



Features

- Flicker-free output, which meets the requirement of ErP standard
- High PF, high efficiency, low THD
- SELV and Class I design, suitable for use inside of the light
- Compliance with CE, ENEC, UKCA, RCM, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Functions

- Support central emergency application (100% output in DC input)
- Support self-contained emergency application
- Protective features (short-circuit, overload protection)

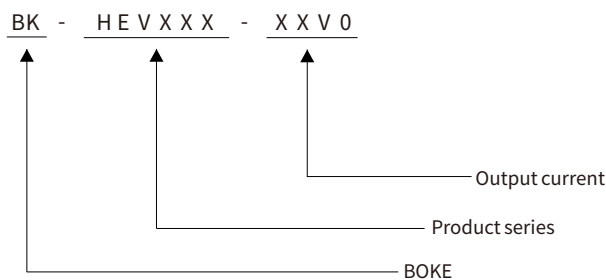
Suitable for lights

- Suitable for CV strip lights, CV linear lights, floor lights, tri-proof lights, bracket lights, etc

Typical applications

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

Model coding rules of HEV series



Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-HEV080-24V0	200-240VAC/220-240VDC	81.6W MAX.	24VDC	3.4A	L241.5*W48*H30mm
BK-HEV080-48V0	200-240VAC/220-240VDC	81.6W MAX.	48VDC	1.7A	L241.5*W48*H30mm
BK-HEV150-24V0	200-240VAC/220-240VDC	150W MAX.	24VDC	6.25A	L241.5*W48*H30mm
BK-HEV150-48V0	200-240VAC/220-240VDC	150W MAX.	48VDC	3.12A	L241.5*W48*H30mm
BK-HEV200-24V0	200-240VAC/220-240VDC	199.2W MAX.	24VDC	8.3A	L281.5*W48*H30mm
BK-HEV200-48V0	200-240VAC/220-240VDC	199.2W MAX.	48VDC	4.15A	L281.5*W48*H30mm

Technical data

Product model	BK-HEV080-24V0	BK-HEV080-48V0
Output parameters		
Regulation method	Constant voltage	Constant voltage
Rated output current	3.4A	1.7A
Rated output voltage	24V	48V
Rated output power	81.6W Max	
Output voltage adjustment	Fixed output	
Output current ripple LF	±2%	
Voltage accuracy	±5%	
Linear regulation	±5%	
Load regulation	±5%	
Flicker-free(typical)	Pst LM = 0.009, SVM = 0.016 ,(The above parameters are obtained by testing with constant voltage light strip)	
Input parameters		
Rated input voltage range	200-240VAC 220-240VDC	
Input voltage range	180-264VAC 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.48A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF(typical)	PF: 0.98,DF: 0.98,see the electrical values below for details	
Input THD(typical)	5% ,see the electrical values below for details	
Efficiency(typical)	91% ,see the electrical values below for details	
In-rush current(typical)	28.8A peak ,300us 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	Full load(Pin):89.7W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)	
Leakage current(typical)	0.34mA	
Isolation resistance	I/P-O/P: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=-20-55°C	
Case temperature	Tc=90°C	
Operating humidity	5-85% RH, not condensing	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing	
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, full load and 25°C of ambient temperature.

Technical data

Product model	BK-HEV150-24V0	BK-HEV150-48V0
Output parameters		
Regulation method	Constant voltage	Constant voltage
Rated output current	6.25A	3.12A
Rated output voltage	24V	48V
Rated output power	150W Max	
Output voltage adjustment	Fixed output	
Output current ripple LF	±2%	
Voltage accuracy	±5%	
Linear regulation	±5%	
Load regulation	±5%	
Flicker-free(typical)	Pst LM = 0.011, SVM = 0.009 ,(The above parameters are obtained by testing with constant voltage light strip)	
Input parameters		
Rated input voltage range	200-240VAC 220-240VDC	
Input voltage range	180-264VAC 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.8A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF(typical)	PF: 0.98,DF: 0.98,see the electrical values below for details	
Input THD(typical)	5% ,see the electrical values below for details	
Efficiency(typical)	92.5% ,see the electrical values below for details	
In-rush current(typical)	45A 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	Full load(Pin):162.2W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)	
Leakage current(typical)	0.26mA	
Isolation resistance	I/P-O/P: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=-20-55°C	
Case temperature	Tc=90°C	
Operating humidity	5-85% RH, not condensing	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing	
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, full load and 25°C of ambient temperature.

Technical data

Product model	BK-HEV200-24V0	BK-HEV200-48V0
Output parameters		
Regulation method	Constant voltage	Constant voltage
Rated output current	8.3A	4. 15A
Rated output voltage	24V	48V
Rated output power	199.2W Max	
Output voltage adjustment	Fixed output	
Output current ripple LF	±2%	
Voltage accuracy	±5%	
Linear regulation	±5%	
Load regulation	±5%	
Flicker-free(typical)	Pst LM = 0.009, SVM = 0.007 ,(The above parameters are obtained by testing with constant voltage light strip)	
Input parameters		
Rated input voltage range	200-240VAC 220-240VDC	
Input voltage range	180-264VAC 200-264VDC	
Input vottage shock	<380 V AC	
Input current	<1.1A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF(typical)	PF: 0.99,DF: 0.99,see the electrical values below for details	
Input THD(typical)	5% ,see the electrical values below for details	
Efficiency(typical)	93% ,see the electrical values below for details	
In-rush current(typical)	58A peak ,460us 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	Full load(Pin):214.2W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)	
Leakage current(typical)	0.32mA	
Isolation resistance	I/P-O/P: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=-20-55°C	
Case temperature	Tc=90°C	
Operating humidity	5-85% RH, not condensing	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensing	
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	

