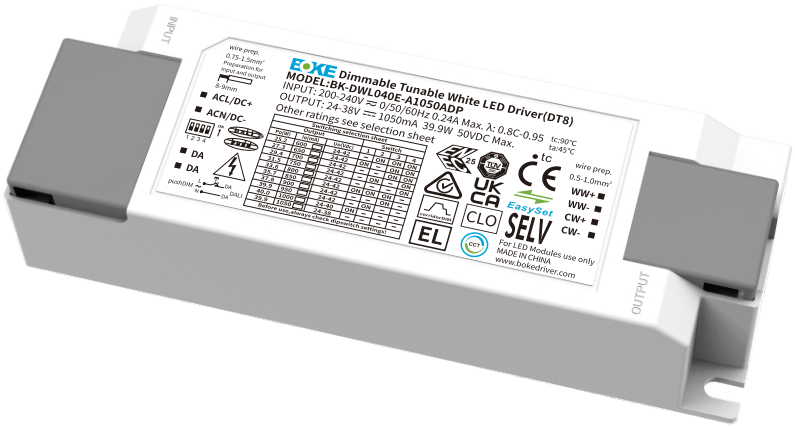
Constant current independent color temperature driver

DWL Series suffix DP(DALI-2+pushDIM+pushCCT+Energy Data+EL+CLO+corridorDIM +DALI programmable)



Features

- Support DALI-2+pushDIM+pushCCT mode
- **Support Energy DATA function and energy-reporting reading(DALIPart252)**
- **Support Luminaire data reading(DALIPart251),support diagnostics-maintenance reading(DALIPart253)**
- Support advanced functions such as corridorDIM,EL,CLO
- The output current programming can be realized through the DALI interface
- 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 DT8)
- PUSH(pushDIM,pushCCT,corridorDIM)

Functions

- Support DALI part251,252,253
- PUSH dimming (pushDIM) and PUSH color temperature (pushCCT) with memory
- Support central emergency application
- Support self-contained emergency application
- Emergency lighting(EL)
- Constant light output function(CLO)
- Corridor dimming (corridorDIM)
- Programming via DALI(EasySet)
- Protective features (short-circuit,no-load, hot plug-in protection)

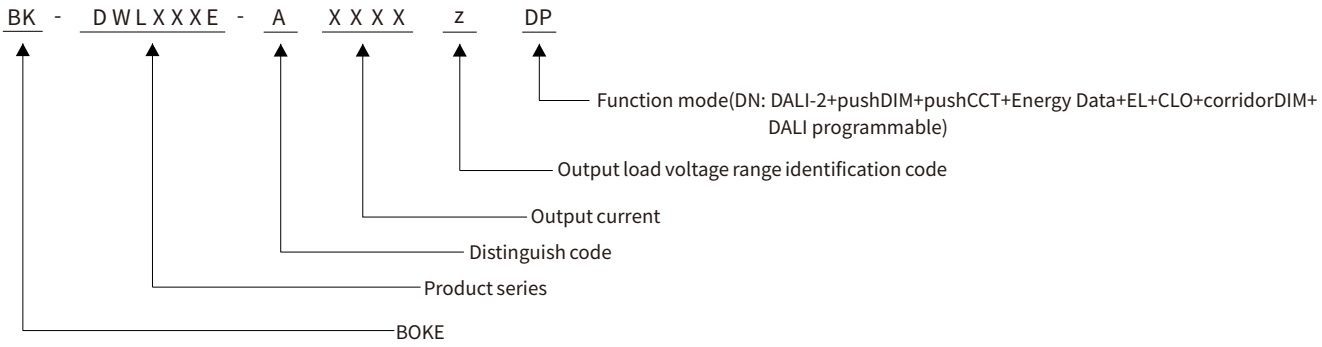
Suitable for lights

- 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	Energy Data	corridorDIM	AOC	EL	CLO	DALI interfaces	NFC interfaces
BK-DWL022E-A	**DP**	√	√	√	√	√	√	√	√	√	
BK-DWL040E-A	DN		√	√	√	√	√	√	√	√	√

*The description in this specification is only applicable to the products with the suffix DP and the model are DWL022E-A,DWL040E-A.

