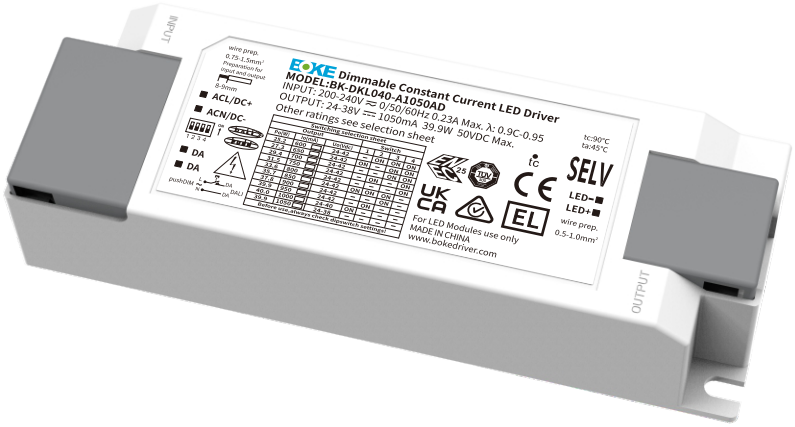
Constant current independent dimmable driver

DKL Series suffix D(DALI-2+pushDIM)



Features

- Support DALI-2+pushDIM dimming mode
- 10-level current output can be realized by DIP-switch
- Soft dimming and flicker-free at any brightness
- Using HPC patented technology, at any dimming level, the brightness of the lights is the same
- Standby power input<0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- Screw-free and pressing type strain relief, supports thicker cables and is easier to install
- Independent input and output strain relief, stronger wiring
- Intelligent LED hot-plug protection function
- SELV and Class II design, suitable for use outside of the light
- Compliance with CE,ENEC,UKCA,RCM,CCC,DALI-2 and other certifications
- IP20 protection grade, indoor use
- 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,no-load,over temperature,hot plug-in protection)

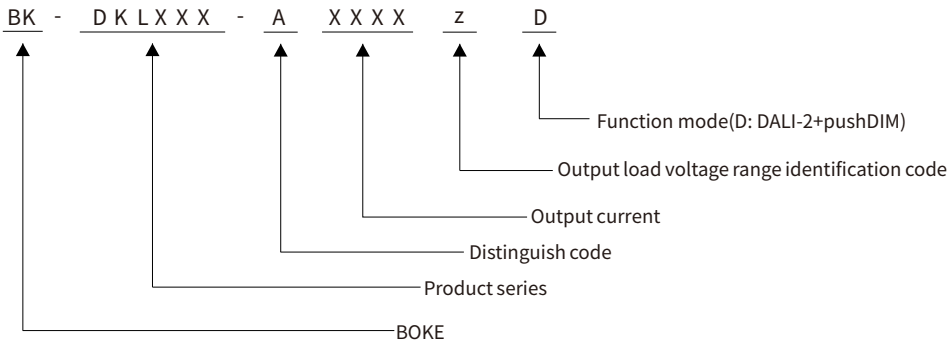
Suitable for lights

- Suitable for lights with independent drivers such as downlights, spotlights, panel lights, etc
- Not suitable for lights with built-in drivers

Typical applications

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

Model coding rules of DKL series



Function list

Model	suffix	DIP-switch	Wired dimming		Advanced functions					Device Configuration	
			DALI-2	pushDIM	EnergyData	corridorDIM	AOC	EL	CLO	DALI interfaces	NFC interfaces
BK-DKL022-A	D	√	√	√							
BK-DKL040-A	DP	√	√	√	√	√	√	√	√	√	
BK-DKL060-A	DN		√	√	√	√	√	√	√	√	√

*The description in this specification is only applicable to the products with the suffix D and the model are DKL022-A,DKL040-A and DKL060-A.

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension	Certifications
BK-DKL022-A0600AD	200-240VAC/DC	22.8W MAX.	24-42VDC	0.225-0.6A	L117*W45.5*H29mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL022-A0600ADP	200-240VAC/DC	22.8W MAX.	24-42VDC	0.225-0.6A	L117*W45.5*H29mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL022-A0600ADN	200-240VAC/DC	22.8W MAX.	24-42VDC	0.225-0.6A	L117*W45.5*H29mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL040-A1050AD	200-240VAC/DC	40W MAX.	24-42VDC	0.6-1.05A	L137*W46*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL040-A1050ADP	200-240VAC/DC	40W MAX.	24-42VDC	0.6-1.05A	L137*W46*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL040-A1050ADN	200-240VAC/DC	40W MAX.	24-42VDC	0.6-1.05A	L137*W46*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL060-A1650AD	200-240VAC/DC	62.7W MAX.	24-42VDC	1.1-1.65A	L157.5*W50.5*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL060-A1650ADP	200-240VAC/DC	62.7W MAX.	24-42VDC	1.1-1.65A	L157.5*W50.5*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DKL060-A1650ADN	200-240VAC/DC	62.7W MAX.	24-42VDC	1.1-1.65A	L157.5*W50.5*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2

*The description in this specification is only applicable to the products with the suffix D and the model are DKL022-A,DKL040-A and DKL060-A.