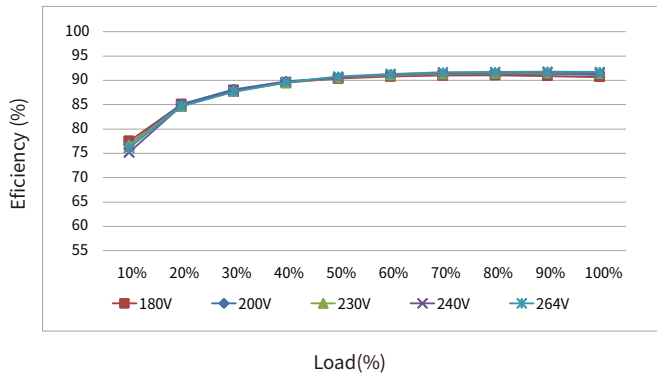
Remarks

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

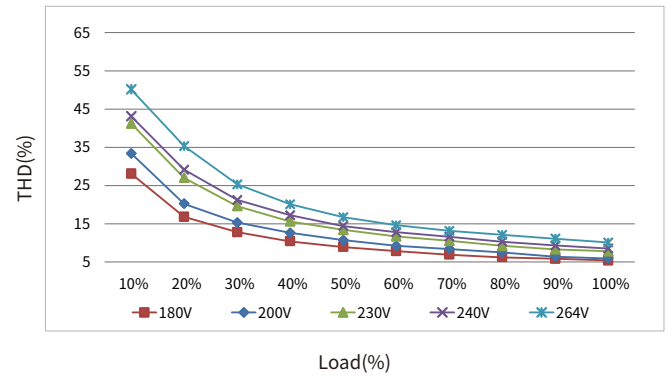
Electrical values

BK-HEV080-24V0

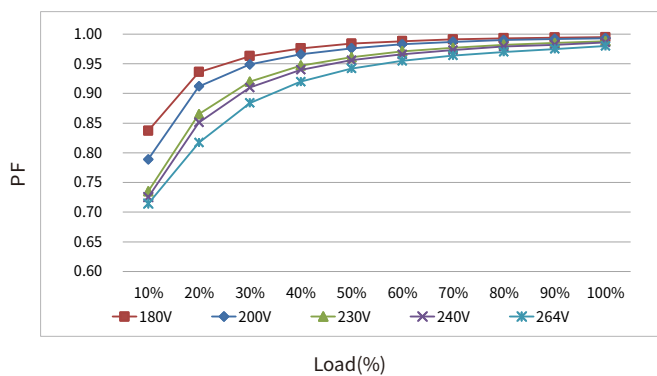
Efficiency vs load



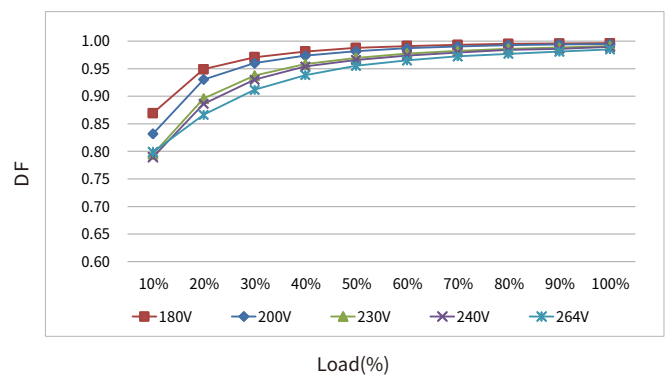
THD vs. Load



Power factor vs. Load

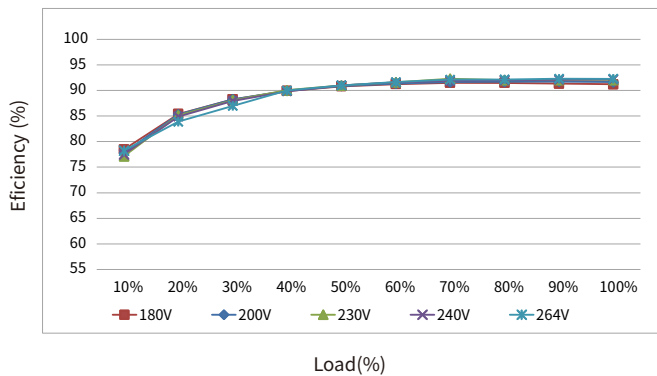


Displacement power vs. Load

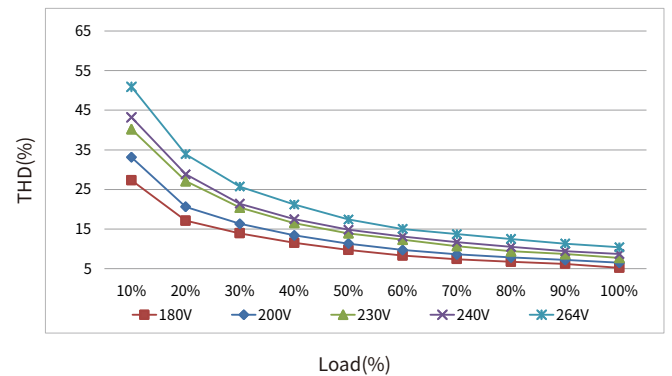


BK-HEV080-48V0

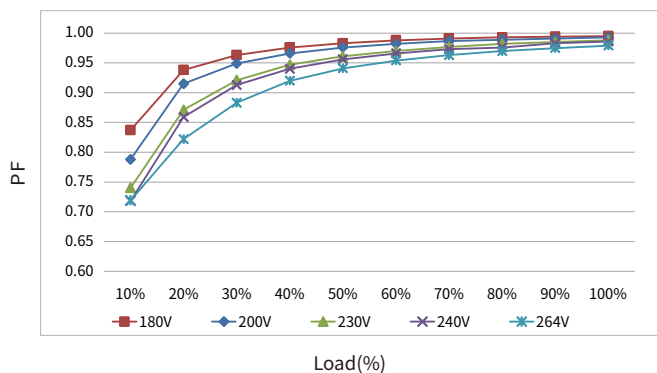
Efficiency vs load



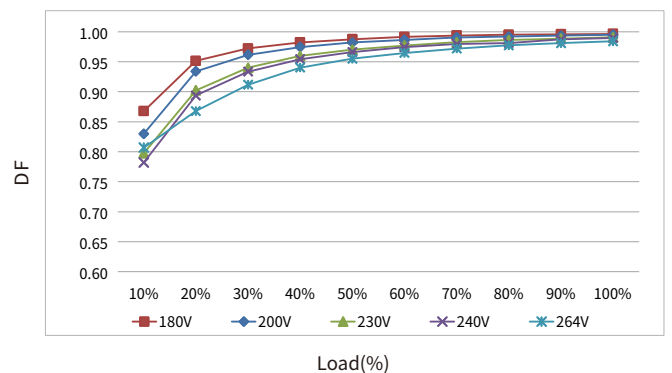