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension	Certifications
BK-DWL022E-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-DWL022E-A0600ADN	200-240VAC/DC	22.8W MAX.	24-42VDC	0.1-0.6A	L117*W45.5*H29mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DWL040E-A1050ADP	200-240VAC/DC	40W MAX.	24-42VDC	0.6-1.05A	L137*W46*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2
BK-DWL040E-A1050ADN	200-240VAC/DC	40W MAX.	24-42VDC	0.4-1.05A	L137*W46*H30mm	CE, ENEC, UKCA, RCM, CCC, EL, DALI-2

*The description in this specification is only applicable to the products with the suffix DP and the model are DWL022E-A,DWL040E-A.

Technical data

Product model	BK-DWL022E-A0600ADP
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	EasySet Programming/DIP S.W(10 levels)
Output current ripple LF	±2%
Output current accuracy	±5%
Linear regulation	±3%
Load regulation	±3%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.187%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.001, 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 200-264VDC
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)	84% ,see the electrical values below for details
In-rush current	8.13A 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):27.1W, 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
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), DALI part251,252,253
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-DWL040E-A1050ADP
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	EasySet Programming/DIP S.W(10 levels)
Output current ripple LF	±2%
Output current accuracy	±5%
Linear regulation	±2%
Load regulation	±3%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.215%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.012, 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 200-264VDC
Input votage shock	<380 V AC
Input current	<0.24A (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% ,see the electrical values below for details
Efficiency(Max)	87% ,see the electrical values below for details
In-rush current	15.27A peak ,258us 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):46W, 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
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), DALI part251,252,253
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172
RF	N/A

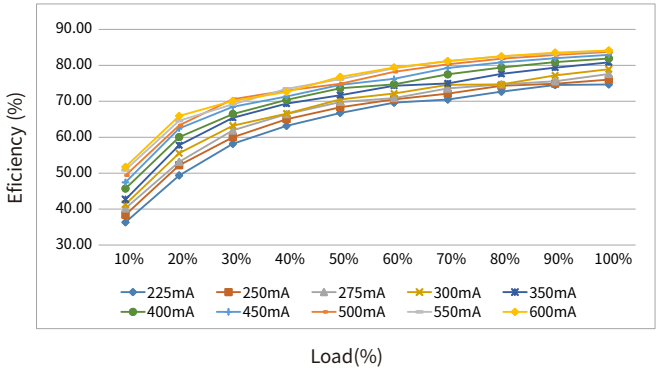
Remarks

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.

