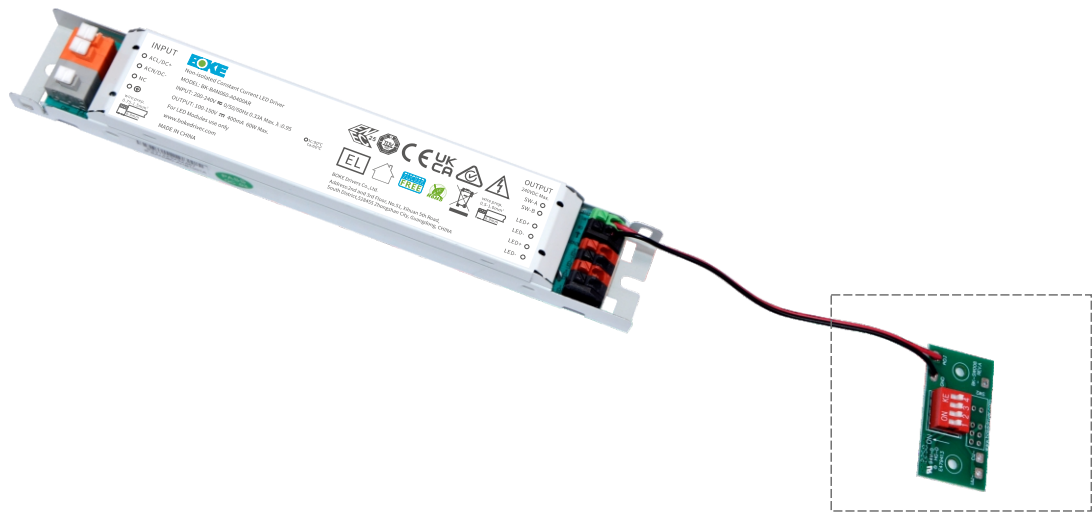


Non-isolated constant current linear driver BAN Series suffix R(External DIP-switch)



Optional accessories(Model:BK-SW008A)

Features

- Input and output non-isolated
- Multi-level current output can be realized by external DIP-switch
- The DIP-switch can be externally connected to the lamp body to adjust the output power
- 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
- Protective features
(short-circuit, no-load protection)

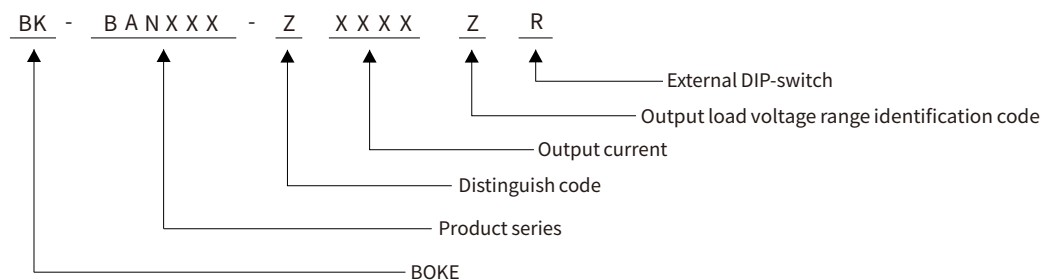
Suitable for lights

- 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	Function
BK-BAN022-A BK-BAN040-A BK-BAN060-A BK-BAN075-A BK-BAN100-B BK-BAN150-A	S	Integrated dialing
	R	External dialing

* The description in this specification is only applicable to the products with the suffix R and the model are BAN022-A, BAN040-A, BAN060-A, BAN075-A, BAN100-B and BAN150-A.

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-BAN022-A0400AS BK-BAN022-A0400AR	200-240VAC/DC	22.8W MAX.	39-72VDC	0.2-0.4A	L158*W30*H21mm
BK-BAN040-A0400AS BK-BAN040-A0400AR	200-240VAC/DC	40W MAX.	54-114VDC	0.2-0.4A	L158*W30*H21mm
BK-BAN060-A0400AS BK-BAN060-A0400AR	200-240VAC/DC	60W MAX.	100-200VDC	0.2-0.4A	L195*W30*H21mm
BK-BAN075-A0400AS BK-BAN075-A0400AR	200-240VAC/DC	75.2W MAX.	100-200VDC	0.2-0.4A	L245*W30*H21mm
BK-BAN100-B0800AS BK-BAN100-B0800AR	200-240VAC/DC	100W MAX.	54-240VDC	0.35-0.8A	L285*W30*H21mm
BK-BAN150-A1000AS BK-BAN150-A1000AR	200-240VAC/DC	150.1W MAX.	54-240VDC	0.35-1A	L355*W30*H21mm

* The description in this specification is only applicable to the products with the suffix R and the model are BAN022-A, BAN040-A, BAN060-A, BAN075-A, BAN100-B and BAN150-A.

Technical data

Product model	BK-BAN022-A0400AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.2-0.4A, see the DIP-switch for details
Rated output voltage range	39-72VDC, see the DIP-switch for details
Rated output power	22.8W Max, see the DIP-switch for details
Output current adjustment	External DIP S.W(5 levels)
Output current ripple LF	±2%
Output current accuracy	±5%-±10%, see the DIP-switch for details
Linear regulation	±3%
Load regulation	±3%
No load output voltage	150VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.510%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.005, SVM = 0.002, (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	<0.135A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF:0.96 ,DF:0.96 ,see the electrical values below for details
Input THD(typ.)	9% ,see the electrical values below for details
Efficiency(typ.)	89.5% ,see the electrical values below for details
In-rush current(typ.)	9.65A peak ,184us 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):25.5W, 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:A)
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-BAN040-A0400AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.2-0.4A, see the DIP-switch for details
Rated output voltage range	54-114VDC, see the DIP-switch for details
Rated output power	40W Max, see the DIP-switch for details
Output current adjustment	External DIP S.W(5 levels)
Output current ripple LF	±2%
Output current accuracy	±5%-±10%, see the DIP-switch for details
Linear regulation	±3%
Load regulation	±3%
No load output voltage	150VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.494%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.000, 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	<0.22A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF:0.97 ,DF:0.97 ,see the electrical values below for details
Input THD(typ.)	8% ,see the electrical values below for details
Efficiency(typ.)	93.5% ,see the electrical values below for details
In-rush current(typ.)	16.5A peak ,236us 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):42.8W, 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:A)
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-BAN060-A0400AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.2-0.4A, see the DIP-switch for details
Rated output voltage range	100-200VDC, see the DIP-switch for details
Rated output power	60W Max, see the DIP-switch for details
Output current adjustment	External DIP S.W(5 levels)
Output current ripple LF	±2%
Output current accuracy	±5%-±10%, see the DIP-switch for details
Linear regulation	±3%
Load regulation	±3%
No load output voltage	240VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=1.012%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.000, SVM = 0.002, (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	<0.33A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typ.)	PF:0.97 ,DF:0.98 ,see the electrical values below for details
Input THD(typ.)	7% ,see the electrical values below for details
Efficiency(typ.)	94.5% ,see the electrical values below for details
In-rush current(typ.)	21A peak ,272us 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):63.5W, 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:A)
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-BAN075-A0400AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.2-0.4A, see the DIP-switch for details
Rated output voltage range	100-200VDC, see the DIP-switch for details
Rated output power	75.2W Max, see the DIP-switch for details
Output current adjustment	External DIP S.W(5 levels)
Output current ripple LF	±2%
Output current accuracy	±5%-±10%, see the DIP-switch for details
Linear regulation	±3%
Load regulation	±3%
No load output voltage	240VDC
Flicker-free(typ.)	Flickering percent(IEEE 1789)=0.745%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.000, 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	<0.4A (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.)	7% ,see the electrical values below for details
Efficiency(typ.)	94.5% ,see the electrical values below for details
In-rush current(typ.)	25.5A peak ,302us 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):79.6W, 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-BAN100-B0800AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.35-0.8A, see the DIP-switch for details
Rated output voltage range	54-240VDC, see the DIP-switch for details
Rated output power	100W Max, see the DIP-switch for details
Output current adjustment	DIP S.W(10 levels)
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-A1000AR
Output parameters	
Regulation method	Constant Current
Rated output current range	0.35-1A,see the DIP-switch for details
Rated output voltage range	54-240 VDC,see the DIP-switch for details
Rated output power	150.1W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(10 levels)
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 votage 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

