

Non-isolated constant current linear driver BAN Series suffix F(NFC programmable)



Features

- Input and output non-isolated
- The output current programming can be realized through the NFC interface
- Output flick-free, meets the new requirements of ErP certification
- Built in active PFC function, high PF, low THD
- Dual-stage circuit design, work stable
- Withstand 380VAC high voltage short-time shock
- Suitable for built-in use of Class I lamps
- Passed CE, ENEC, UKCA, RCM, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5.5-year guarantee

Functions

- Support central emergency application
- Support self-contained emergency application
- Programming via NFC(EasySet)
- Protective features (short-circuit, no-load protection)

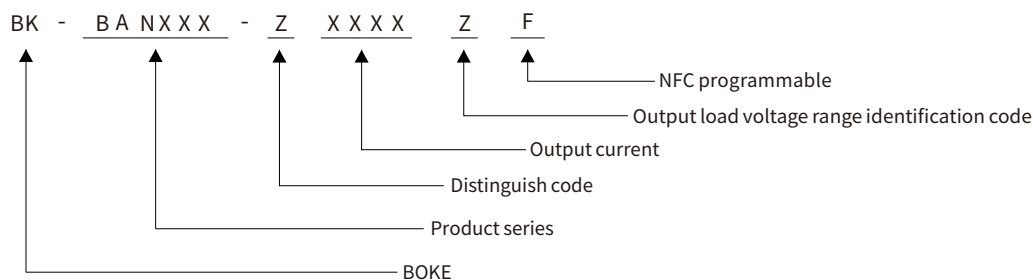
Suitable for lights

- Suitable for linear lights, tri-proof lights, floor lights, bracket lights and other linear or ultra-thin lights etc.

Typical applications

- LED indoor lighting
- LED office lighting
- LED commercial lighting

Model coding rules of BAN series



Function list

Model	Mode	Device Configuration
BK-BAN100-B BK-BAN150-A	F	NFC interfaces

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-BAN100-B0800AF	200-240VAC/DC	100W MAX.	54-240VDC	0.35-0.8A	L285*W30*H21mm
BK-BAN150-A1000AF	200-240VAC/DC	150W MAX.	54-240VDC	0.2-1A	L355*W30*H21mm

Technical data

Product model	BK-BAN100-B0800AF
Output parameters	
Regulation method	Constant Current
Rated output current range	0.35-0.8A, see the operating window for details
Rated output voltage range	54-240VDC, see the operating window for details
Rated output power	100W Max, see the operating window for details
Output current adjustment	EasySet Programming
Output current ripple LF	±3%
Output current accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.684%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.043, SVM = 0.003, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.55A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF:0.98,DF:0.98, see the electrical values below for details
Input THD(typ.)	6% , see the electrical values below for details
Efficiency(typ.)	95% (230V AC & Full load), see the electrical values below for details
In-rush current(typ.)	23.8A peak, 430us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.5s(AC start), <0.5s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin):105.3W, No load(Pno): N/A, On stand-by(Psb) : N/A, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC
Mains surge capability	L-N:2.5KV,L-FG/N-FG:2.5KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:B)
Isolation resistance	I/P-FG:100MΩ/500Vdc/25°C/70% RH
Control interface	
DALI dimming port	N/A
pushDIM dimming port	N/A
1-10V 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	N/A
Dimming drive mode	N/A
Emergency support	
Central emergency system	Supported
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	IP20
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, 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	N/A
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, 50Hz, full load and 25°C of ambient temperature.