THD vs. Load



Power factor vs. Load



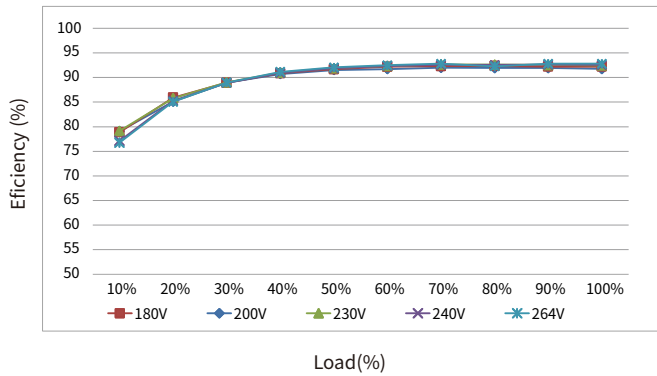
Displacement power vs. Load



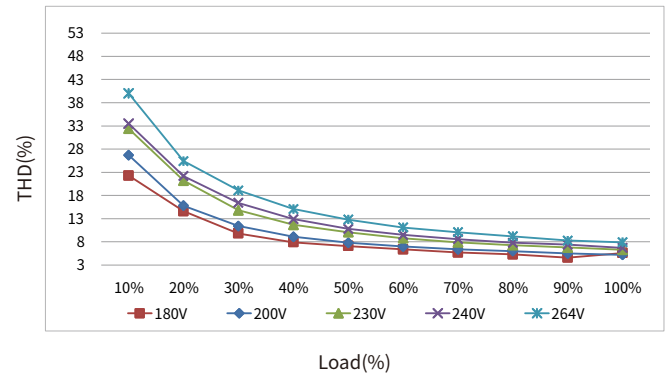
Electrical values

BK-HEV150-24V0

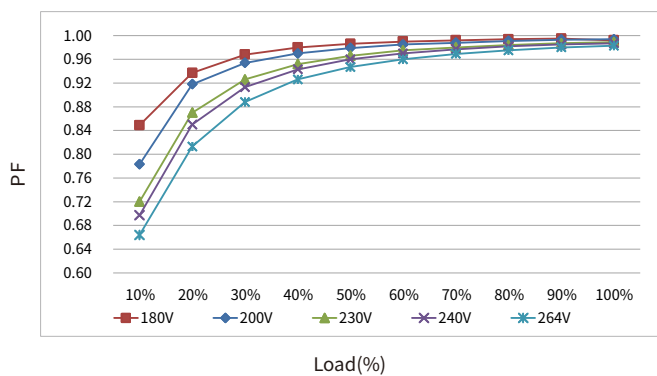
Efficiency vs load



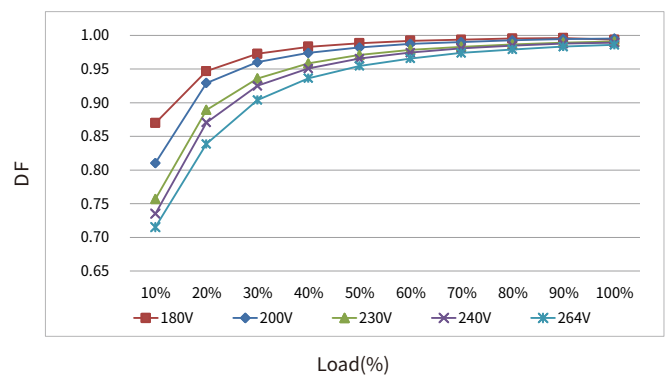
THD vs. Load



Power factor vs. Load

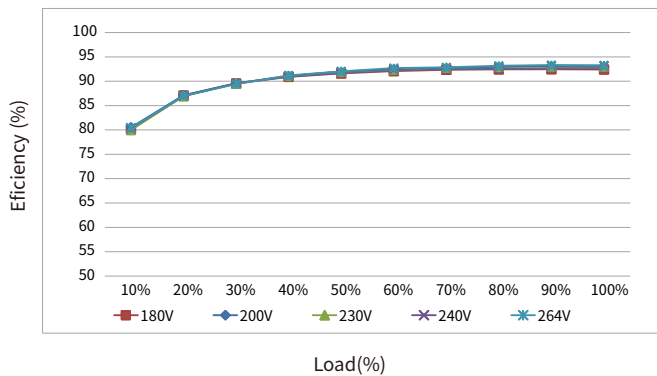


Displacement power vs. Load

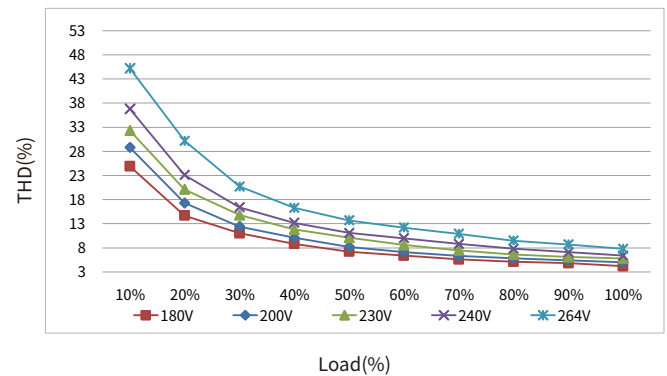


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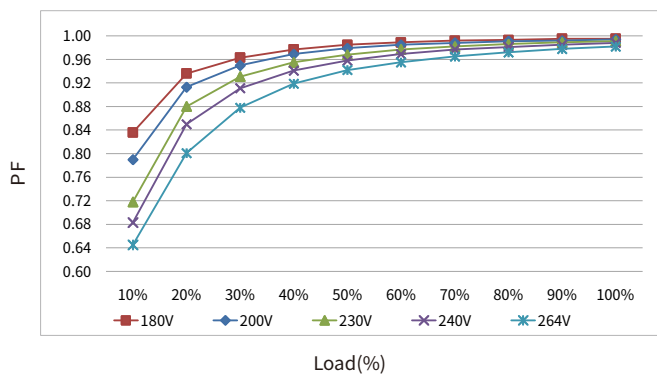
Efficiency vs load