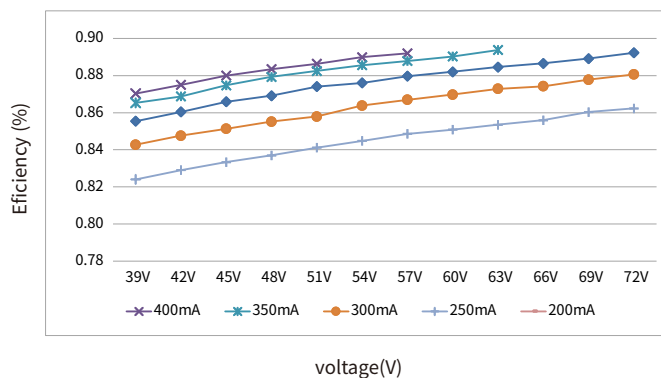
Remarks

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

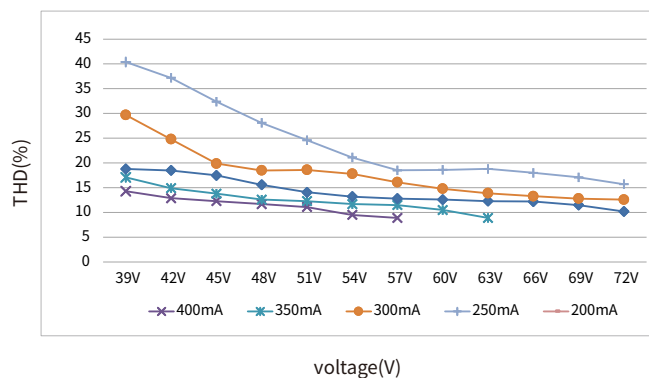
Electrical values

BK-BAN022-A0400AR

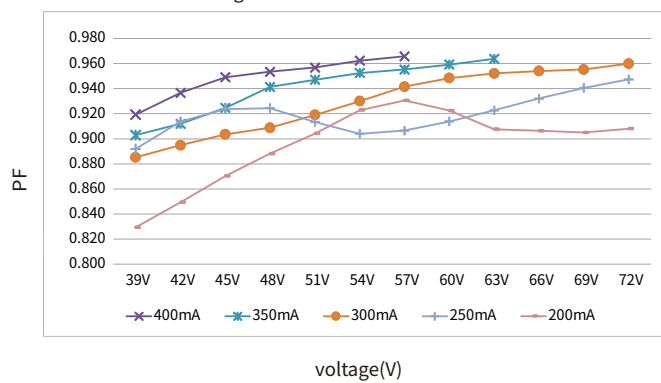
Efficiency vs. voltage



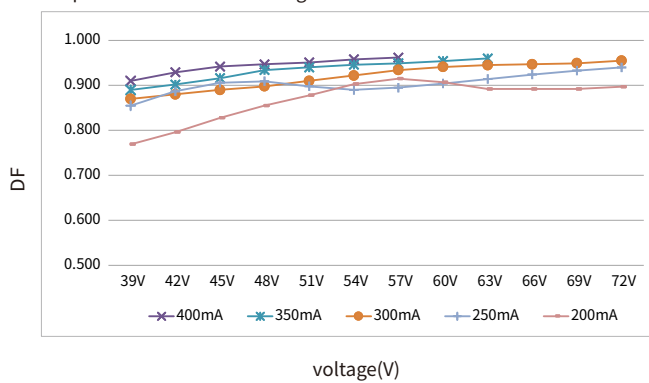
THD vs. voltage



Power factor vs. voltage

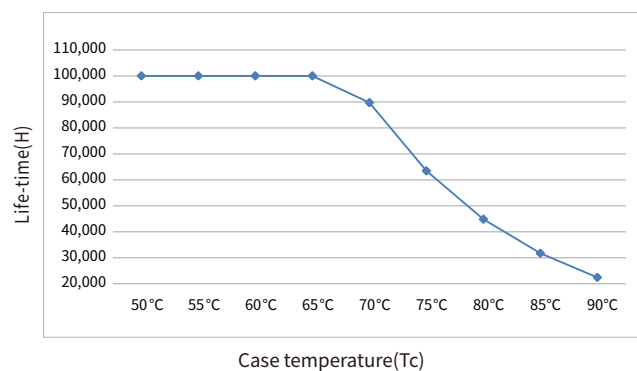


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature



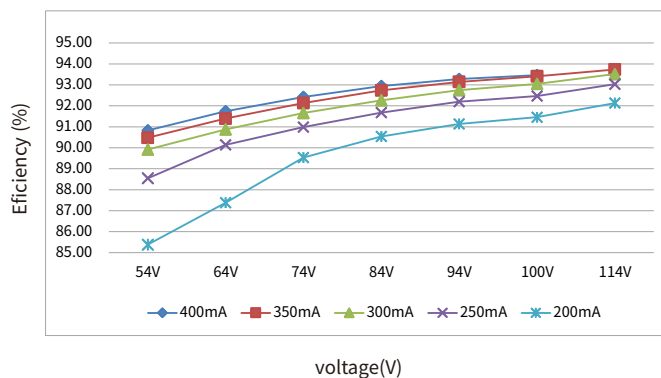
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of tc to ta temperature depends also on the luminaire design.