Technical data

Product model	BK-BAN150-A1000AF
Output parameters	
Regulation method	Constant Current
Rated output current range	0.2-1A, see the operating window for details
Rated output voltage range	54-240VDC, see the operating window for details
Rated output power	150W Max, see the operating window for details
Output current adjustment	EasySet Programming
Output current ripple LF	±3%
Output current accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.196%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.016, SVM = 0.001, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.8A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF:0.98,DF:0.98, see the electrical values below for details
Input THD(typ.)	6% , see the electrical values below for details
Efficiency(typ.)	96% (230V AC & Full load), see the electrical values below for details
In-rush current(typ.)	23.67A peak ,390us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typ.)	Full load(Pin):156.4W, No load(Pno): N/A, On stand-by(Psb) : N/A, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC
Mains surge capability	L-N:2.5KV,L-FG/N-FG:2.5KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:B)
Isolation resistance	I/P-FG:100MΩ/500Vdc/25°C/70% RH
Control interface	
DALI dimming port	N/A
pushDIM dimming port	N/A
1-10V 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	N/A
Dimming drive mode	N/A
Emergency support	
Central emergency system	Supported
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	IP20
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, 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	N/A
EL	Compatible IEC 61347-2- 13 Annex J , compatible with EN 60598-2-22 and EN 50172
RF	N/A

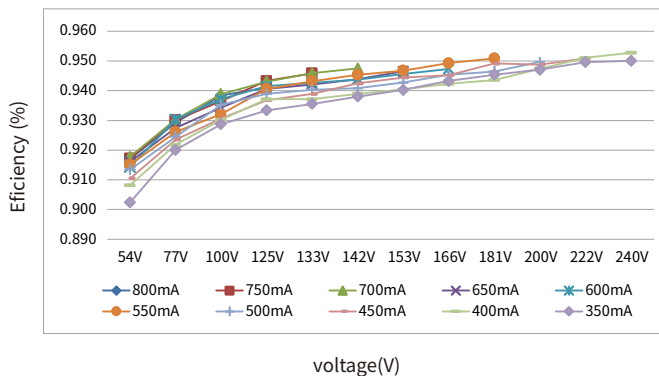
Remarks

1.By default, all parameter are measured at 230VAC input, 50Hz, full load and 25°C of ambient temperature.