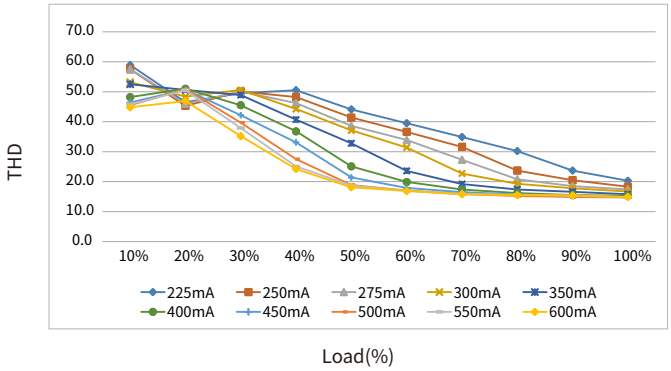
Electrical values

BK-DWL022E-A0600ADP

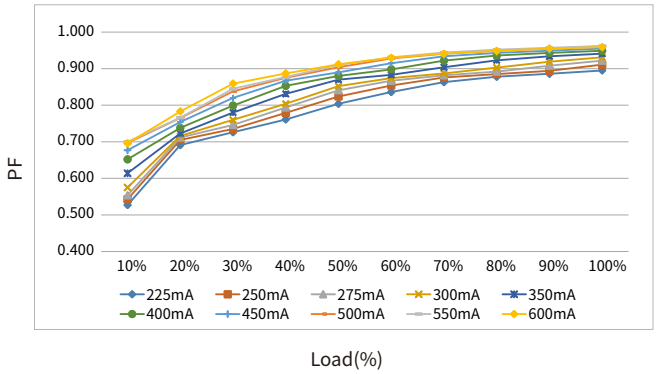
Efficiency vs load



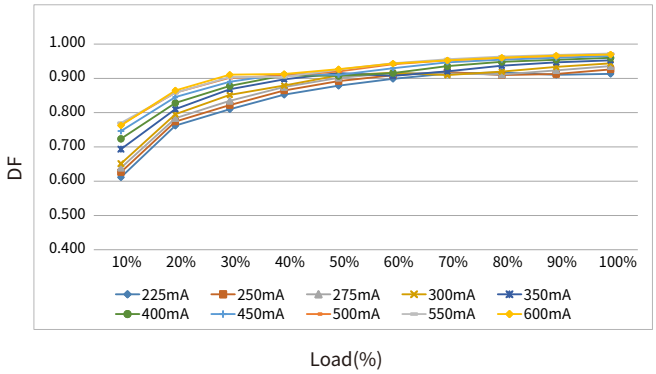
THD vs. Load



Power factor vs. Load

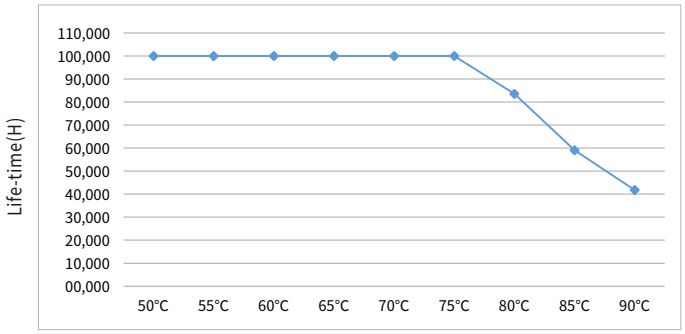


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



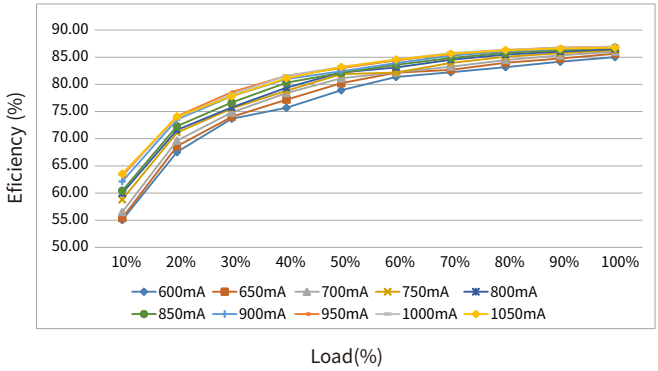
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