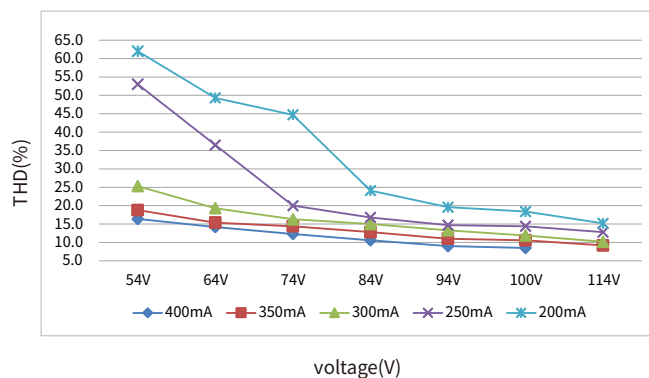
Electrical values

BK-BAN040-A0400AR

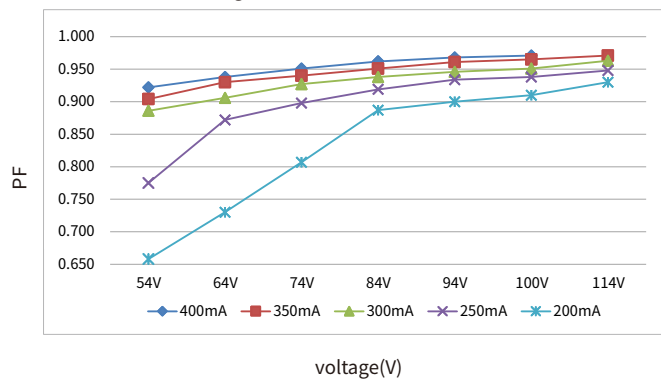
Efficiency vs voltage



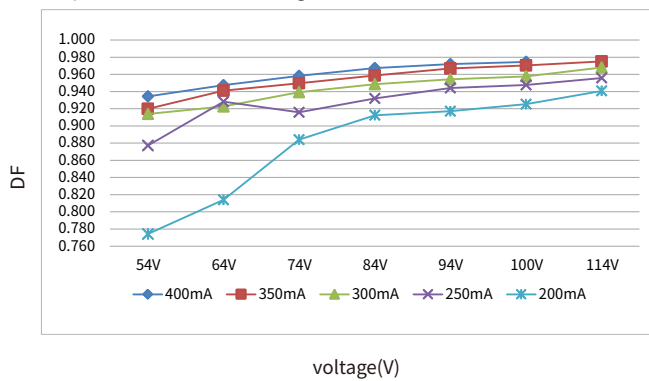
THD vs. voltage



Power factor vs. voltage

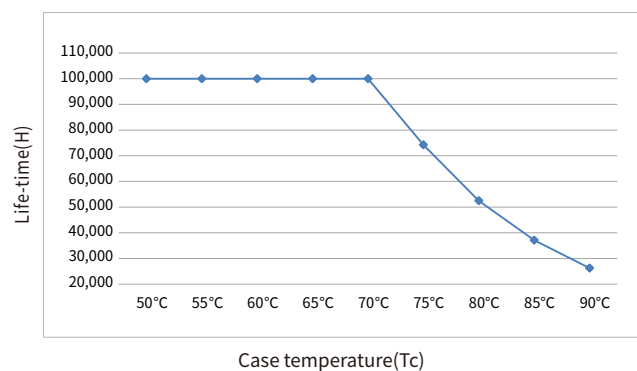


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature



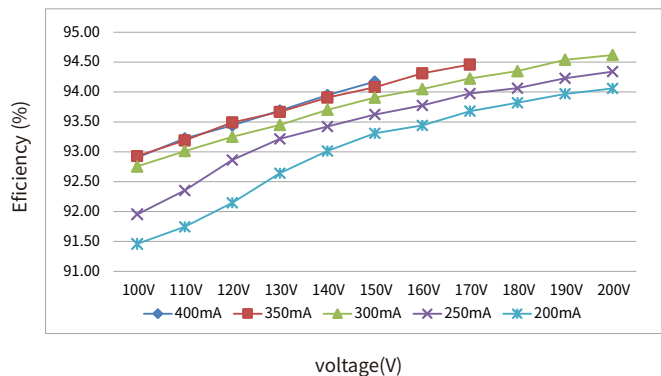
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of tc to ta temperature depends also on the luminaire design.

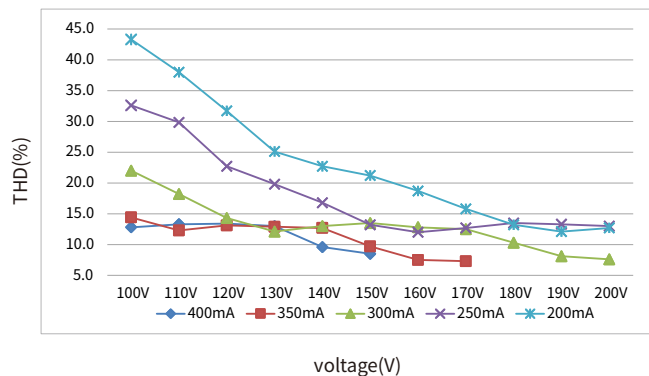
Electrical values

BK-BAN060-A0400AR

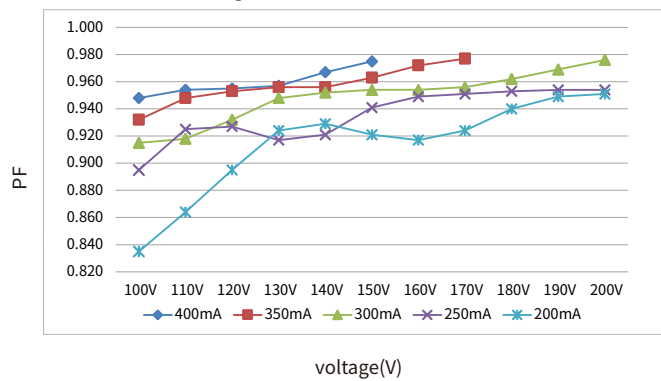
Efficiency vs voltage



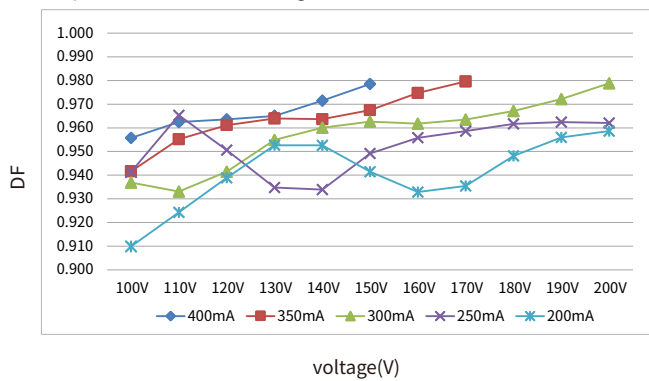
THD vs. voltage



Power factor vs. voltage

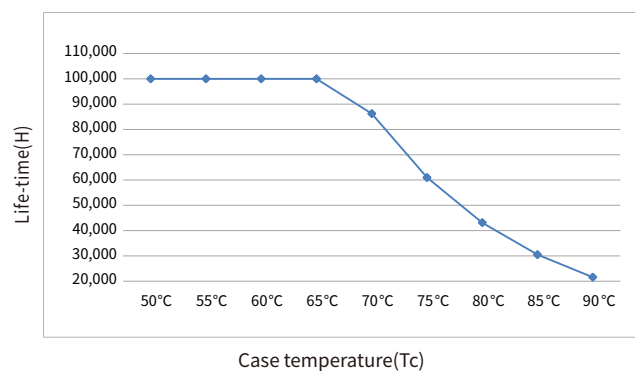


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature



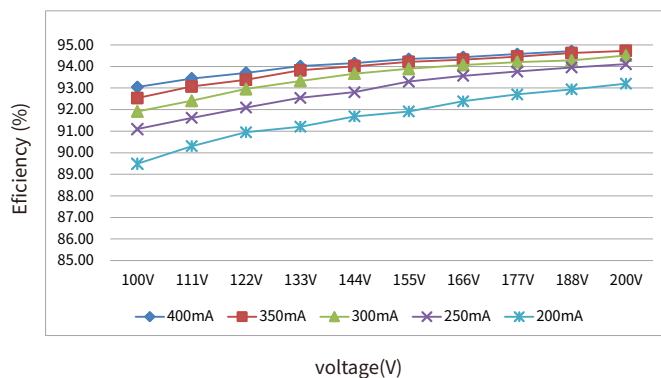
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