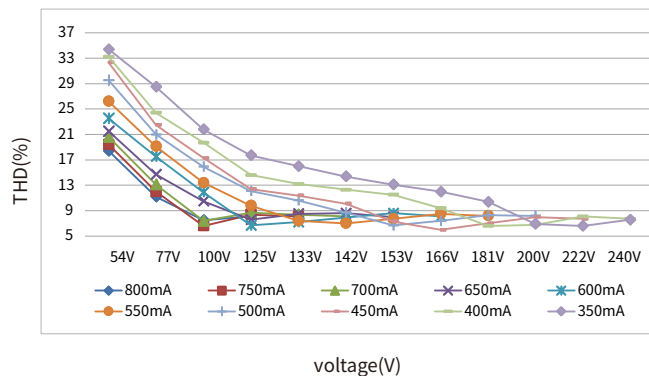
Electrical values

BK-BAN100-B0800AF

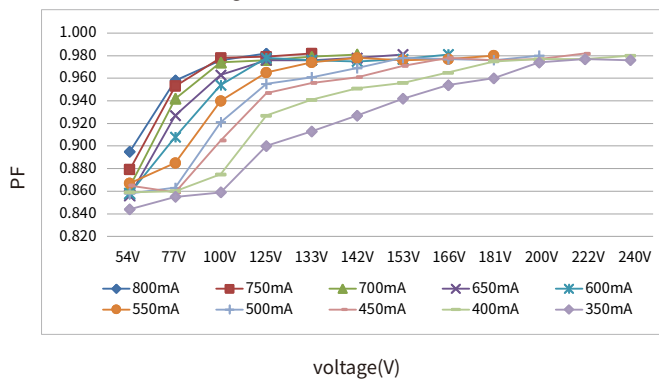
Efficiency vs voltage



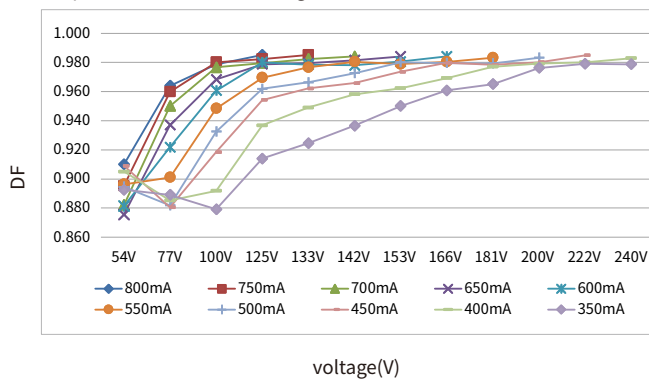
THD vs. voltage



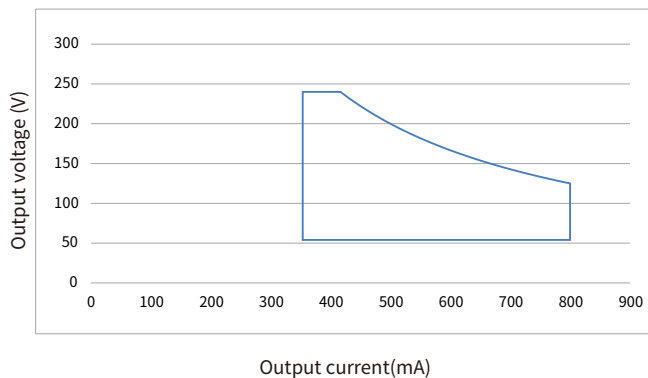
Power factor vs. voltage



Displacement factor vs. voltage



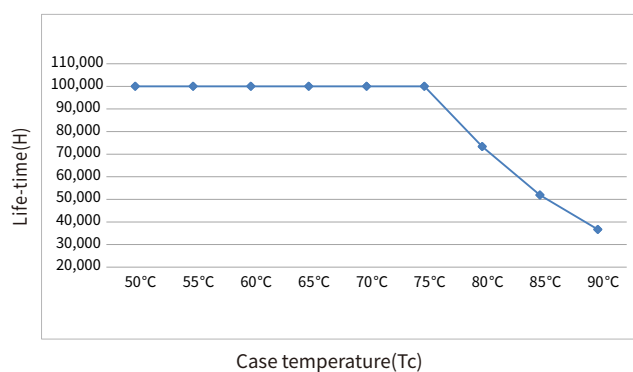
Operating window



- Output voltage x output current = output power
- The minimum current step is 1mA, the minimum voltage step is 1V, the voltage range is 54-240V, the current range is 350-800mA, and the voltage and current can be set arbitrarily under the premise that the output power does not exceed 100W.