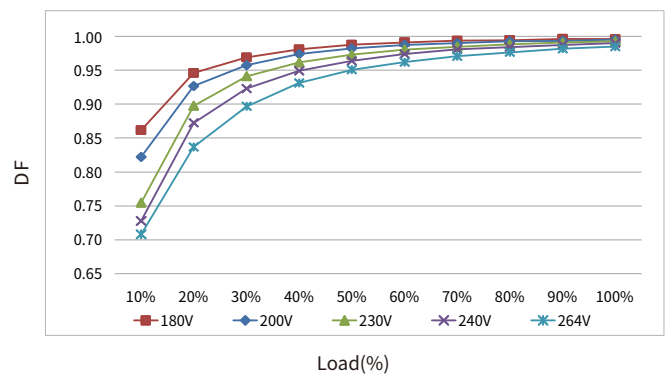
THD vs. Load



Power factor vs. Load



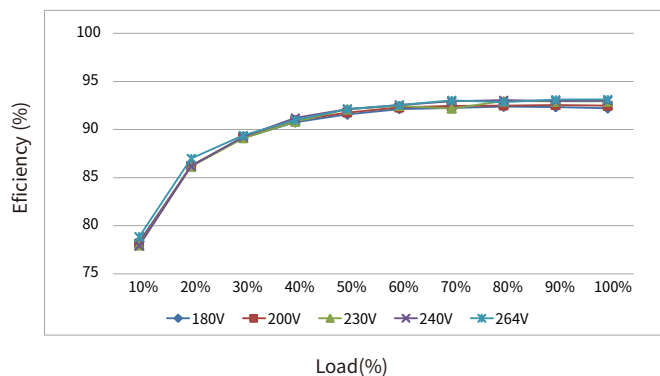
Displacement power vs. Load



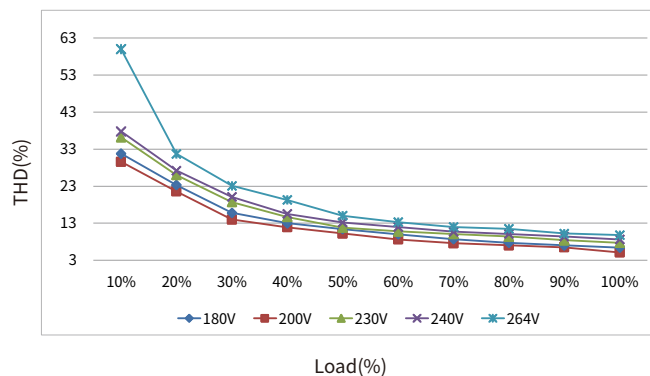
Electrical values

BK-HEV200-24V0

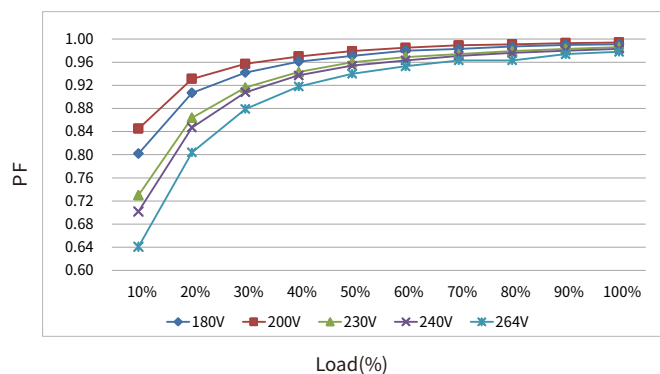
Efficiency vs load



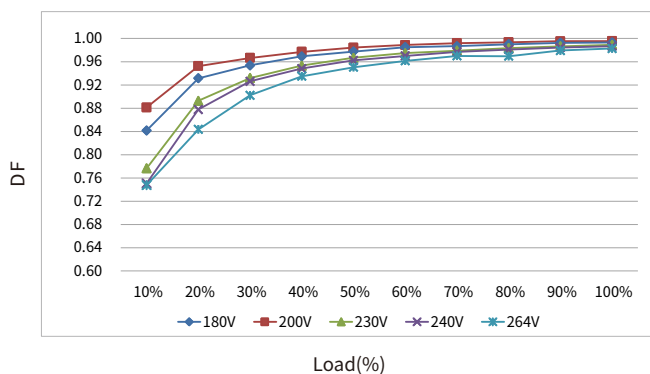
THD vs. Load



Power factor vs. Load

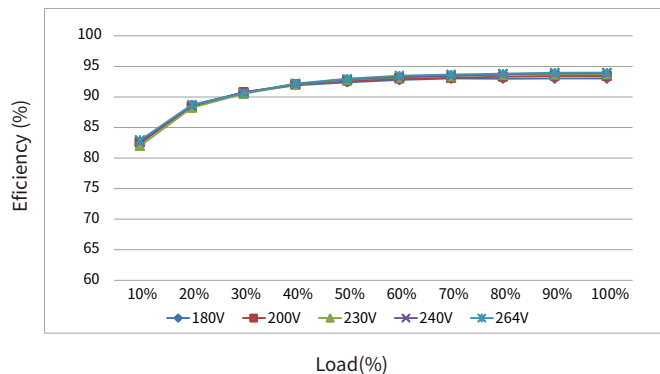


Displacement power vs. Load

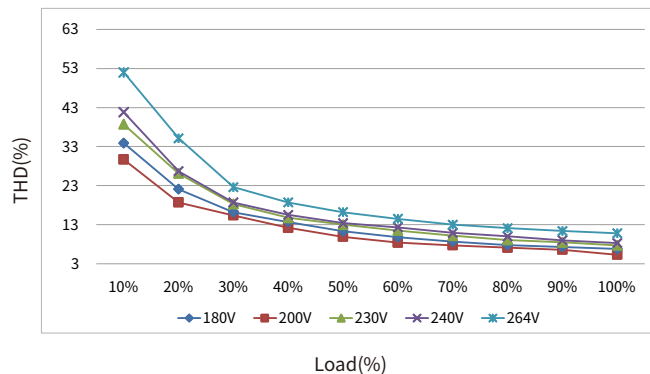


BK-HEV200-48V0

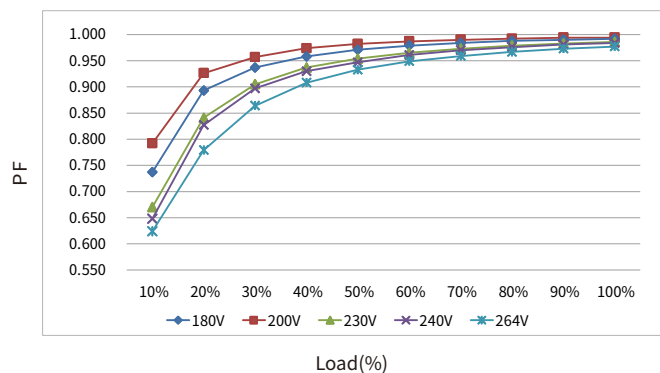
Efficiency vs load



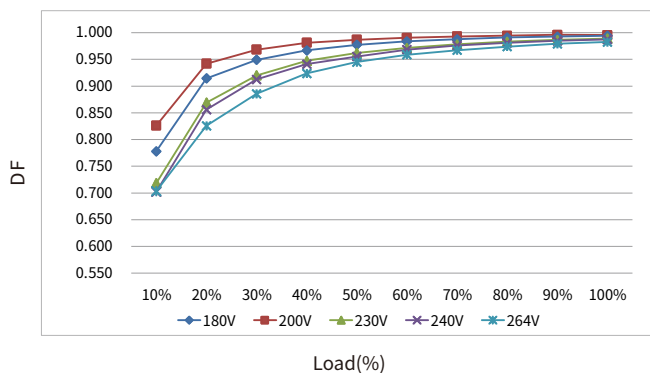
THD vs. Load



Power factor vs. Load



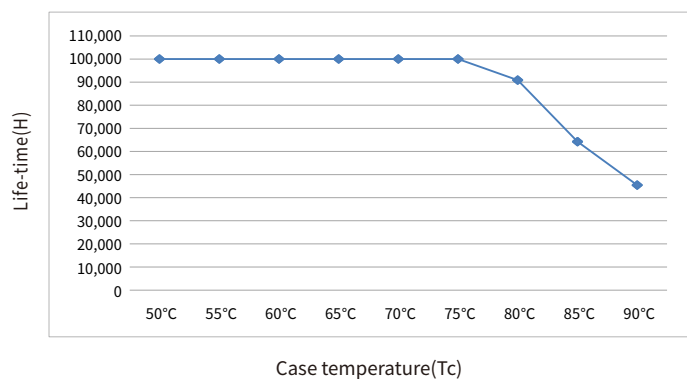
Displacement power vs. Load



Expected life-time