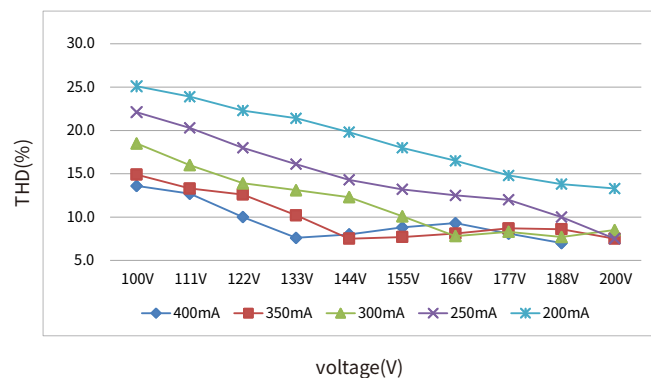
Electrical values

BK-BAN075-A0400AR

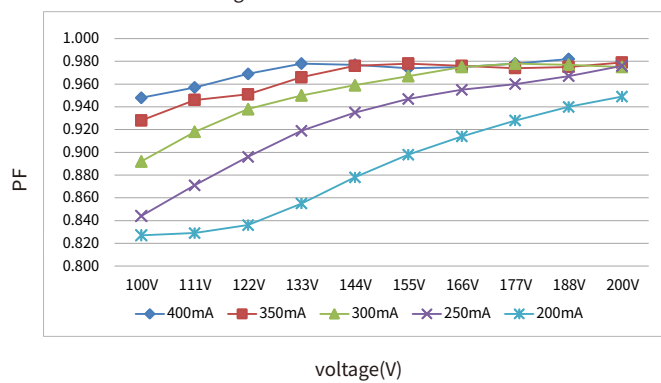
Efficiency vs. voltage



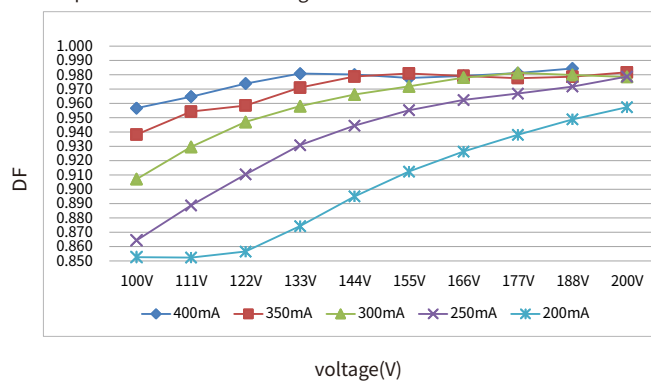
THD vs. voltage



Power factor vs. voltage

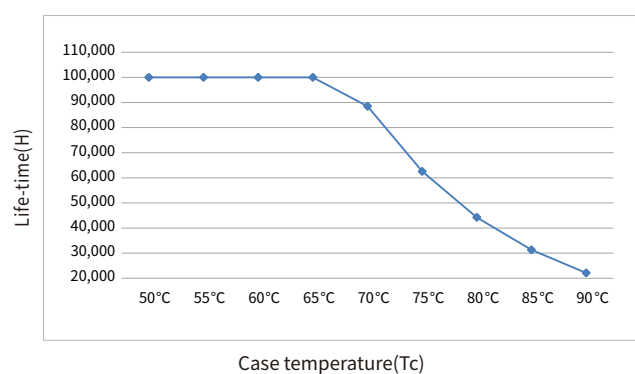


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature



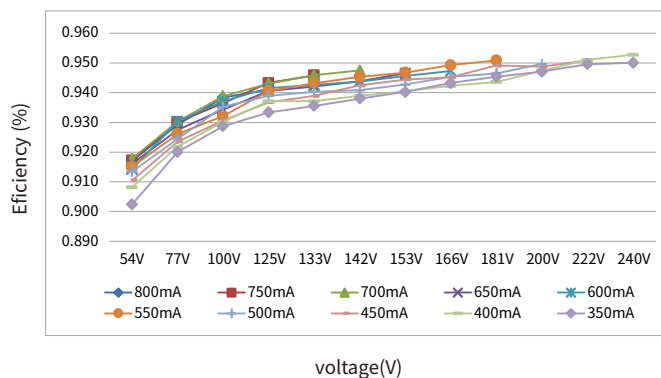
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

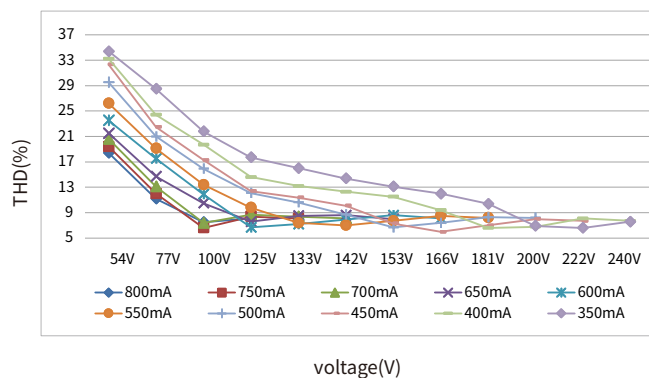
Electrical values

BK-BAN100-B0800AS

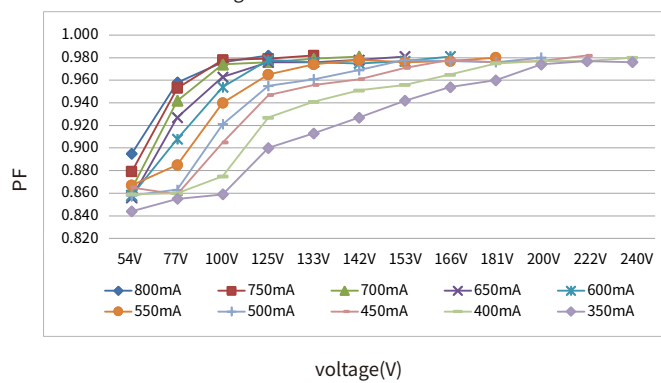
Efficiency vs. voltage



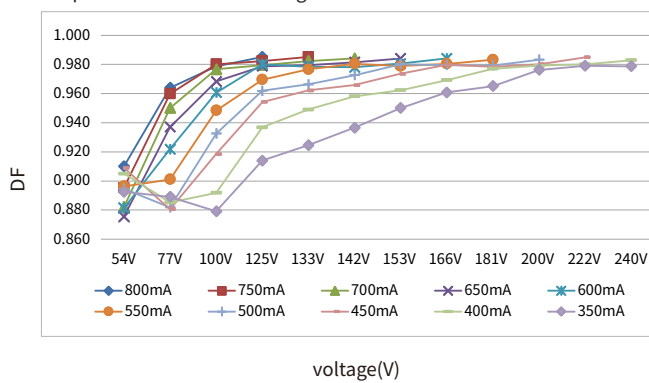
THD vs. voltage



Power factor vs. voltage

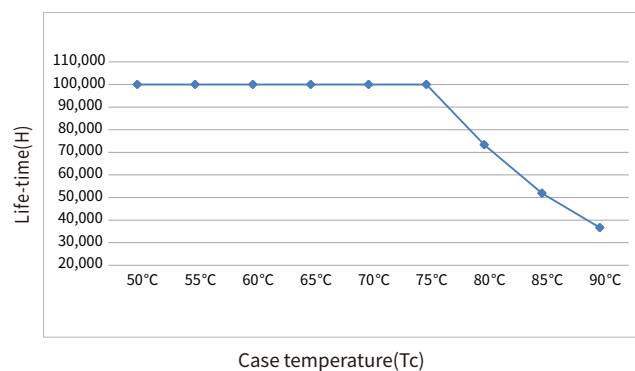


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature



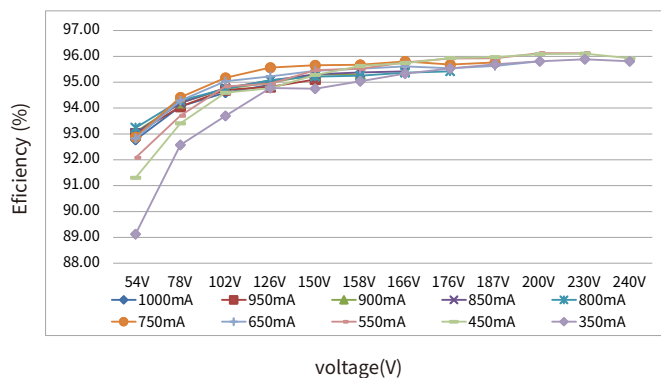
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