Expected life-time

Life-time vs. case temperature

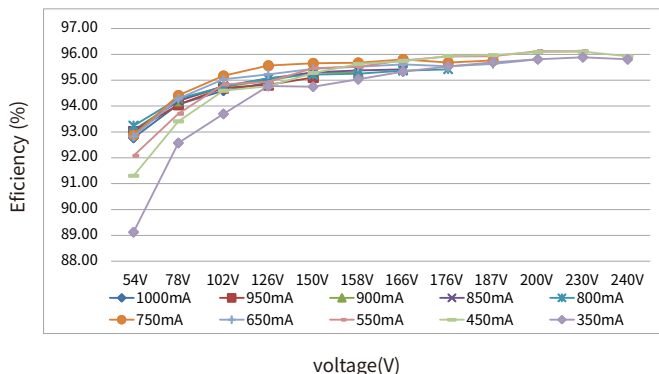


- The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

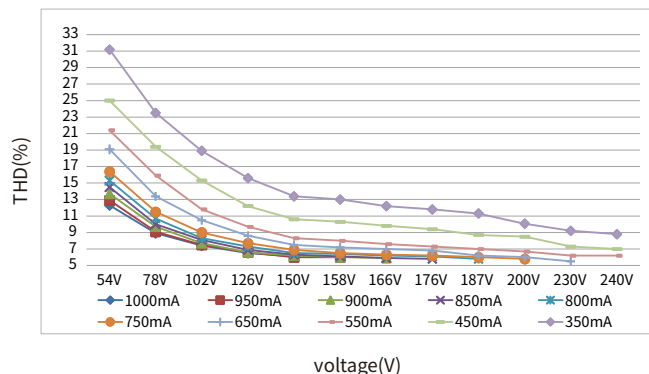
Electrical values

BK-BAN150-A1000AF

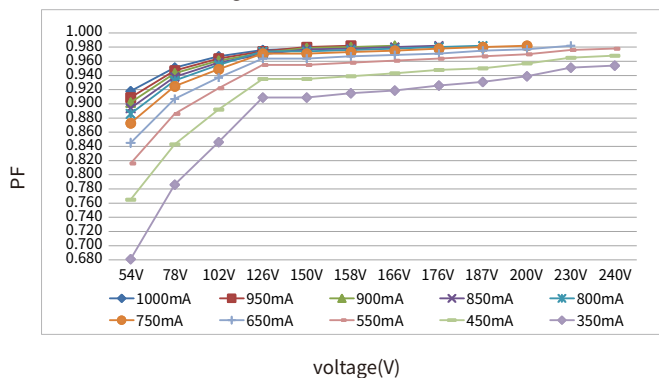
Efficiency vs voltage



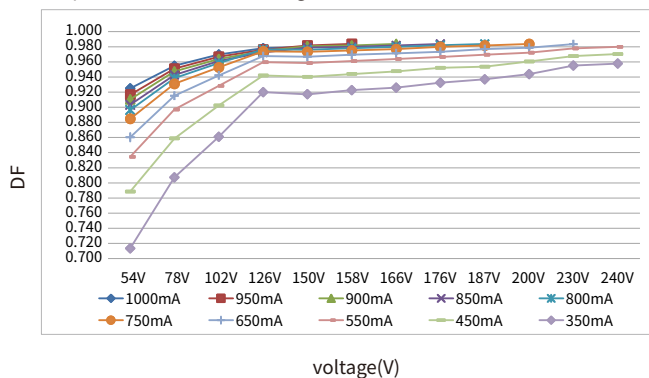
THD vs. voltage



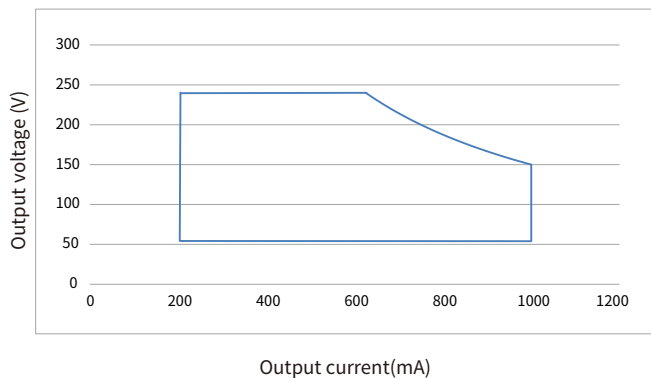
Power factor vs. voltage



Displacement factor vs. voltage



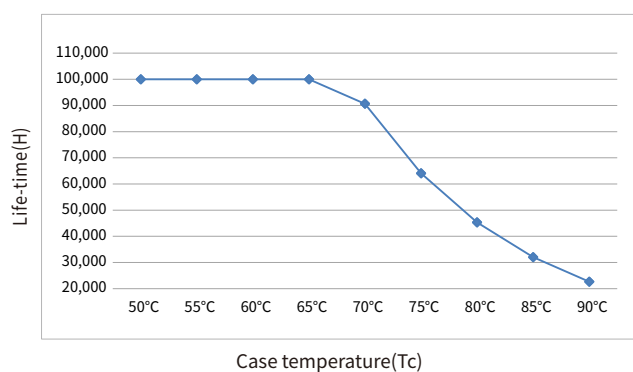
Operating window



- Output voltage x output current = output power
- The minimum current step is 1mA, the minimum voltage step is 1V, the voltage range is 54-240V, the current range is 200-1000mA, and the voltage and current can be set arbitrarily under the premise that the output power does not exceed 150W.