Technical data

Product model	BK-DKL022-A0600AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.225-0.6A,see the DIP-switch for details
Rated output voltage range	24-42VDC,see the DIP-switch for details
Rated output power	22.8W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(10 levels)
Output current ripple LF	±2%
Output current accuracy	±5%
Linear regulation	±1%
Load regulation	±3%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.403%, Pst LM = 0.000, SVM = 0.011, (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	<0.14A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF:0.96,DF:0.97,see the electrical values below for details
Input THD	15% ,see the electrical values below for details
Efficiency(Max)	86% ,see the electrical values below for details
In-rush current	8.45A peak ,270us 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):26.5W, 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):3750V AC, I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV(Performance criterion:A)
Leakage current	0.45mA (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: 180-264V 47/63Hz
1-10V dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1-100% (minimum current: 6mA)
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=-20-45°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	
Certifications	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
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.
2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

Technical data

Product model	BK-DKL040-A1050AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.6-1.05A,see the DIP-switch for details
Rated output voltage range	24-42VDC,see the DIP-switch for details
Rated output power	40W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(10 levels)
Output current ripple LF	±2%
Output current accuracy	±5%
Linear regulation	±1%
Load regulation	±3%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.169%, 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 votage shock	<380 V AC
Input current	<0.23A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF:0.97,DF:0.98 ,see the electrical values below for details
Input THD	12.5% ,see the electrical values below for details
Efficiency(Max)	89% ,see the electrical values below for details
In-rush current	14.75A peak ,256us 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):44.9W, 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):3750V AC, I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV(Performance criterion:A)
Leakage current	0.45mA (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: 180-264V 47/63Hz
1-10V dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1-100% (minimum current: 10mA)
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=-20-45°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	
Certifications	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
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.
2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

Technical data

Product model	BK-DKL060-A1650AD
Output parameters	
Regulation method	Constant Current
Rated output current range	1.1-1.65A,see the DIP-switch for details
Rated output voltage range	24-42VDC,see the DIP-switch for details
Rated output power	62.7W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(10 levels)
Output current ripple LF	±2%
Output current accuracy	±5%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.512%, Pst LM = 0.196, SVM = 0.005, (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	<0.35A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF:0.97,DF:0.98 ,see the electrical values below for details
Input THD	12.5% ,see the electrical values below for details
Efficiency(Max)	89% ,see the electrical values below for details
In-rush current	28.625A peak ,346us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.75s(AC start),<0.75s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)
Switching cycles	> 50,000 switching cycles
Power consumption	Full load(Pin):70.4W, 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):3750V AC, I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV(Performance criterion:A)
Leakage current	0.53mA (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: 180-264V 47/63Hz
1-10V dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1-100% (minimum current: 16.5mA)
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=-20-45°C
Case temperature	Tc=85°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	
Certifications	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
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

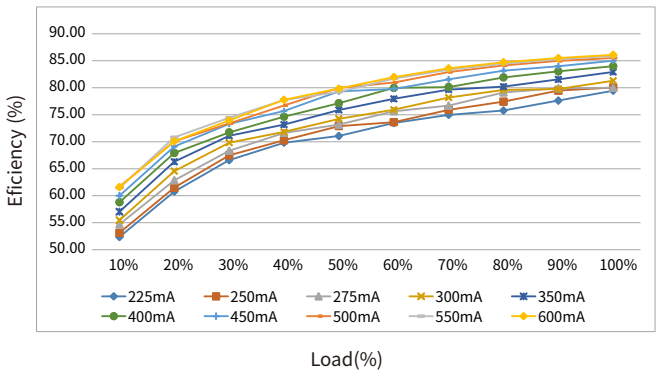
Remarks

1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.
2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