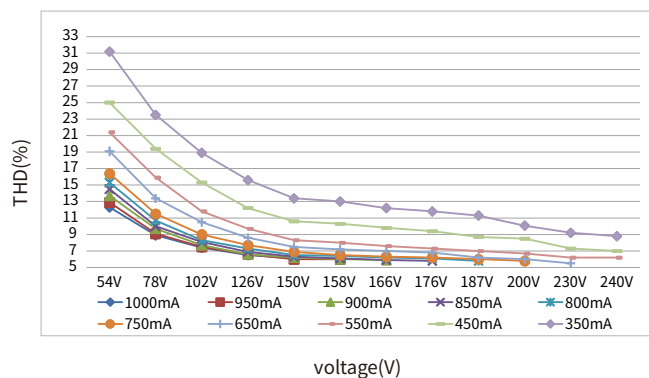
Electrical values

BK-BAN150-A1000AR

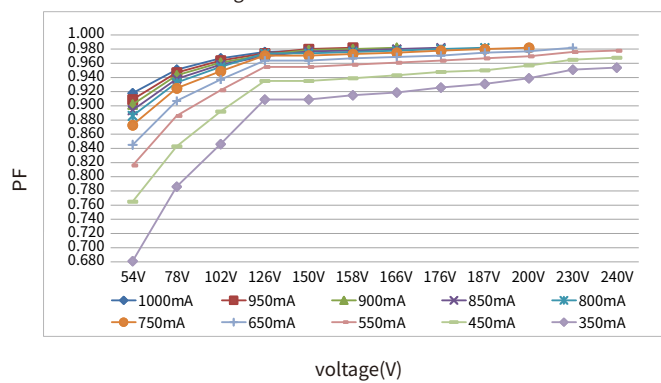
Efficiency vs. voltage



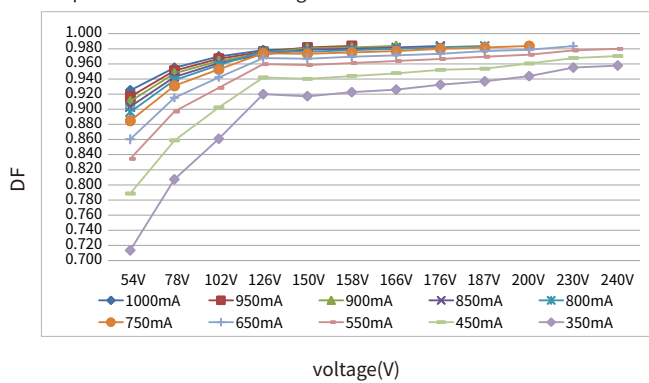
THD vs. voltage



Power factor vs. voltage

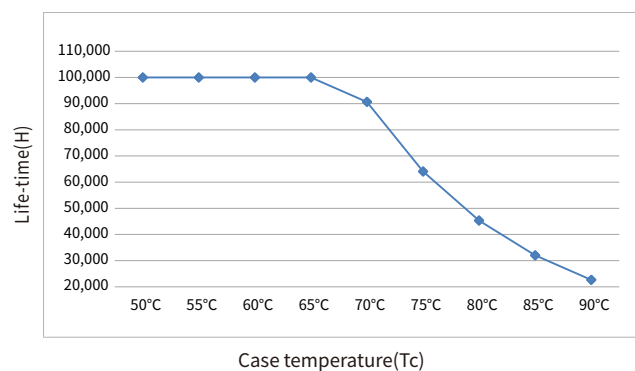


Displacement factor vs. voltage



Expected life-time

Life-time vs. case temperature

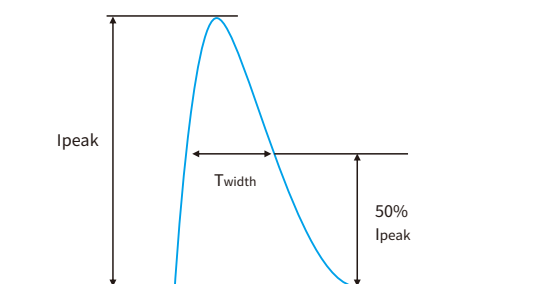


-The life-time of the LED driver is shown in the figure above
(calculated based on the 90% survival rate).

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

Surge

Model	Ipeak	Twidth	Condition	Relative number of MCB														Unit: pcs
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
BK-BAN022-A0400AR	9.65A	184us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	35	46	57	71	89	59	77	95	118	148	61	79	97	122	452
BK-BAN040-A0400AR	16.5A	236us		16	21	25	32	40	27	34	42	53	66	36	47	58	73	91
BK-BAN060-A0400AR	21A	272us		10	13	16	20	26	17	22	27	34	43	24	32	39	49	61
BK-BAN075-A0400AR	25.5A	302us		7	10	12	15	19	12	16	20	25	31	20	25	31	39	49
BK-BAN100-B0800AR	23.8A	430us		5	7	9	11	14	9	12	15	18	23	15	19	23	29	36
BK-BAN150-A1000AR	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.

Insulation between circuits

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

Label

BAN022

INPUT
AC/L/DC+
AC/N/DC-
NC
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

BOKE
Non Isolated Constant Current LED Driver
MODEL: BK-BAN022-A0400AR
INPUT: 200-240V AC 0.15A/60Hz 0.135A Max. $\lambda > 0.95$
OUTPUT: 39-57V $\pm 1\%$ 400mA 22.8W Max.
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

OUTPUT
150VDC Max.
SW-A
SW-B
LED+
LED-
LED+
LED-
LED+
LED-

Model	Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Power (W)
BK-BAN022-A0400AR	200-240	39-57	400	22.8

BAN040

INPUT
AC/L/DC+
AC/N/DC-
NC
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

BOKE
Non Isolated Constant Current LED Driver
MODEL: BK-BAN040-A0400AR
INPUT: 200-240V AC 0.15A/60Hz 0.22A Max. $\lambda > 0.95$
OUTPUT: 54-100V $\pm 1\%$ 400mA 40W Max.
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

OUTPUT
150VDC Max.
SW-A
SW-B
LED+
LED-
LED+
LED-
LED+
LED-

Model	Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Power (W)
BK-BAN040-A0400AR	200-240	54-100	400	40

BAN060

INPUT
AC/L/DC+
AC/N/DC-
NC
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

BOKE
Non Isolated Constant Current LED Driver
MODEL: BK-BAN060-A0400AR
INPUT: 200-240V AC 0.15A/60Hz 0.33A Max. $\lambda > 0.95$
OUTPUT: 100-150V $\pm 1\%$ 400mA 60W Max.
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

OUTPUT
240VDC Max.
SW-A
SW-B
LED+
LED-
LED+
LED-
LED+
LED-

Model	Input Voltage (V)	Output Voltage (V)	Output Current (mA)	Power (W)
BK-BAN060-A0400AR	200-240	100-150	400	60

Label

BAN075

INPUT

- AC/L/DC+
- AC/N/DC-
- NC
- ⊕

wire prep.
0.5-1.5mm

BOKE

Non-isolated Constant Current LED Driver
MODEL: BK-BAN075-A0400AR
INPUT: 200-240V $\approx$ 0/50/60Hz 0.4A Max. λ : 0.95
OUTPUT: 100-188V $\approx$ 400mA 75.2W Max.
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

EL

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No.51, Xihuan 5th Road,
South District, 528455 Zhongshan City, Guangdong, CHINA

OUTPUT
240VDC Max.