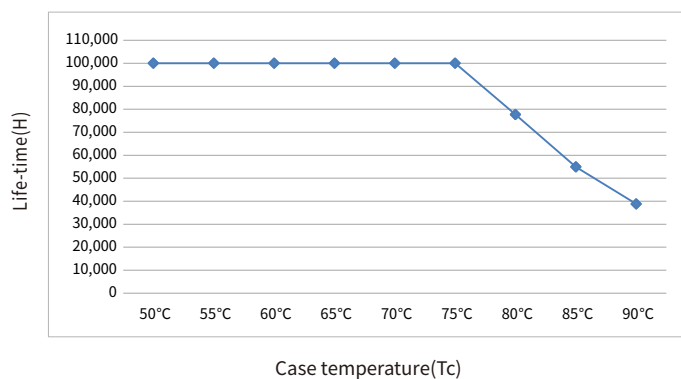
BK-HEV080-24V0

Life-time vs. case temperature



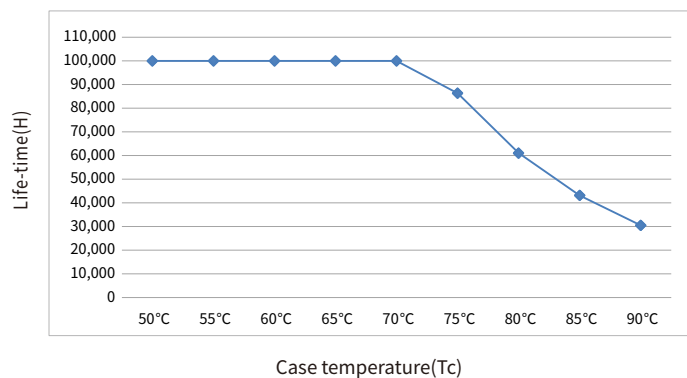
BK-HEV080-48V0

Life-time vs. case temperature



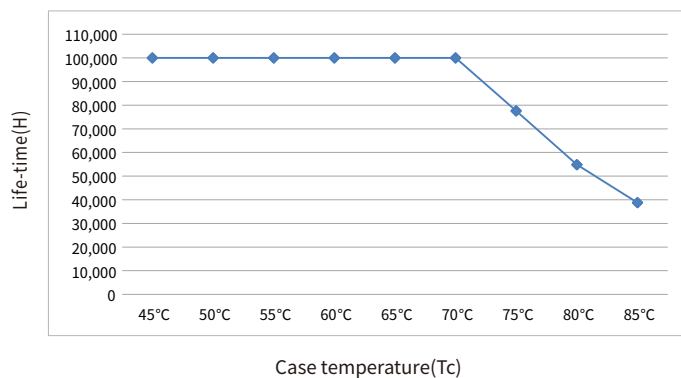
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Life-time vs. case temperature



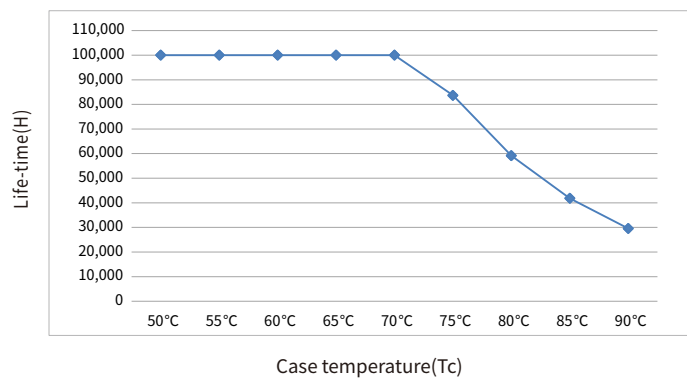
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Life-time vs. case temperature



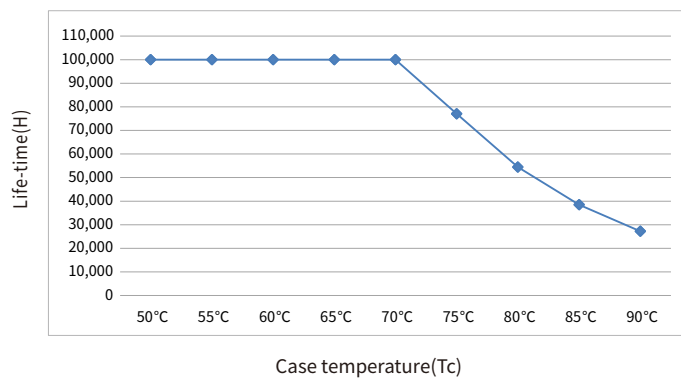
BK-HEV200-24V0

Life-time vs. case temperature



BK-HEV200-48V0

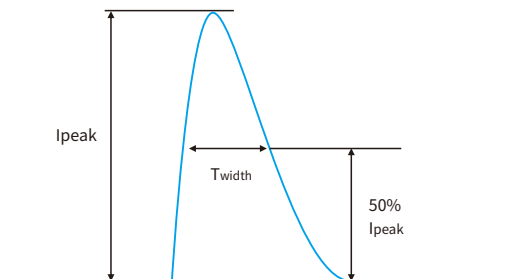
Life-time vs. case temperature



- 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/pcs														
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