Expected life-time

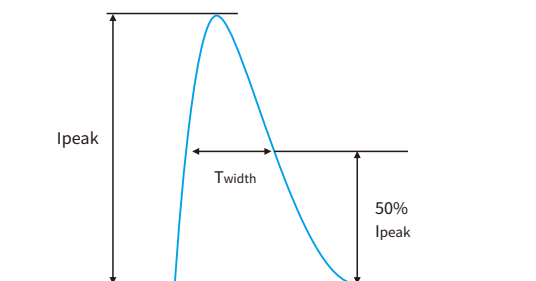
Life-time vs. case temperature



- The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

Surge

Model	I _{peak}	T _{width}	Condition	Relative number of MCB															Unit: pcs
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25	
BK-BAN100-B0800AF	23.8A	430us	AC 230V, Full load, Cold start, T _a ≤ 30°C, MCB is not installed side by side	5	7	9	11	14	9	12	15	18	23	15	19	23	29	36	
BK-BAN150-A1000AF	23.67A	390us		6	8	10	12	15	10	13	16	20	24	10	13	16	20	24	



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 behaviour

- Output short-circuit will not damage the driver.

After removing the short circuit fault, the driver will automatically resume output.

Output no-load operation

- Output no-load will not damage the driver.

Please turn off the driver first if you need to connect the LED load.

Adjustable output current (AOC)

- The output current of the driver can be adjusted within a certain range, can be selected through the EasySet configuration software.

Configuration programming(EasySet)

- The programming configuration of the driver is realized using the BOKE EasySet programming suite and through the driver's NFC interface.
- Please see the "Device configuration" section.
- More information about the EasySet programming suite can be found at www.bokedriver.com.

Insulation between circuits

Isolation	Input	Output	Case
Input	-	-	Basic
Output	-	-	Basic
Case	Basic	Basic	-

Label

BAN100

INPUT

- ACL/DC+
- ACN/DC-
- NC
- ⊕

wire prep.
0.5-1.5mm

BOKE

Non-isolated Constant Current LED Driver
MODEL: BK-BAN100-B0800AF
INPUT: 200-240V ≈ 0.50/60Hz 0.55A Max. λ: 0.95
OUTPUT: 54-240V ≈ 0.35-0.8A 100W Max.

For LED Modules use only
www.bokedriver.com
MADE IN CHINA

CE

UK CA

RoHS

EL

EasySet

300VDC Max.

LED+

LED-

BAN150

INPUT

- ACL/DC+
- ACN/DC-
- NC
- ⊕

wire prep.
0.5-1.5mm

BOKE

Non-isolated Constant Current LED Driver
MODEL: BK-BAN150-A1000AF
INPUT: 200-240V ≈ 0.50/60Hz 0.8A Max. λ: 0.95
OUTPUT: 54-150V ≈ 1000mA 150W Max.

For LED Modules use only
www.bokedriver.com
MADE IN CHINA

CE

UK CA

RoHS

EL

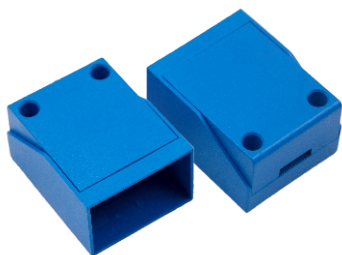
EasySet

300VDC Max.