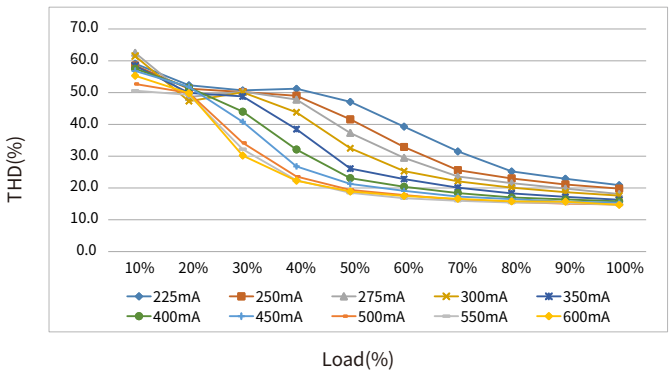
Electrical values

BK-DKL022-A0600AD

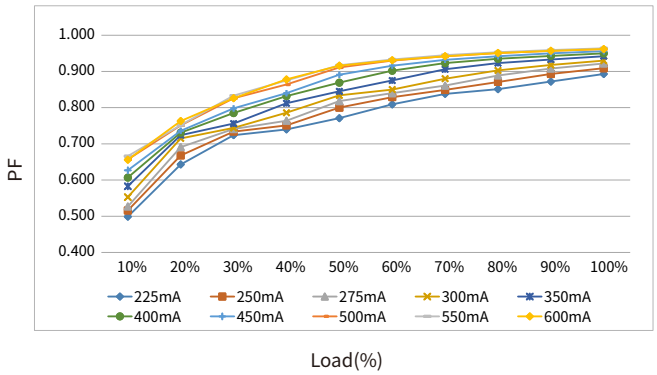
Efficiency vs load



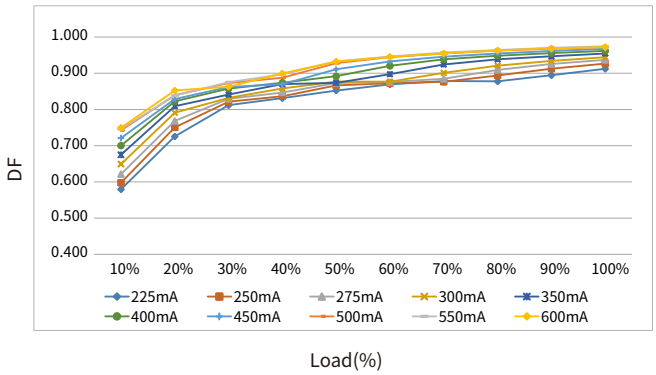
THD vs. Load



Power factor vs. Load

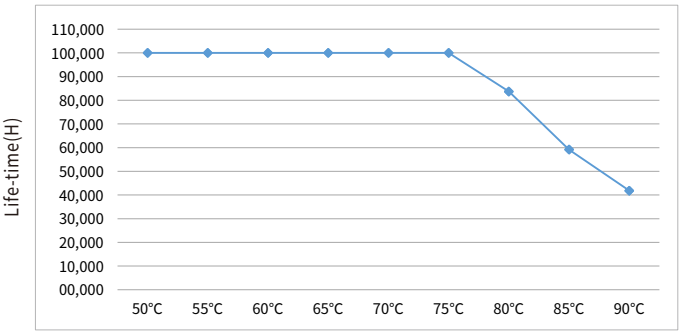


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



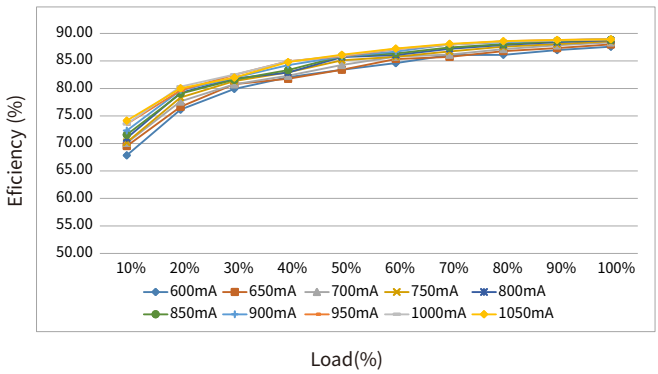
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

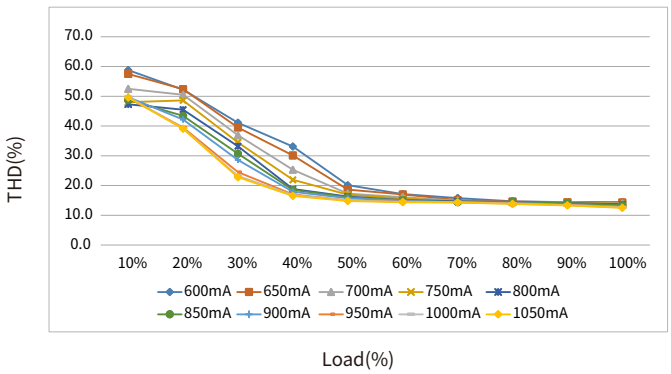
Electrical values

BK-DKL040-A1050AD

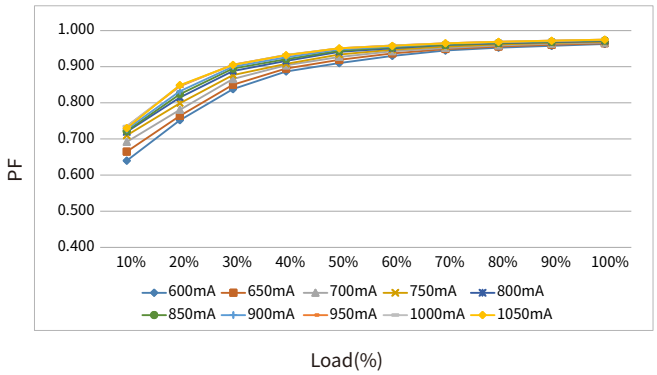
Efficiency vs load



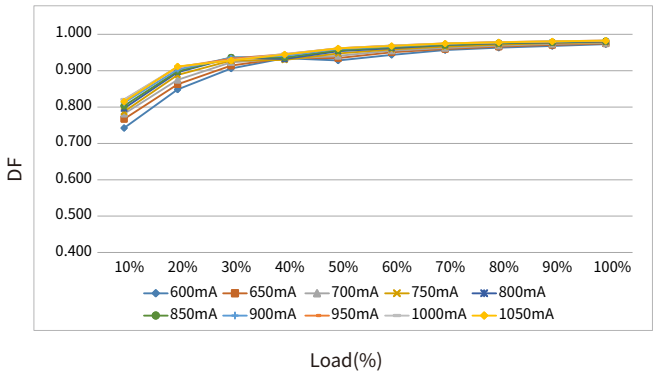
THD vs. Load



Power factor vs. Load

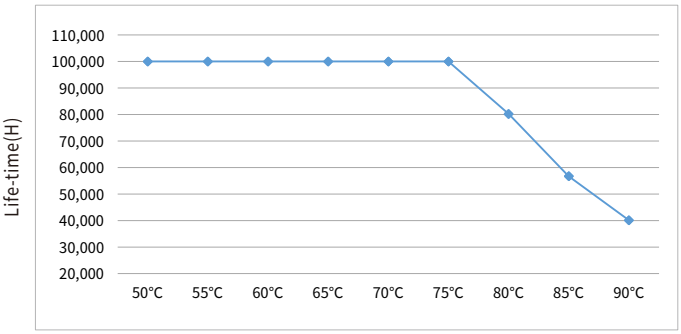


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



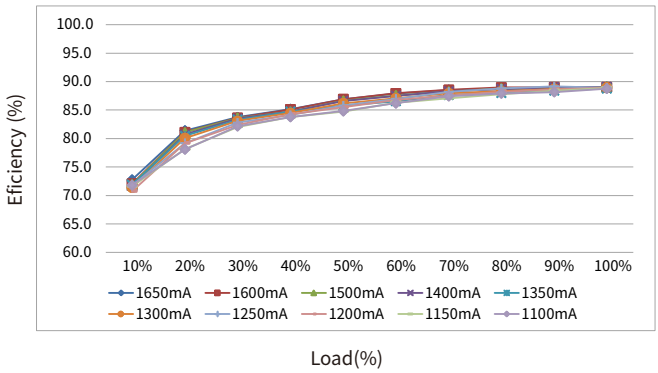
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