BK-HEV080	28.8A	300us	AC 230V, Full load, Cold start, Ta ≤ 30°C, MCB is not installed side by side	8	10	12	15	19	13	16	20	25	31	20	26	32	40	50
BK-HEV150	45A	390us		4	5	6	7	9	6	8	10	12	15	11	14	17	22	27
BK-HEV200	58A	460us		2	3	4	5	6	4	5	6	8	10	8	10	13	16	20



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

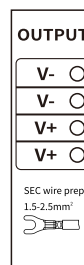
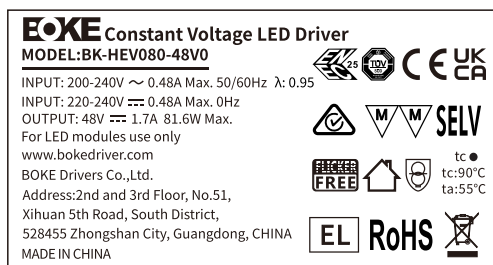
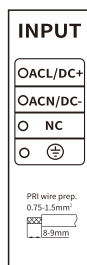
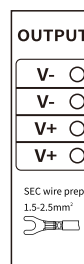
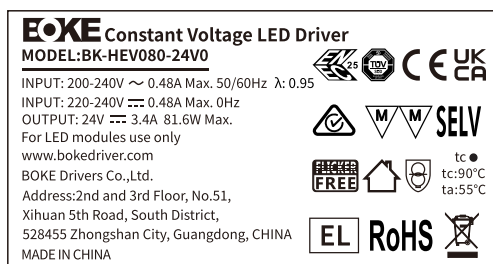
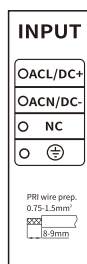
- When the load connected to the driver exceeds the rated power, the driver will enter a hiccup state. After reducing the load power, the driver will resume normal output.