SW-A
SW-B

LED+
LED-
LED+

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
16.18	14.40	200	39-72	--	--	--	ON
20.22	18.00	250	39-72	--	--	ON	--
24.27	21.60	300	39-72	--	ON	--	--
24.78	22.05	350	39-63	ON	--	--	--
25.62	22.80	400	39-57	--	--	--	--

BAN100

INPUT

- AC/L/DC+
- AC/N/DC-
- NC
- ⊕

wire prep.
0.5-1.5mm

BOKE

Non-isolated Constant Current LED Driver
MODEL: BK-BAN100-B0800AR
INPUT: 200-240V $\approx$ 0/50/60Hz 0.55A Max. λ : 0.95
OUTPUT: 54-125V $\approx$ 800mA 100W Max.
Other ratings see below sheet
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

EL

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No.51, Xihuan 5th Road,
South District, 528455 Zhongshan City, Guangdong, CHINA

OUTPUT
300VDC Max.

SW-A
SW-B

LED+
LED-

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
90.80	84.00	350	54-240	ON	ON	ON	ON
103.8	96.00	400	54-240	ON	--	ON	ON
107.4	99.90	450	54-222	--	--	ON	ON
107.5	100.0	500	54-200	--	ON	--	ON
107.0	99.55	550	54-181	--	--	--	ON
107.1	99.60	600	54-166	ON	ON	ON	--
106.9	99.45	650	54-153	--	--	ON	--
106.9	99.40	700	54-142	--	ON	--	--
107.3	99.75	750	54-133	ON	--	--	--
107.5	100.0	800	54-125	--	--	--	--

BAN150

INPUT

- AC/L/DC+
- AC/N/DC-
- NC
- ⊕

wire prep.
0.5-1.5mm

BOKE

Non-isolated Constant Current LED Driver
MODEL: BK-BAN150-A1000AR
INPUT: 200-240V $\approx$ 0/50/60Hz 0.8A Max. λ : 0.95
OUTPUT: 54-150V $\approx$ 1000mA 150W Max.
For LED Modules use only
www.bokedriver.com
MADE IN CHINA

EL

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No.51, Xihuan 5th Road,
South District, 528455 Zhongshan City, Guangdong, CHINA

OUTPUT
300VDC Max.

SW-A
SW-B

LED+
LED-

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
168.00	150.0	450	54-240	ON	ON	ON	ON
190.80	180.0	550	54-240	ON	--	ON	ON
199.90	195.0	650	54-222	--	--	ON	ON
199.90	195.0	750	54-200	--	ON	--	ON
199.90	195.0	850	54-181	--	--	--	ON
199.90	195.0	950	54-166	ON	ON	ON	--
199.90	195.0	1050	54-153	--	--	ON	--
199.90	195.0	1150	54-142	--	ON	--	--
199.90	195.0	1250	54-133	ON	--	--	--
199.90	195.0	1350	54-125	--	--	--	--

DIP-switch & output current

BK-BAN022-A0400AR

Pin(W) typ.	Output			1	2	3	4	Current accuracy
	Prated(W)	Irated(mA)	Voltage(Vdc)					
16.18	14.40	200	39-72	--	--	--	ON	±10%
20.22	18.00	250	39-72	--	--	ON	--	±7%
24.27	21.60	300	39-72	--	ON	--	--	±6%
24.78	22.05	350	39-63	ON	--	--	--	±5%
25.62	22.80	400	39-57	--	--	--	--	±5%

BK-BAN040-A0400AR

Pin(W) typ.	Output			1	2	3	4	Current accuracy
	Prated(W)	Irated(mA)	Voltage(Vdc)					
24.75	22.8	200	54-114	--	--	--	ON	±10%
30.63	28.5	250	54-114	--	--	ON	--	±7%
36.57	34.2	300	54-114	--	ON	--	--	±6%
42.57	39.9	350	54-114	ON	--	--	--	±5%
42.80	40.0	400	54-100	--	--	--	--	±5%

BK-BAN060-A0400AR

Pin(W) typ.	Output			1	2	3	4	Current accuracy
	Prated(W)	Irated(mA)	Voltage(Vdc)					
42.5	40.0	200	100-200	--	--	--	ON	±10%
53.0	50.0	250	100-200	--	--	ON	--	±7%
63.4	60.0	300	100-200	--	ON	--	--	±6%
63.0	59.5	350	100-170	ON	--	--	--	±5%
63.7	60.0	400	100-150	--	--	--	--	±5%

BK-BAN075-A0400AR

Pin(W) typ.	Output			1	2	3	4	Current accuracy
	Prated(W)	Irated(mA)	Voltage(Vdc)					
42.92	40.0	200	100-200	--	--	--	ON	±10%
53.13	50.0	250	100-200	--	--	ON	--	±7%
63.49	60.0	300	100-200	--	ON	--	--	±6%
73.90	70.0	350	100-200	ON	--	--	--	±5%
79.40	75.2	400	100-188	--	--	--	--	±5%

BK-BAN100-B0800AR

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
90.80	84.00	350	54-240	--	ON	ON	ON
103.8	96.00	400	54-240	ON	--	ON	ON
107.4	99.90	450	54-222	--	--	ON	ON
107.5	100.0	500	54-200	--	ON	--	ON
107.0	99.55	550	54-181	--	--	--	ON
107.1	99.60	600	54-166	ON	ON	ON	--
106.9	99.45	650	54-153	--	--	ON	--
106.9	99.40	700	54-142	--	ON	--	--
107.3	99.75	750	54-133	ON	--	--	--
107.5	100.0	800	54-125	--	--	--	--

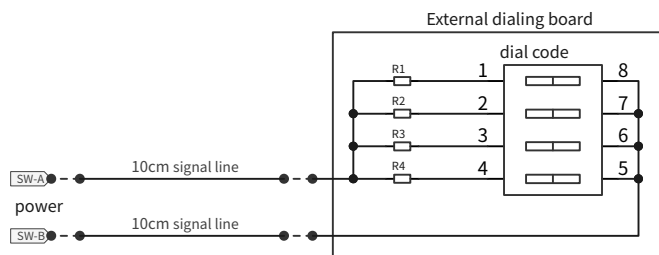
BK-BAN150-A1000AR

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
89.40	84.00	350	54-240	--	ON	ON	ON
114.9	108.0	450	54-240	ON	--	ON	ON
140.4	132.0	550	54-240	--	--	ON	ON
159.0	149.5	650	54-230	--	ON	--	ON
159.6	150.0	750	54-200	--	--	--	ON
159.1	149.6	800	54-187	ON	ON	ON	--
159.1	149.6	850	54-176	--	--	ON	--
158.9	149.4	900	54-166	--	ON	--	--
159.7	150.1	950	54-158	ON	--	--	--
159.6	150.0	1000	54-150	--	--	--	--

Remarks:

- ★ It means that this item is the factory default current.
- It means that this channel is OFF.
- When power on is NOT allowed. Pleased is connect the AC power before DIP.

External DIP-switch parameters



Note:

- The wiring length of the external drawing code shall not exceed 10cm and The EMC of the power supply must be confirmed with the whole lamp.
- Custom currents must be re-matched with resistance values and confirmed with the manufacturer
- It is recommended that the current between each gear should be $\geq 50\text{mA}$. The larger the current gear span, the larger the current accuracy error of the smaller gear.