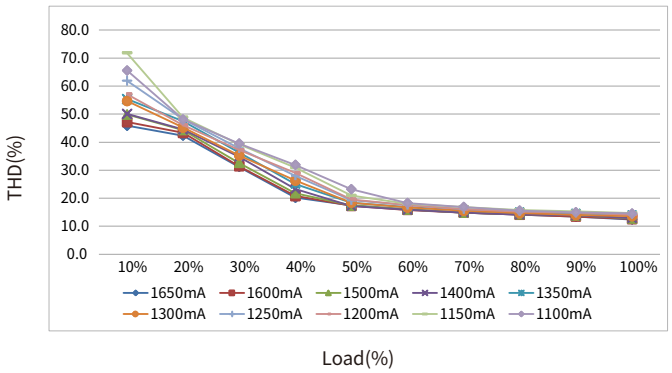
Electrical values

BK-DKL060-A1650AD

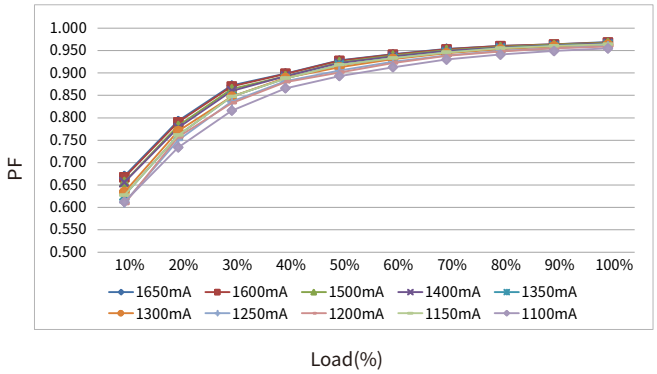
Efficiency vs load



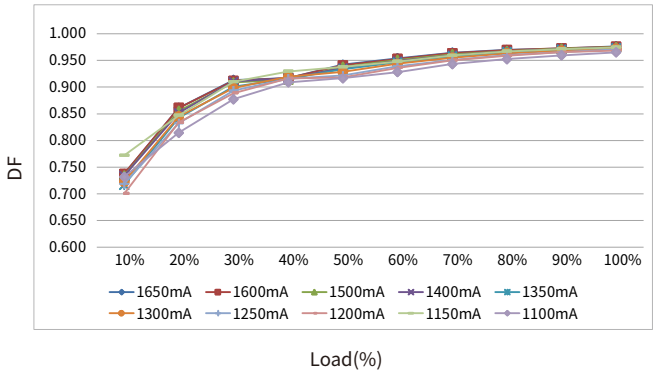
THD vs. Load



Power factor vs. Load

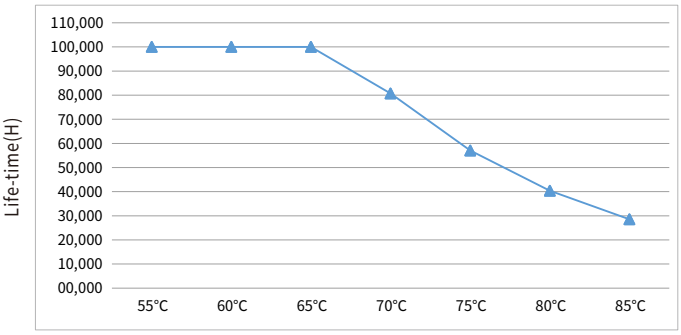


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature

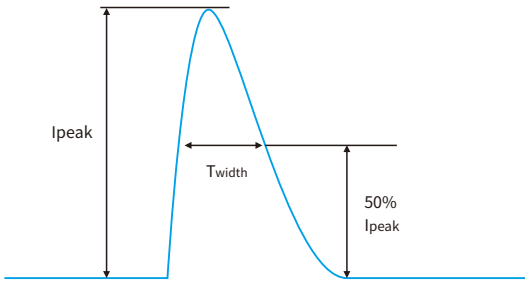


-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of tc to ta 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-DKL022-A0600AD	8.45A	270us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	30	38	47	59	74	49	64	79	98	123	67	88	108	136	168
BK-DKL040-A1050AD	14.75A	256us		18	23	29	36	45	30	39	48	60	75	40	52	64	80	99
BK-DKL060-A1650AD	28.625A	346us		7	9	10	13	16	11	14	17	22	27	22	28	35	44	54



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.

Ouput over temperature

- When the working temperature exceeds the over temperature protection point inside the power supply IC, the power supply enters a protection state such as output derating,output hiccup or output shutdown. After the external temperature is normal, restart and resume operation.

Driver restart method

There are two ways to restart the driver:
- Through the AC input:disconnect the AC of the driver and power it again.
- Through dimming interface.
  DALI:send “OFF” command first,then send “MAX” command.
  pushDIM:short press pushbutton two times,then long press pushbutton.

Output hot plug-in protection

- This function is used to prevent LED light that are far below the driver's no-load voltage burnout when hot plugged into a powered driver output.
- This product comes with a default hot plug protection function at the factory and cannot be turned off.

- Note:
  Due to the hot plug-in protection function of the driver, the following applications may not achieve the expected effect:
  1. When the output of the driver is connected to the color temperature switch:
     When the switch is used to change the color temperature, the hot plug-in protection of the driver will be triggered, and the LED will not be lit.
  2. When the LED driver is used in conjunction with a self-contained (independent) emergency control device:
     Use the self-check test switch of the emergency control device to test the emergency function and when exiting the emergency mode, the driver's hot plug-in protection will be triggered and the LED will not be lit.

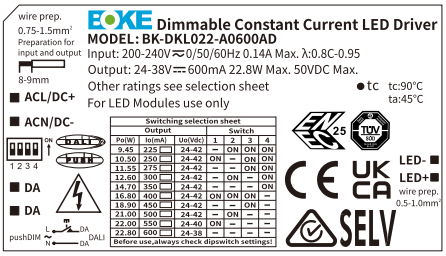
  The above two applications should use drivers without hot plug-in protection function to achieve the expected working effect.
  It is recommended to choose our company's drivers without hot plug-in protection function or those that support configurable closing of hot plug-in function.