Insulation between circuits

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

Label

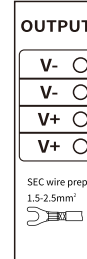
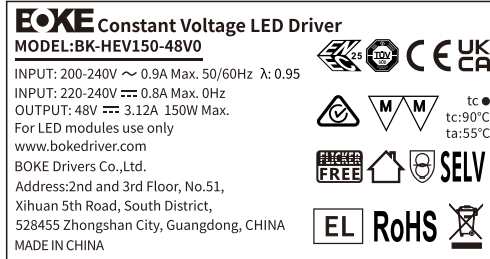
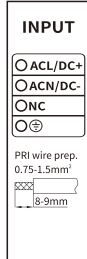
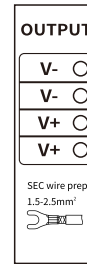
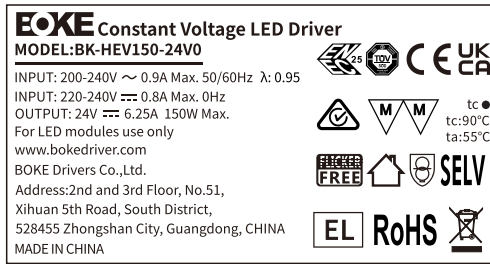
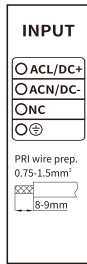
HEV080



Laser engraving technology

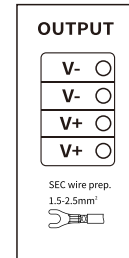
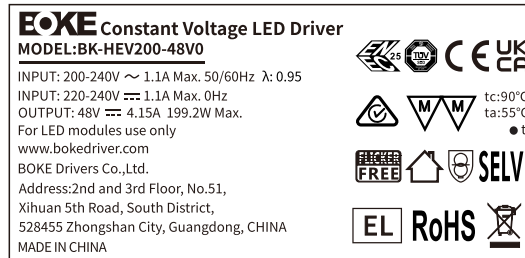
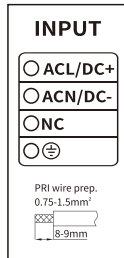
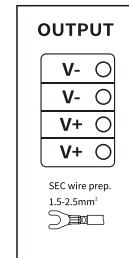
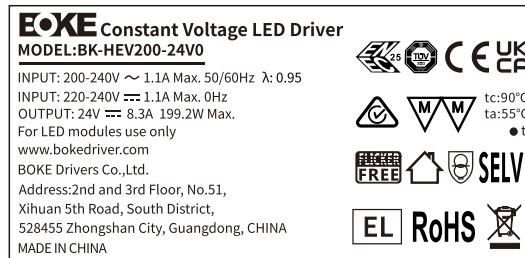
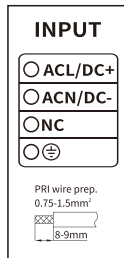
Label

HEV150



Laser engraving technology

HEV200

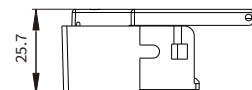
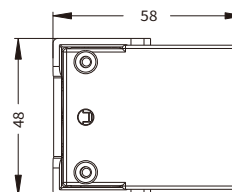


Laser engraving technology

Accessories

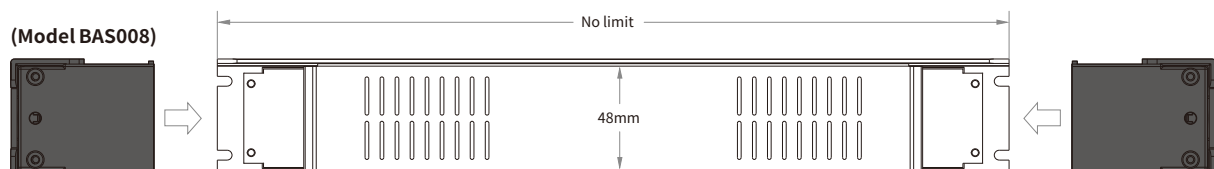


(Model BAS008)



unit:mm

Installation diagram of accessories

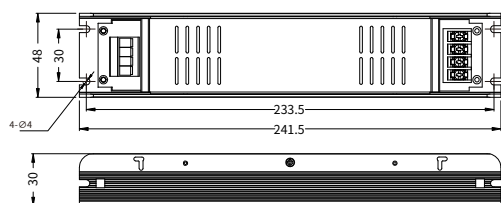


Mechanical Specification

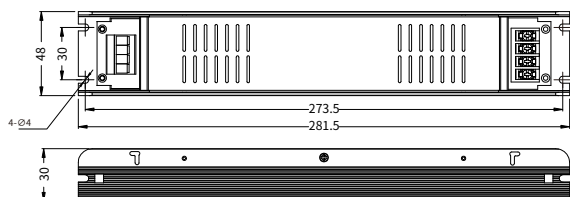
Size(Excluding accessories)

Unit:mm

HEV080/HEV150



HEV200

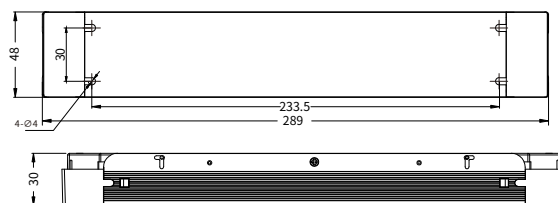


Mechanical Specification

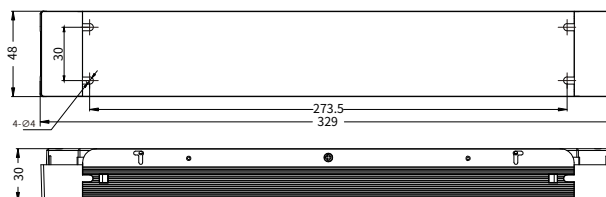
Size(Include accessories)

Unit:mm

HEV080/HEV150



HEV200

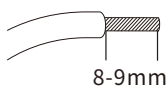


INPUT

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

Input wire

0.75-1.5mm²



OUTPUT

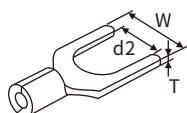
Numbering	function
1	V-
2	V-
1	V+
2	V+

Output wire

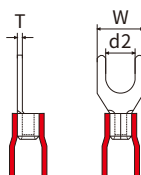
1.5-2.5mm²



Cold-pressed terminal reference



Cold-pressed terminal (bare part)



Cold-pressed terminal(Insulating part)

Product model	Position	Cable cord diameter	Cold-pressed Terminal			
			Model reference	Diameter		Thickness(T)
				Inside diameter(d2)	Outside diameter(W)	
HEV080/HEV150/HEV200	Output	0.5-1.5mm ²	SNB1.25-3.2/SV1.25-3	3.2mm	5.7mm	0.7mm
		1.5-2.5mm ²	SNB2-3.2/SV2-3			0.8mm

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.