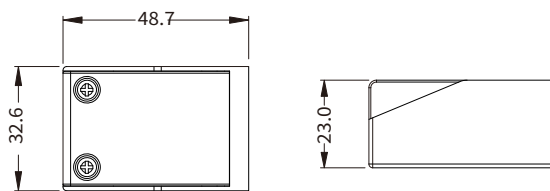
LED+

LED-

Optional accessories



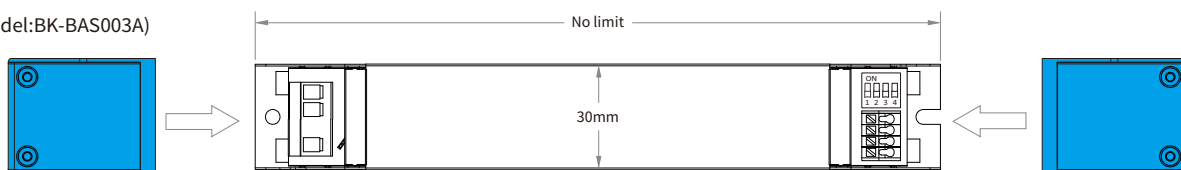
(Model: BK-BAS003A)



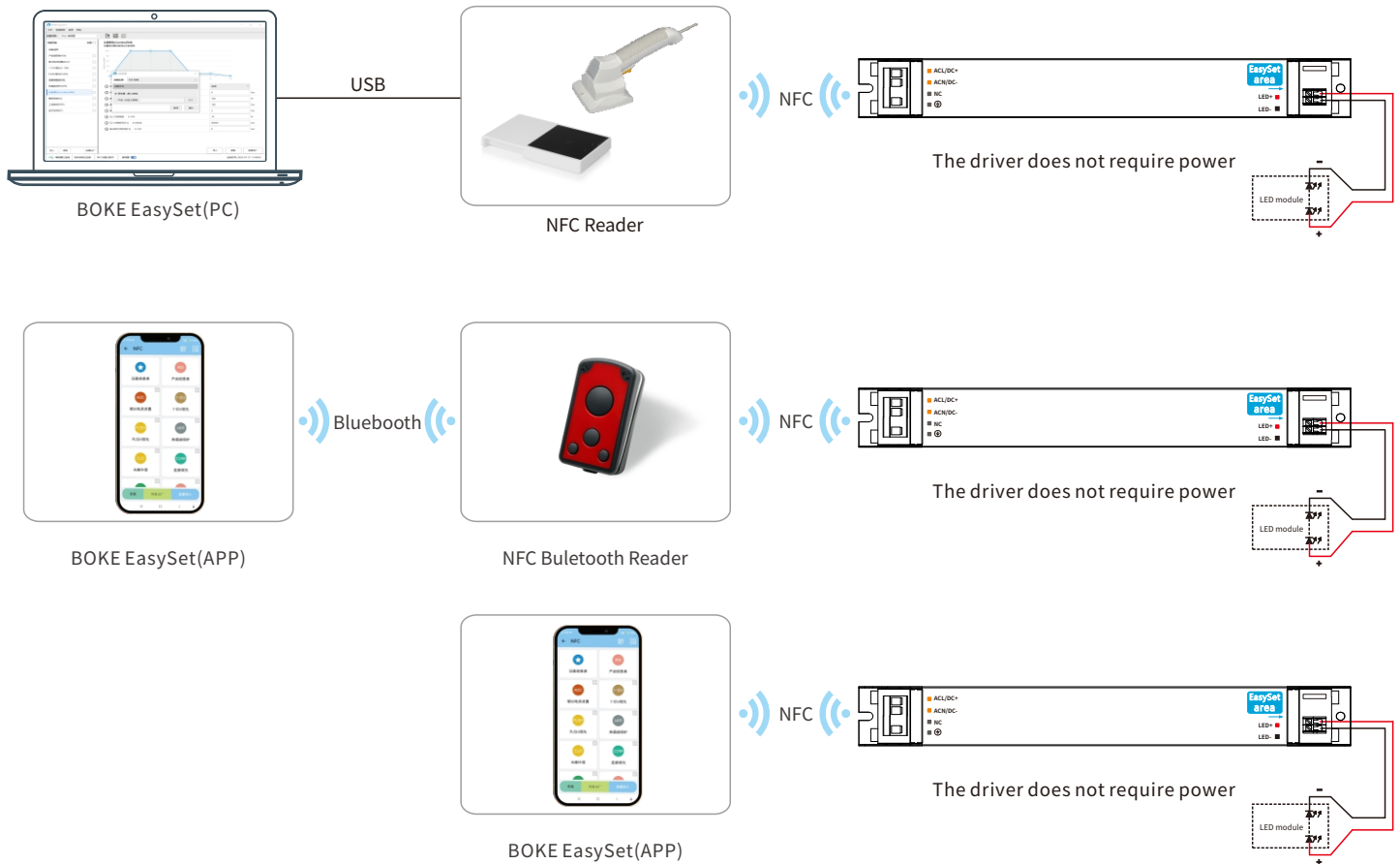
Unit:mm

Installation diagram of accessories

(Model: BK-BAS003A)



Device configuration



Software download(PC&mobile)



PC:Windows7/Windows10/Windows11x64bit;
Mobile:Androidsystem≥6.0, iossystem≥14.0.

Configure tools and software

Type	Name	Brand	Name	BOKE EasySet minimum version	
				PC	APP
Programmer	NFC desktop Reader	FEIG	CPR30+	V1.1.0	-
	NFC handheld Reader	FEIG	ID ISC-PRH101-USB	V1.2.2	-
	NFC Bluetooth Reader	FEIG	ID ECCO Smart HF-BLE	-	V1.0.0
Software	PC Software	BOKE	BOKE EasySet	V1.0.0	-