Insulation between circuits

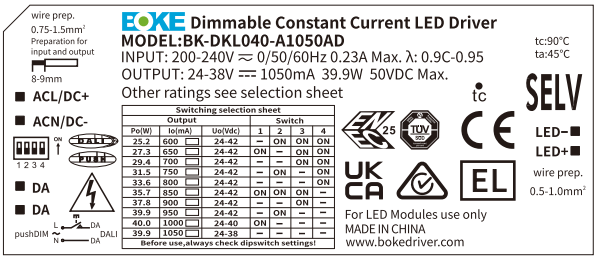
Isolation	Input	Output	Case	DALI	PUSH
Input	-	Double	Double	Basic	-
Output	Double	-	Basic	Double	Double
Case	Double	Basic	-	Double	Double

Label

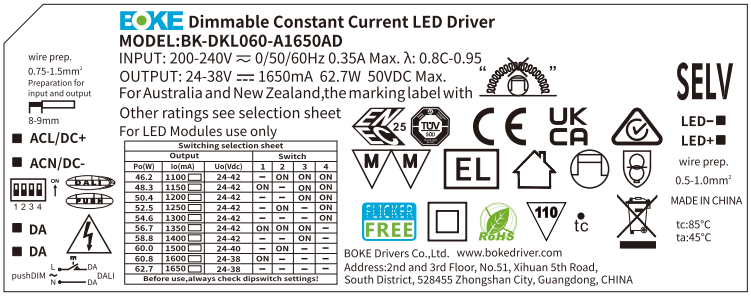
BK-DKL022-A0600AD



BK-DKL040-A1050AD



BK-DKL060-A1650AD



DIP-switch & output current

BK-DKL022-A0600AD

Output			1	2	3	4
Prated(w)	Irated(mA)	Voltage(Vdc)				
9.45	225	24-42	--	ON	ON	ON
10.50	250	24-42	ON	--	ON	ON
11.55	275	24-42	--	--	ON	ON
12.60	300	24-42	--	ON	--	ON
14.70	350	24-42	--	--	--	ON
16.80	400	24-42	ON	ON	ON	--
18.90	450	24-42	--	--	ON	--
21.00	500	24-42	--	ON	--	--
22.00	550	24-40	ON	--	--	--
22.80	600 ★	24-38	--	--	--	--

BK-DKL040-A1050AD

Output			1	2	3	4
Prated(w)	Irated(mA)	Voltage(Vdc)				
25.2	600	24-42	--	ON	ON	ON
27.3	650	24-42	ON	--	ON	ON
29.4	700	24-42	--	--	ON	ON
31.5	750	24-42	--	ON	--	ON
33.6	800	24-42	--	--	--	ON
35.7	850	24-42	ON	ON	ON	--
37.8	900	24-42	--	--	ON	--
39.9	950	24-42	--	ON	--	--
40.0	1000	24-40	ON	--	--	--
39.9	1050 ★	24-38	--	--	--	--

BK-DKL060-A1650AD

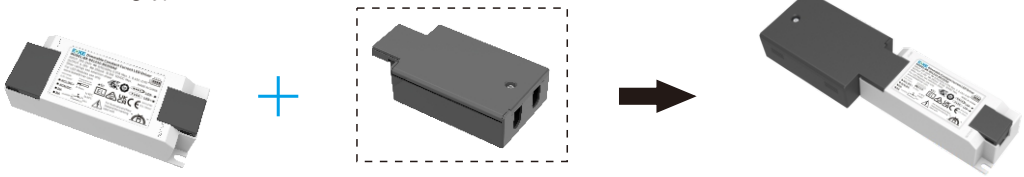
Output			1	2	3	4
Prated(w)	Irated(mA)	Voltage(Vdc)				
46.2	1100	24-42	--	ON	ON	ON
48.3	1150	24-42	ON	--	ON	ON
50.4	1200	24-42	--	--	ON	ON
52.5	1250	24-42	--	ON	--	ON
54.6	1300	24-42	--	--	--	ON
56.7	1350	24-42	ON	ON	ON	--
58.8	1400	24-42	--	--	ON	--
60.0	1500	24-40	--	ON	--	--
60.8	1600	24-38	ON	--	--	--
62.7	1650 ★	24-38	--	--	--	--

Remarks:

1. ★ It means that this item is the factory default current.
2. -- It means that this channel is OFF.

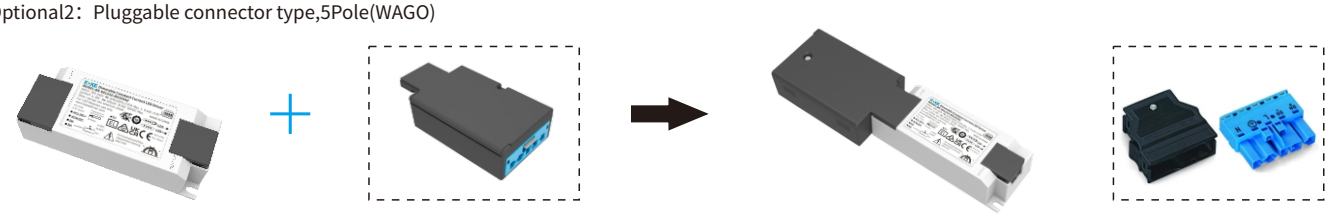
Optional accessories（See the parts specification for details）

Optional 1：Wiring type



Model: BK-BAS010
Wiring type:
Loop-in and loop-out

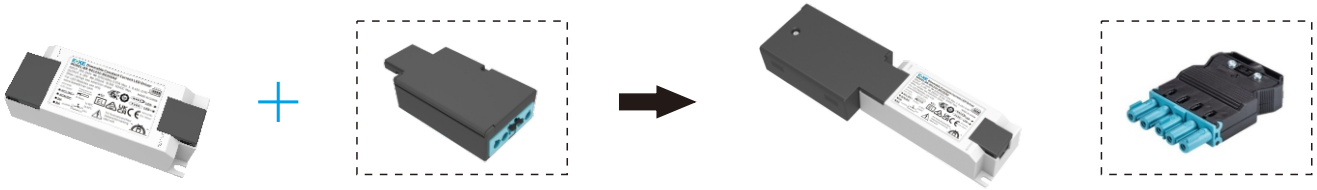
Optional2：Pluggable connector type,5Pole(WAGO)



Model: BK-BAS010A
Pluggable connector type：
WAGO(770-2115/007-000)

Pluggable connector other side：
WAGO(770-1105/022-000)

Optional3：Pluggable connector type,5Pole(Wieland)