Replace LED module

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

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 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 cannot be connected in parallel.

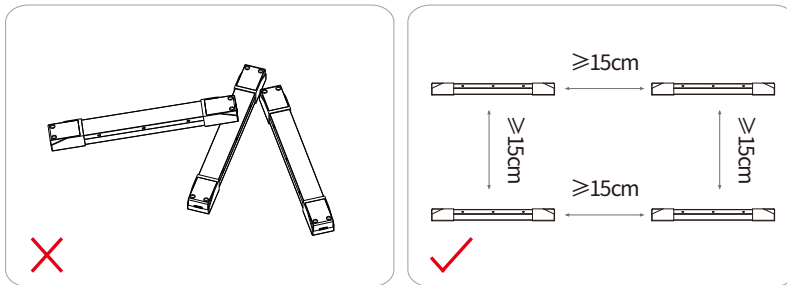


Figure 1

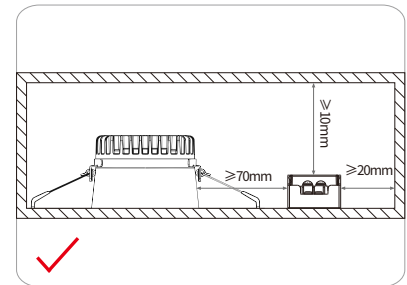
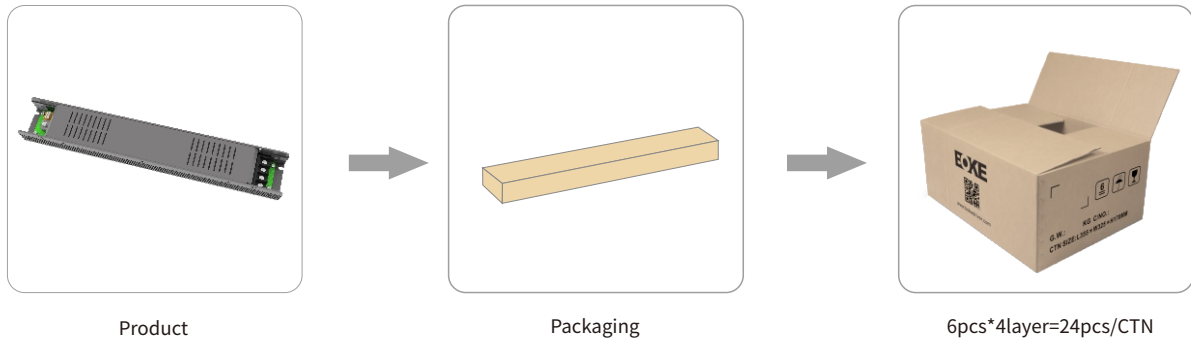


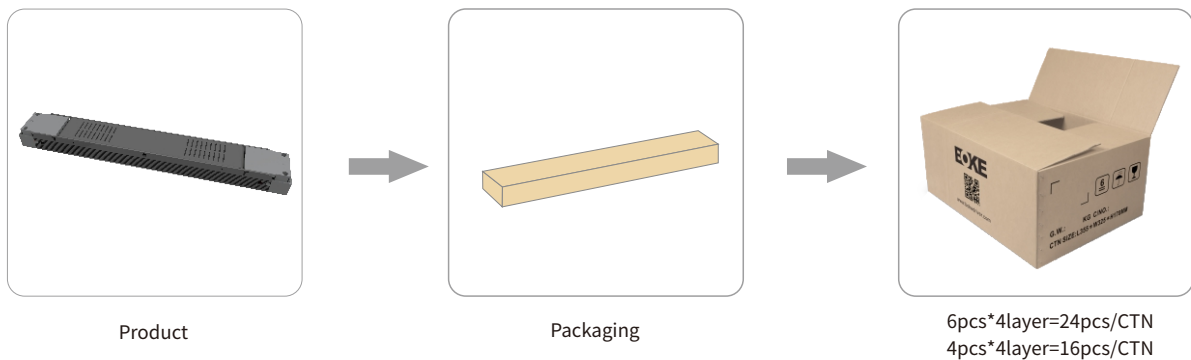
Figure 2

Packaging(Excluding accessories)



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
HEV080	L241.5*W48*H30mm	326g	L300*W54*H37mm	L310*W345*H170mm	24pcs	7.82kg	9.32kg
HEV150	L241.5*W48*H30mm	361g	L300*W54*H37mm	L310*W345*H170mm	24pcs	8.66kg	10.1kg
HEV200	L281.5*W48*H30mm	482g	L300*W54*H37mm	L310*W345*H170mm	24pcs	11.6kg	12.9kg

Packaging(Include accessories)



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
HEV080	L289*W48*H30mm	369g	L300*W54*H37mm	L310*W345*H170mm	24pcs	8.86kg	10.4kg
HEV150	L289*W48*H30mm	404g	L300*W54*H37mm	L310*W345*H170mm	24pcs	9.70kg	10.9kg
HEV200	L329*W48*H30mm	525g	L380*W54*H37mm	L400*W240*H170mm	16pcs	8.40kg	9.90kg

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.