	APP	BOKE	BOKE EasySet	-	V1.0.0

Parameters configure

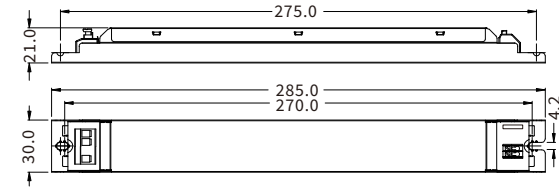
Configuration items	Factory settings	Parameter configuration	Read/Wirte
Product information	-	NO	Read Only
Adjustable output current(AOC)	Activated	YES	Read/Wirte

Mechanical Specification

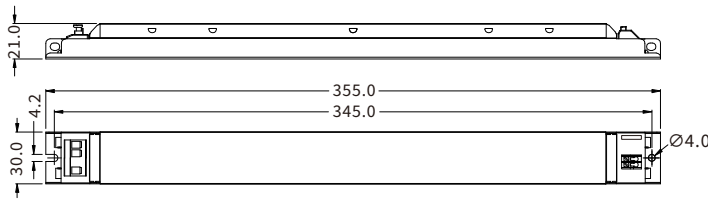
Size(Excluding accessories)

Unit:mm

BAN100-B



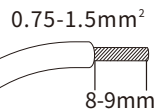
BAN150-A



INPUT

Numbering	function	colour
1	ACL/DC+	orange
2	ACN/DC-	orange
3	NC	gray
4	FG	gray

Input wire

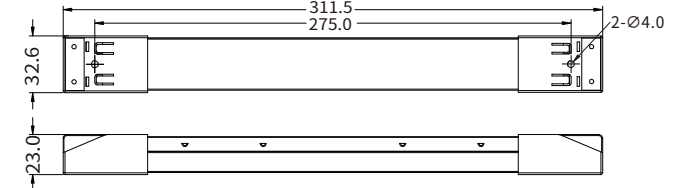


Mechanical Specification

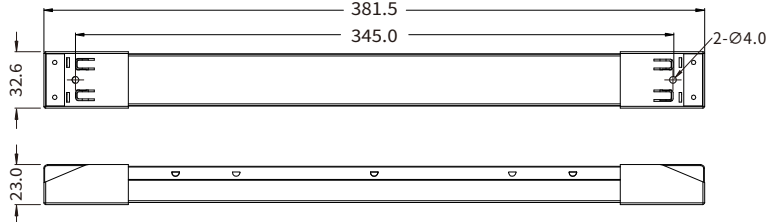
Size(Include accessories)