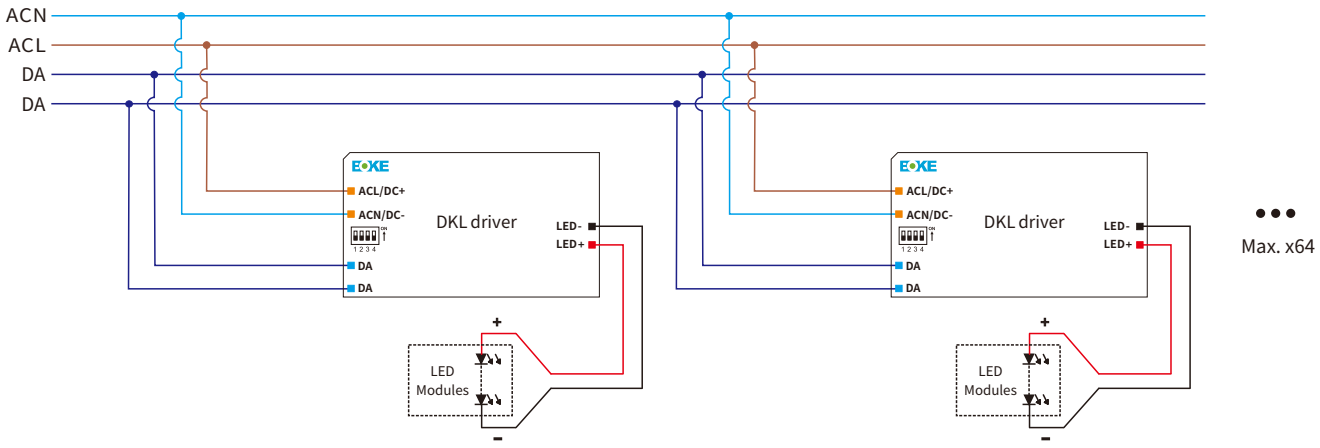


Model: BK-BAS010B
Pluggable connector type：
Wieland(92.052.8658.0)

Pluggable connector other side：
Wieland(92.953.5453.0)

DALI dimming application

Wiring diagram



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 2×1.5mm^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
2×0.50mm^2	max.100m
2×0.75mm^2	max.150m
2×1.00mm^2	max.200m
⩾2×1.50mm^2	max.300m

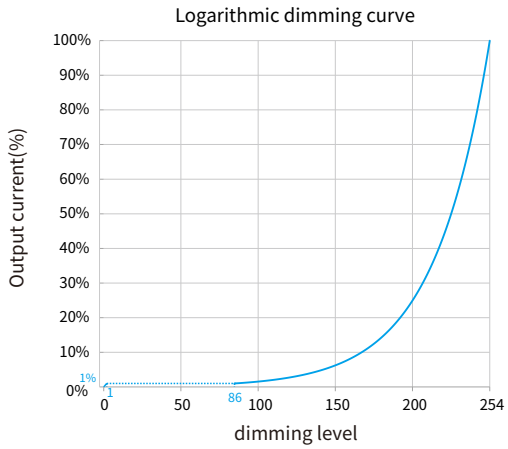
Power-on level :

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.

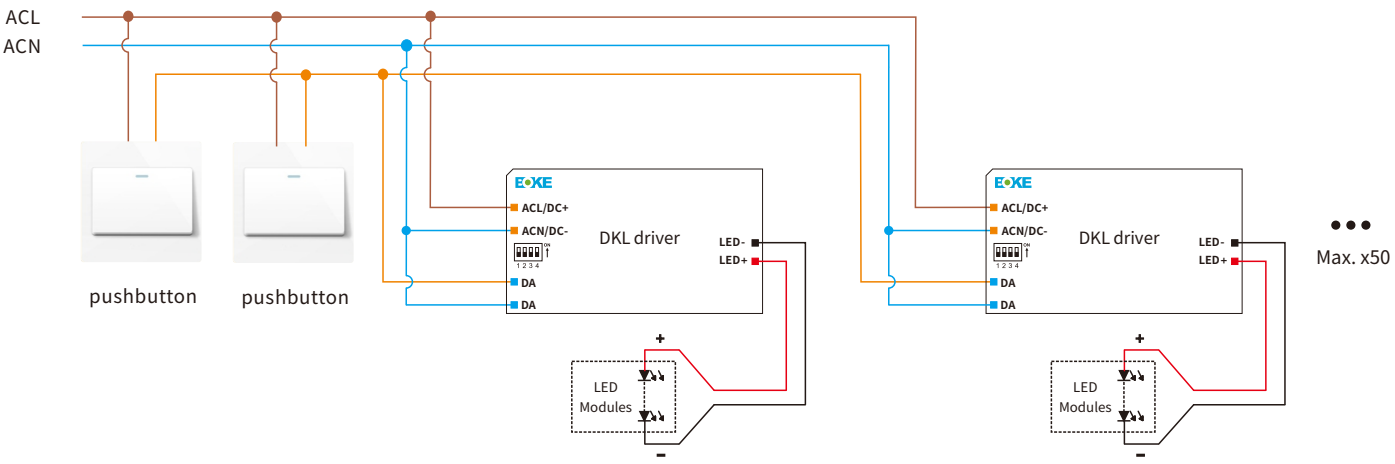
Dimming curve



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, short press the pushbutton 5 times quickly within 3s , the driver will automatically switch to the pushDIM dimming mode.

Remarks:

Max. 50 drivers per pushDIM control line.

