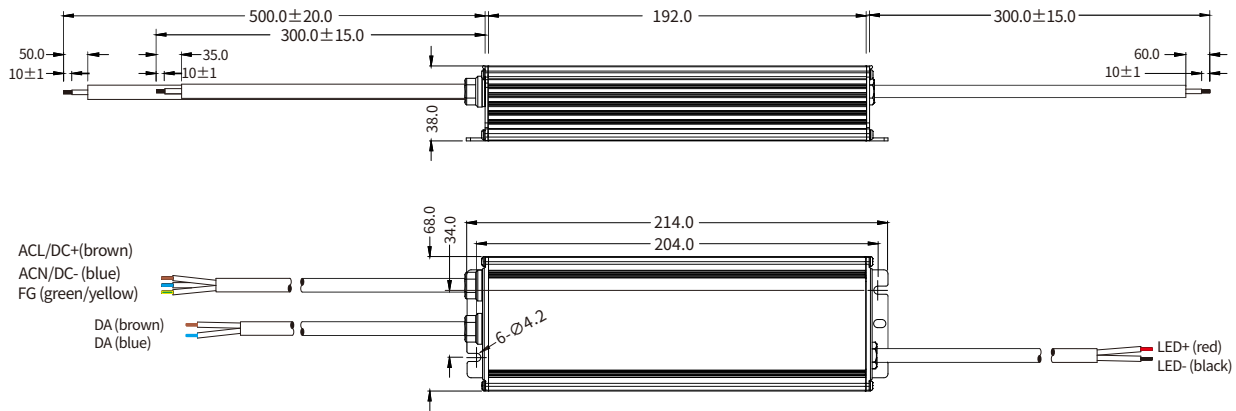
- Long press the pushbutton 15s,all lights output to the brightest state.

Installation

Mechanical dimensions

Unit:mm

DMV150



INPUT

Function	Colour	Wire specification
ACL/DC+,ACN/DC-,FG	brown,blue,yellow/green	1.0mm ² *3; H05RN-F; Rubber wire,The outer skin is black, and the inner package is brown, blue, yellow / green three core wire.

Dimming interface

Function	Ccolour	Wire specification
DA,DA	brown,blue	0.75mm ² *2; H05RN-F; Rubber wire,The outer skin is black, and the inner package is brown and blue two core wire.

OUTPUT

Function	Colour	Wire specification
LED+,LED-	red,black	0.75mm ² *2; H05RN-F; Rubber wire,The outer skin is black, and the inner package is red and black two core wire.

Installation note

Hot plug-in

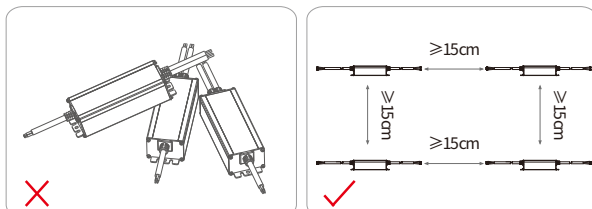
- Hot plug-in is not supported due to residual output voltage of > 0 V.
- If a LED load is connected the device has to be restarted.
- Restart can be achieved by re-powering the driver or executing a on/off command (action) through the control interface (DALI,pushDIM).

Wiring guidelines

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Max. lenght of output wires is 2 m.
- Incorrect wiring can damage LED modules.

Installation requirements

- The driver should be installed in a dry, acid-free, oil-free, fat-free environment.
- The installation ambient temperature of the drive shall not exceed the value of Ta at any time.
- The temperature of the mounting surface of the driver should be lower than 40°C
- The driver should keep a certain distance from the heating stuff (such as the lamp radiator).



Please do not stack the products. The distance between two products should be $\geq 15\text{cm}$ so as not to affect heat dissipation and the lifespan of the products.

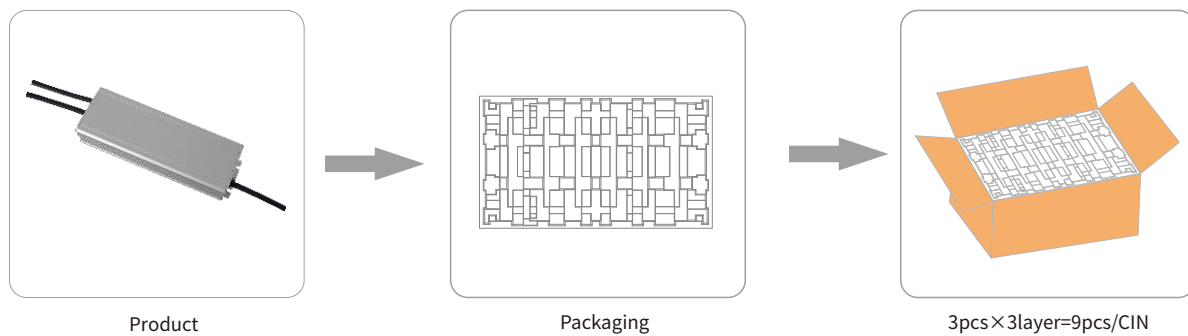
Mounting screw specifications and torque

- Max. torque at the clamping screw: 0.5 Nm / M4

Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 5 seconds
4. Connect LED module again

Packaging



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DMV150	L214*W68*H38mm	558g	L520*W295*H62mm	L530*W310*H230mm	9pcs	5.01kg	6.51kg

Additional information

1. The life and MTBF of the product are for reference only, and do not represent a warranty statement.
2. For more information, please send an email to info@bokedriver.com.