Unit:mm

BAN100-B



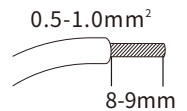
BAN150-A



OUTPUT

Numbering	function	colour
1	LED+	red
2	LED-	black

Output wire



Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of > 0 V.

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. length 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 driver shall not exceed the value of Ta at any time.
- The temperature of the mounting surface of the driver should be lower than the temperature of Ta.
- The driver should keep a certain distance from the heating stuff (such as the luminaire radiator).
- If the driver is used externally (it needs to be used with the accessories), the installation of the driver should also meet the following conditions:
 - 1.The driver should be a certain distance between the drivers, as shown in Figure 1.
 - 2.The driver keeps a certain distance from surrounding objects, as shown in Figure 2.
 - 3.Two power outputs can not be connected inparallel.

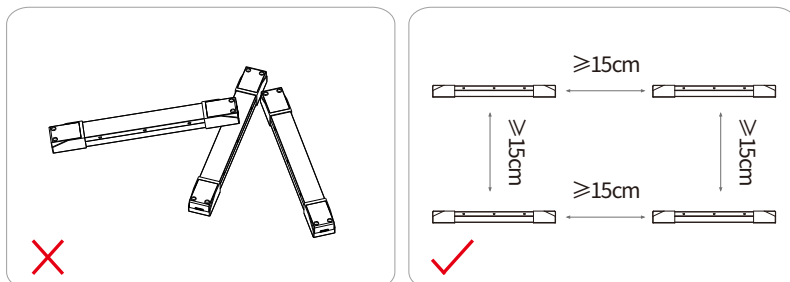


Figure 1

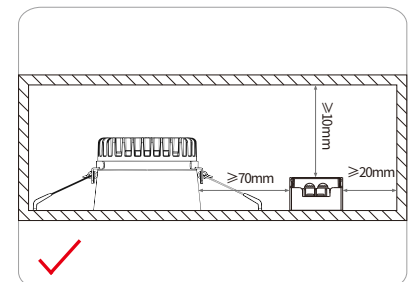
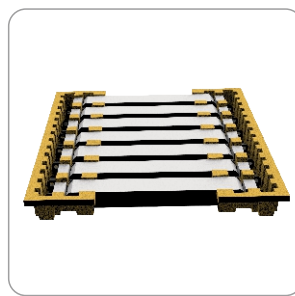


Figure 2

Packaging



Product



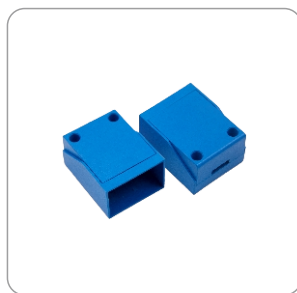
Paper tray



7pcs*5layer=35pcs/CTN
7pcs*4layer=28pcs/CTN

Model	Product size	Weight	Paper tray	Carton size	Packing	N.W	G.W
BAN100-B	L285*W30*H21mm	215g	L345*W75*H29mm	L355*W325*H170mm	35pcs	7.53kg	8.75kg
BAN150-A	L355*W30*H21mm	268g	L345*W75*H29mm	L395*W355*H140mm	28pcs	7.50kg	8.65kg

Accessories



End cap + screws



100 sets/CTN

Model	Product size	Weight	Carton size	Qty/carton	N.W	G.W
BAS003A	L48.7*W32.6*H23mm	22g	L450*W350*H180mm	100 sets	2.2kg	2.7kg

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.