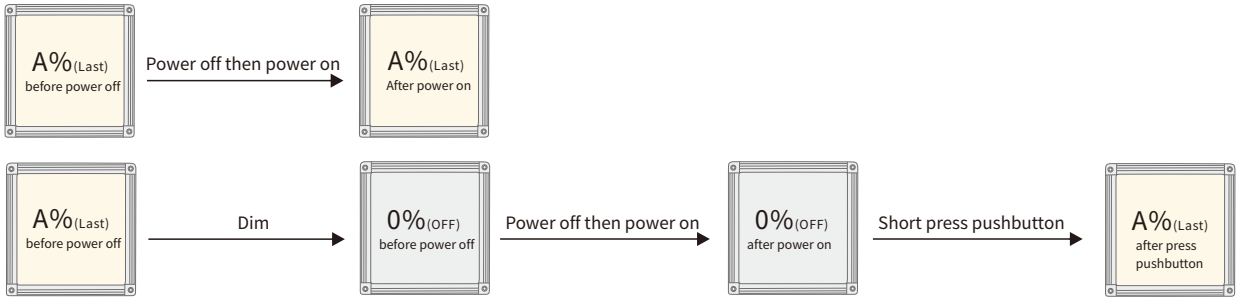
Turn on or turn off:short press pushbutton for 0.2-1s.

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:

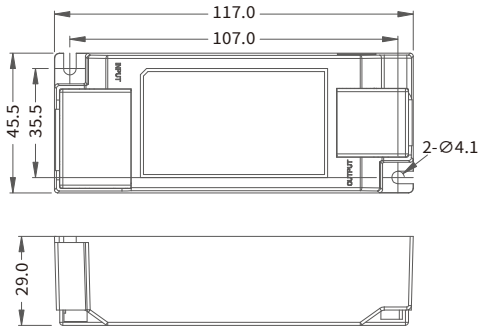
- Long press the pushbutton 15s,all lights output to the brightest state.

Mechanical Specification

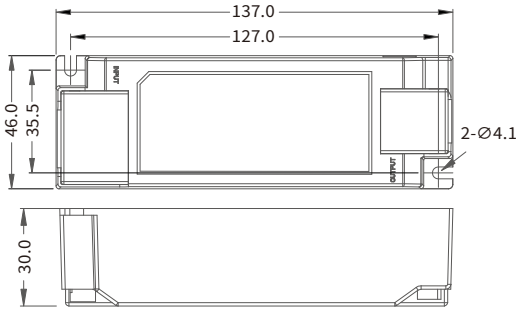
Size(Excluding accessories)

Unit:mm

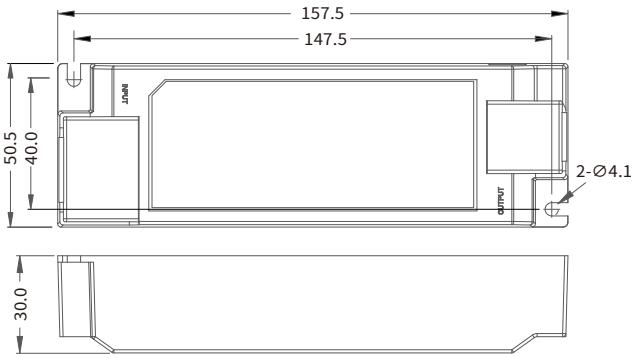
DKL022-A



DKL040-A



DKL060-A

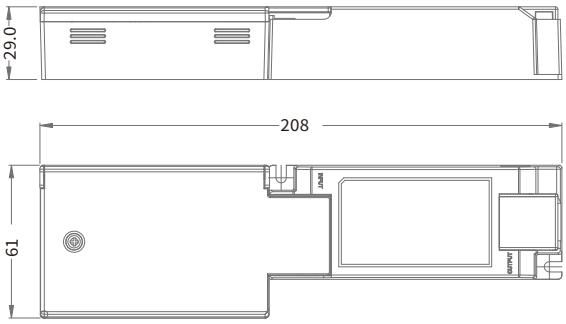


Mechanical Specification

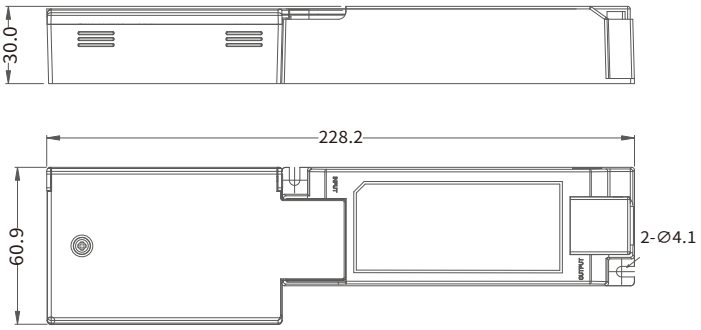
Size(Include accessories)

Unit:mm

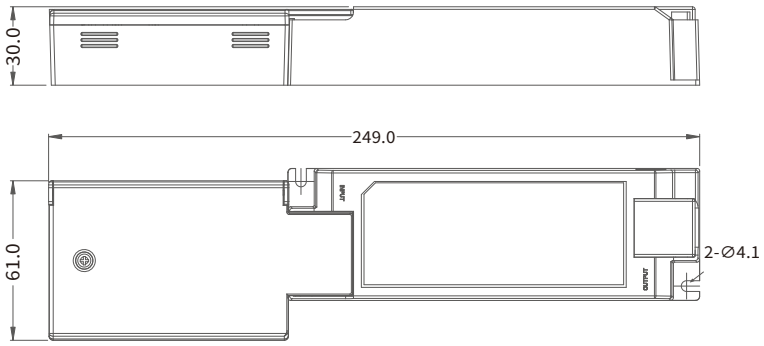
DKL022-A



DKL040-A

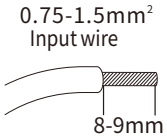


DKL060-A



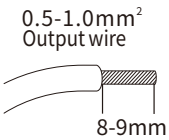
INPUT

Numbering	function	colour
1	ACL/DC+	orange
2	ACN/DC-	orange
3	DA	blue
4	DA	blue



OUTPUT

Numbering	function	colour
1	LED-	black
2	LED+	red



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.

Mounting screw specifications and torque

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

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 45°C
- 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.