BAN022-A0400AR

Switching selection sheet				
Irated	1	2	3	4
200mA	—	—	—	R4:10K
250mA	—	—	R3:12.4K	—
300mA	—	R2:15K	—	—
350mA	R1:17.8K	—	—	—
400mA	—	—	—	—

BAN040-A0400AR/BAN060-A0400AR

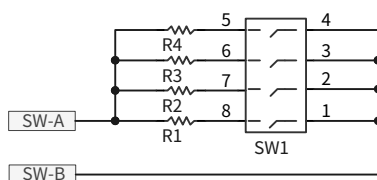
Switching selection sheet				
Irated	1	2	3	4
200mA	—	—	—	R4:10.5K
250mA	—	—	R3:13K	—
300mA	—	R2:15.4K	—	—
350mA	R1:18K	—	—	—
400mA	—	—	—	—

BAN075-A0400AR

Switching selection sheet				
Irated	1	2	3	4
200mA	—	—	—	R4:10.5K
250mA	—	—	R3:12.7K	—
300mA	—	R2:15K	—	—
350mA	R1:17.2K	—	—	—
400mA	—	—	—	—

BAN150-A1000AR Fixed resistance of dial gear

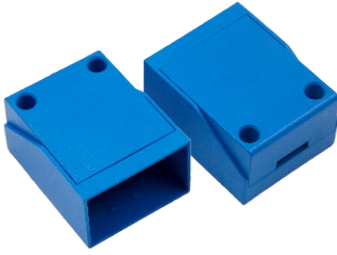
R1	R2	R3	R4
R1:12.4K	R2:28.7K	R3:63.4K	R4:110K



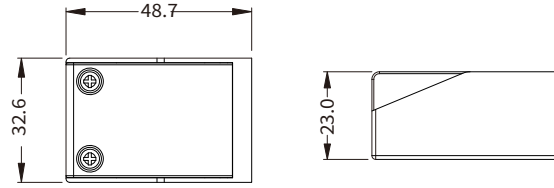
BAN100-B0800AR Fixed resistance of dial gear

R1	R2	R3	R4
R1:12.4K	R2:28.7K	R3:63.4K	R4:110K

Optional accessories



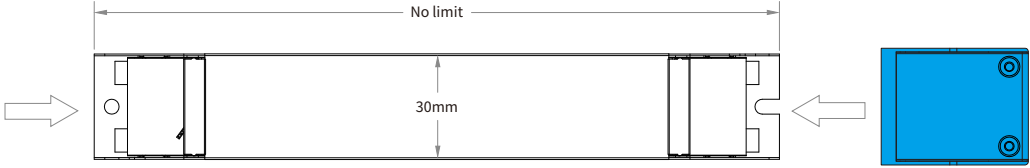
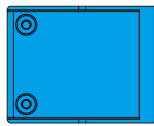
(Model: BK-BAS003A)



Unit:mm

Installation diagram of accessories

(Model: BK-BAS003A)

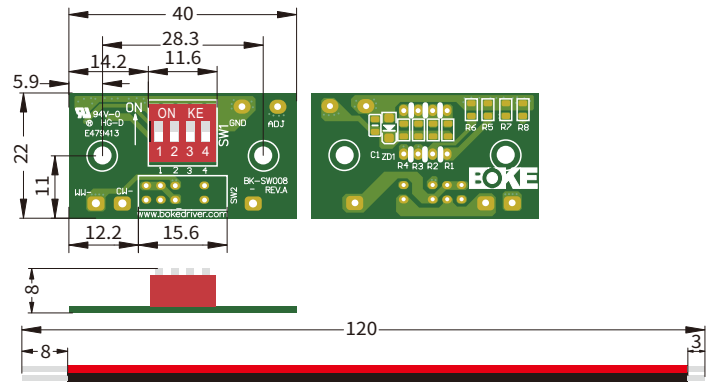


Optional accessories

DIP switch



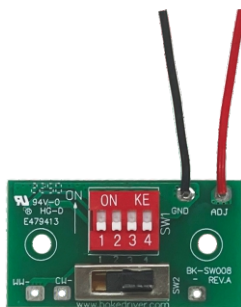
(Model: BK-SW008A)



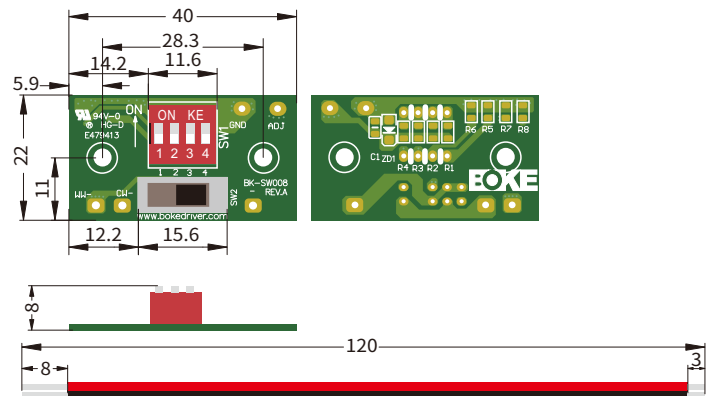
Power terminal

Dip terminal

DIP switch+CCT switch



(Model: BK-SW008B)



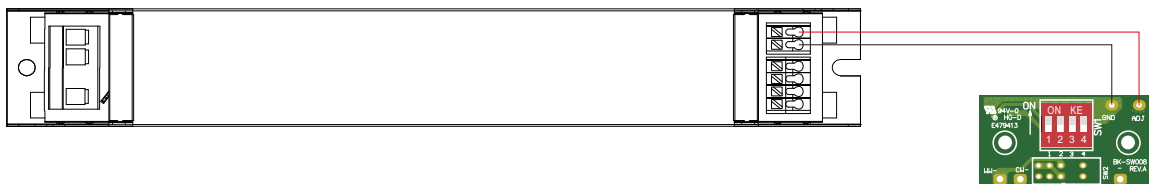
Power terminal

Dip terminal

Unit:mm

Installation diagram of accessories

(Model: BK-SW008A)

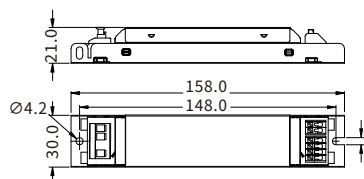


Mechanical Specification

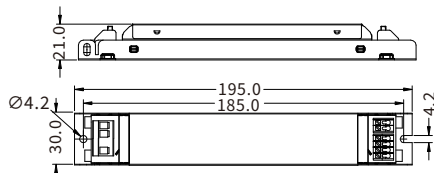
Size(Excluding accessories)

Unit:mm

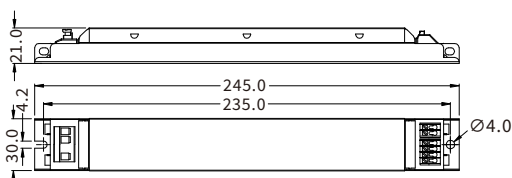
BAN022-A\BAN040-A



BAN060-A



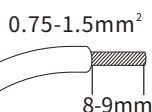
BAN075-A



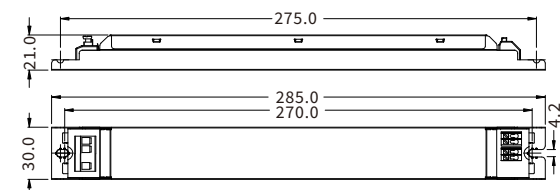
INPUT

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

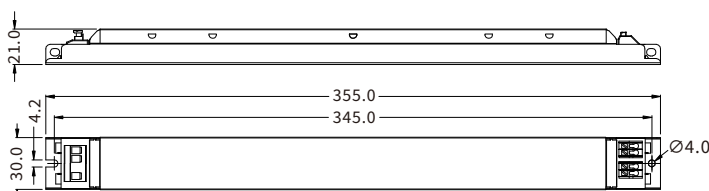
Input wire



BAN100-B



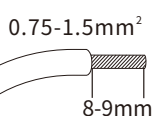
BAN150-A



INPUT

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

Input wire

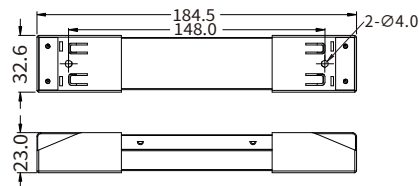


Mechanical Specification

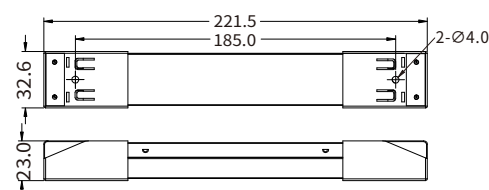
Size(Include accessories)

Unit:mm

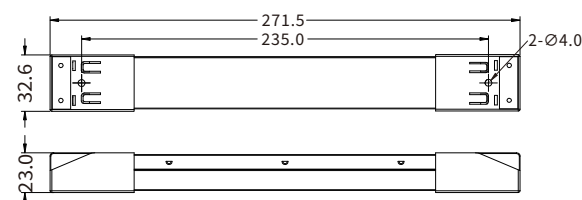
BAN022-A\BAN040-A



BAN060-A



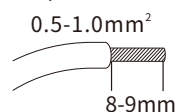
BAN075-A



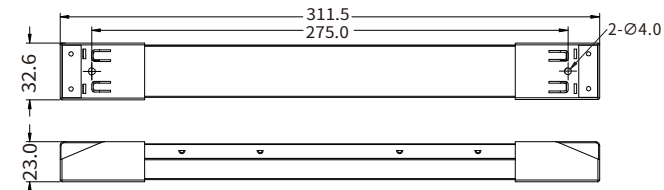
OUTPUT

Numbering	function	colour
1	SW-A	green
2	SW-B	black

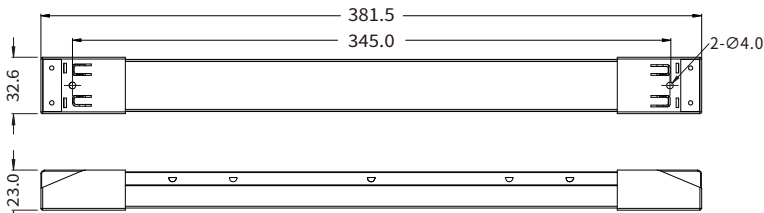
Output wire



BAN100-B



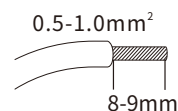
BAN150-A



OUTPUT

Numbering	function	colour
1	SW-A	green
2	SW-B	black

Output wire



Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of $> 0\text{ V}$.

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 T_a at any time.
- The temperature of the mounting surface of the driver should be lower than the temperature of T_a .
- 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 in parallel.

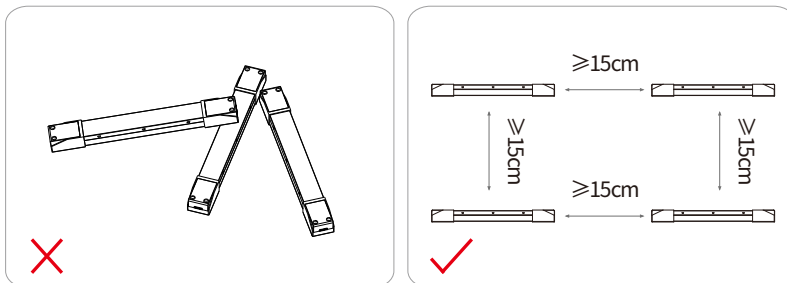


Figure 1

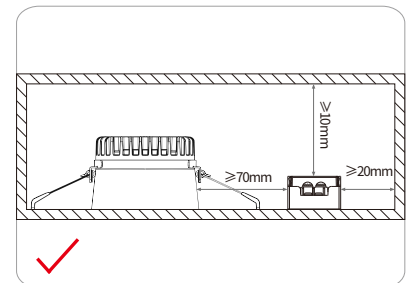
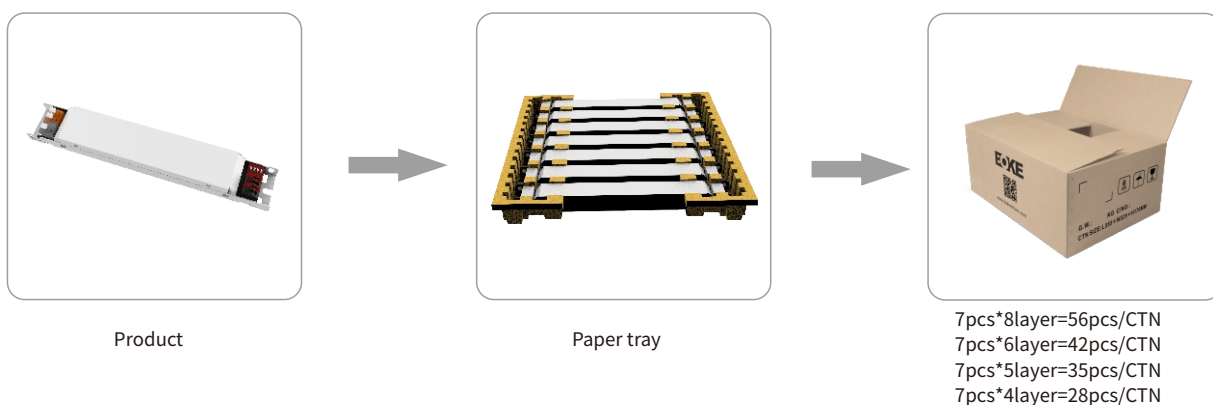


Figure 2

Replace LED module

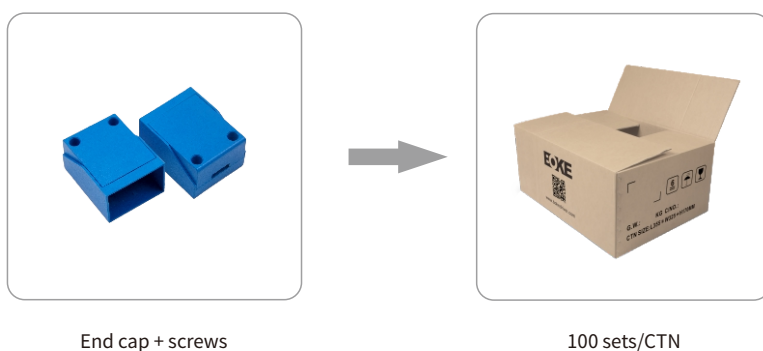
1. Mains off
2. Wait more than 15 seconds
3. Remove LED module
4. Connect LED module again

Packaging



Model	Product size	Weight	Paper tray	Carton size	Packing	N.W	G.W
BAN022-A	L158*W30*H21mm	98g	L345*W75*H29mm	L355*W200*H270mm	56pcs	5.49kg	6.59kg
BAN040-A	L158*W30*H21mm	109g	L345*W75*H29mm	L355*W200*H270mm	56pcs	6.11kg	7.21kg
BAN060-A	L195*W30*H21mm	156g	L345*W75*H29mm	L355*W235*H205mm	42pcs	6.55kg	7.55kg
BAN075-A	L245*W30*H21mm	185g	L345*W75*H29mm	L355*W285*H205mm	42pcs	7.77kg	8.77kg
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



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.