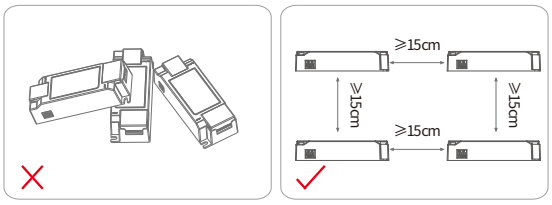


Figure 1

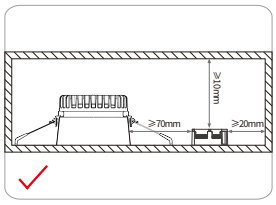
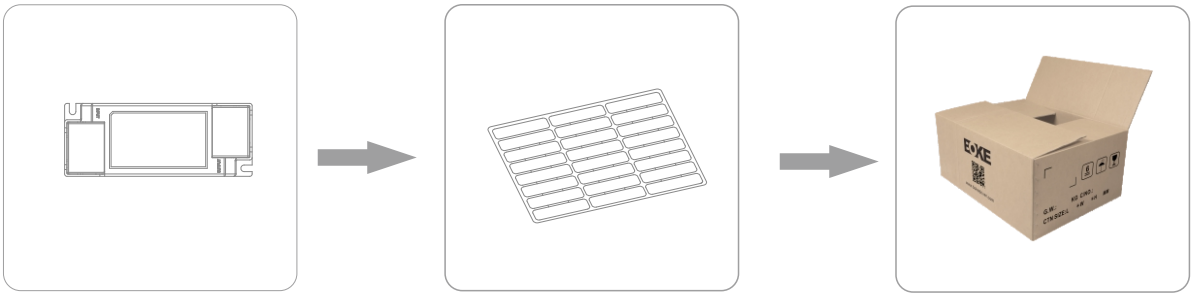


Figure 2

Packaging(Excluding accessories)

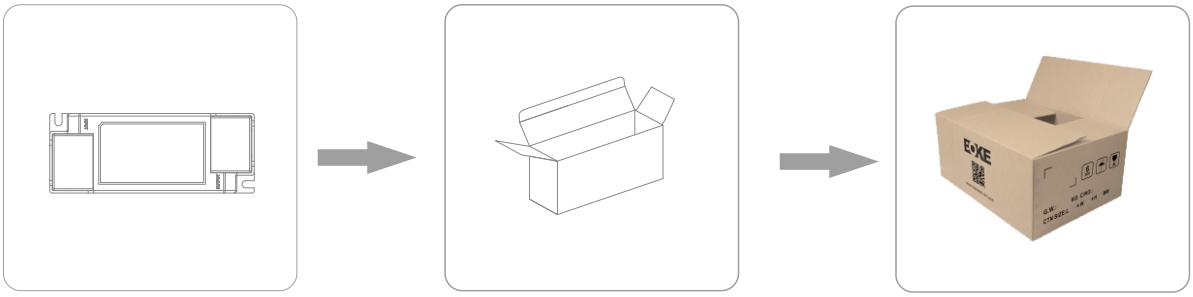
Optional 1: factory default



Product | Blister | 24pcs×3layer=72pcs/CTN
18pcs×3layer=54pcs/CTN

Model	Product size	Weight	Blister size	Carton size	Qty/carton	N.W	G.W
DKL022-A	L117*W45.5*H29mm	98g	L430*W340*H47mm	L450*W350*H180mm	72pcs	7.06kg	8.41kg
DKL040-A	L137*W46*H30mm	132g	L430*W340*H48mm	L450*W350*H180mm	54pcs	7.13kg	8.51kg
DKL060-A	L157.5*W50.5*H30mm	192g	L430*W340*H48mm	L450*W350*H180mm	54pcs	10.4kg	11.7kg

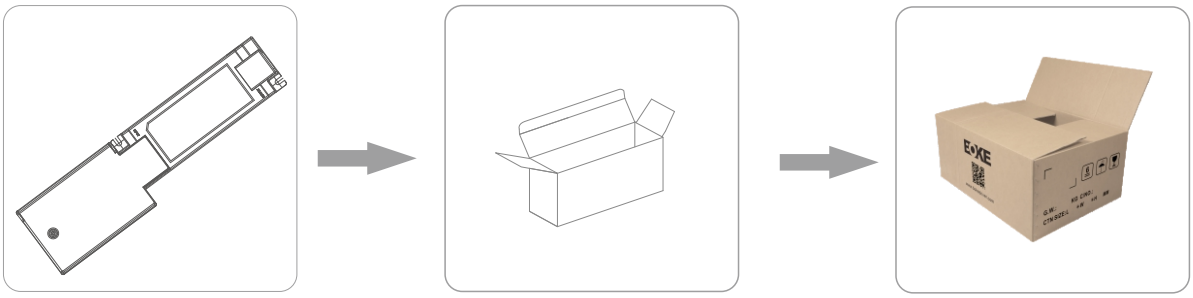
Optional 2:



Product | Packaging | 60pcs×1layer=60pcs/CTN
14pcs×4layer=56pcs/CTN
18pcs×3layer=54pcs/CTN

Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DKL022-A	L117*W45.5*H29mm	98g	L140*W35*H50mm	L345*W310*H170mm	54pcs	5.29kg	6.73kg
DKL040-A	L137*W46*H30mm	132g	L169*W42*H55mm	L450*W350*H180mm	60pcs	7.92kg	9.33kg
DKL060-A	L157.5*W50.5*H30mm	192g	L178*W59*H50mm	L440*W375*H222mm	56pcs	10.8kg	12.1kg

Packaging(Include accessories)



Product　　Packaging　　10pcs×4layer=40pcs/CTN

Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DKL022-A	L208*W61*H29mm	156g	L245*W40*H90mm	L425*W265*H380mm	40pcs	6.24kg	7.49kg
DKL040-A	L228.2*W60.9*H30mm	194g	L245*W40*H90mm	L425*W265*H380mm	40pcs	7.76kg	8.98kg
DKL060-A	L249*W61*H30mm	251g	L255*W40*H90mm	L425*W265*H380mm	40pcs	10.0kg	11.3kg

Additional information

1. This product can only be used outside the light body, Can not be used inside of the light, and it must be used within the specified working environment.
2. The life and MTBF of the product are for reference only, and do not represent a warranty statement.
3. For more information, please send an email to info@bokedriver.com.