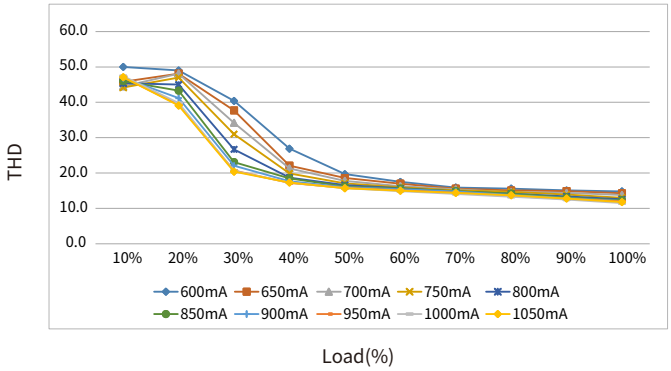
Electrical values

BK-DWL040E-A1050ADP

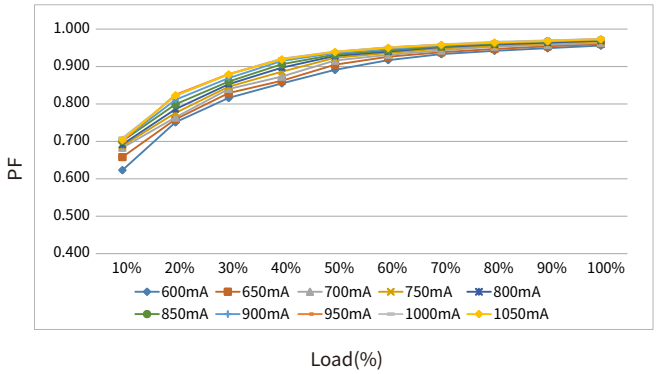
Efficiency vs load



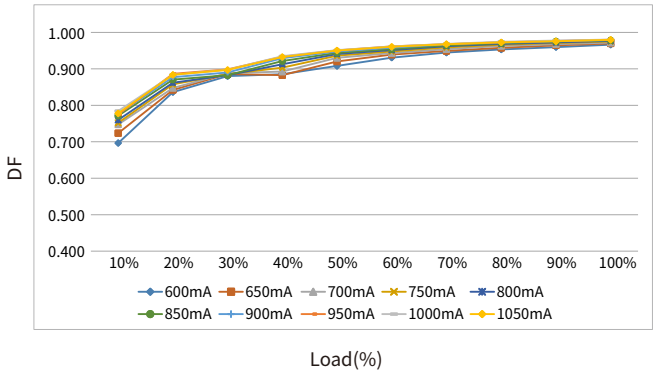
THD vs. Load



Power factor vs. Load

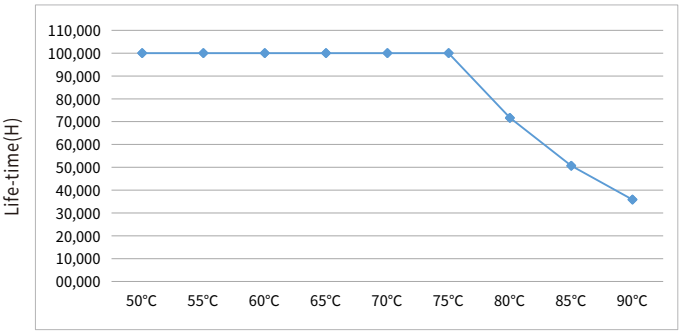


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature

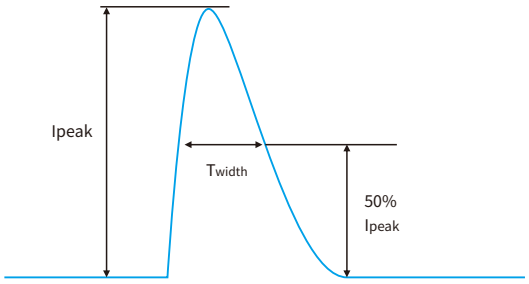


-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- 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-DWL022E-A0600ADP	8.13A	256us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	33	43	53	66	83	55	72	88	110	138	66	86	105	132	165
BK-DWL040E-A1050ADP	15.27A	258us		18	23	28	35	44	29	38	47	59	73	39	50	62	78	97



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.

Output overload protection

- The LED driver turns off the output if the output voltage range is exceeded. The output will be activated again after restart the LED driver .

Output hot plug-in

In the following two cases,the LED driver will automatically turn off the output to protect the LED:

- When the driver is powered on first and the LED is connected later.
- When the driver is powered on,disconnected and connecred again.

The output will be activated again after restart of the LED driver .

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.

Tunable white functionality

- This driver have 2 output channels used to control the intensity and temperature of white colour as well known as “Tunable White”.
- These drivers respond to DALI type 8 (DT8) commands, which in practice means that they only have 1 common address for both output channels .
- The tunable white level of intensity and colour temperature can be set either with a DALI command or by PUSH switch control.
- The higher the brightness, the wider the color temperature range can be obtained.

Adjustable output current (AOC)

- The output current of the driver can be adjusted within a certain range, and 2 options can be selected through the EasySet configuration software.

Setting 1 (default): By DIP-switch setting
The output current is determined by the selection of the DIP-switch.
Setting 2: By programming setting
The output current is determined by the programming setting.

Corridor dimming (corridorDIM)

- Please see the "corridorDIM dimming" section.

Constant light output (CLO)

- The luminous flux of a LED decreases constantly over the life-time.
- The CLO function ensures that the emitted luminous flux remains stable.For that purpose the LED current will increase continuously over the LED life-time.
- In EasySet configuration it is possible to select a start value(in percent) and an expected life-time.The LED driver adjusts the current afterwards automatically.

Emergency lighting(EL)

- The driver works normally under DC input.
- When the driver is applied in DC input, the positive pole of the DC cable should be connected to the ACL/DC+ terminal, and the negative pole of the DC cable should be connected to the ACN/DC- terminal. If the connection is reversed, the driver will not be damaged, but it will affect the EL function normal work.
- The output response action after DC input can be set through the EasySet configuration software.

Setting 1 : When DC input, the output of the driver remains unchanged, and the dimming function responds normally.
Setting 2(default): When DC input, the output of the driver jumps to the set brightness of 15%,and the dimming function is invalid.

Configuration programming(EasySet)

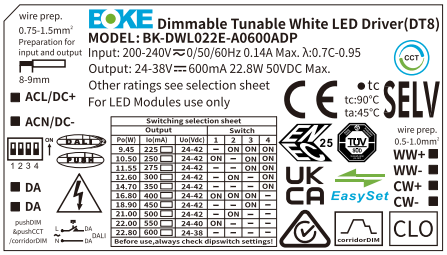
- The programming configuration of the driver is realized using the BOKE EasySet programming suite and through the driver's DALI interface.
- Please see the "Device configuration" section.
- More information about the EasySet programming suite can be found at www.bokedriver.com.

Insulation between circuits

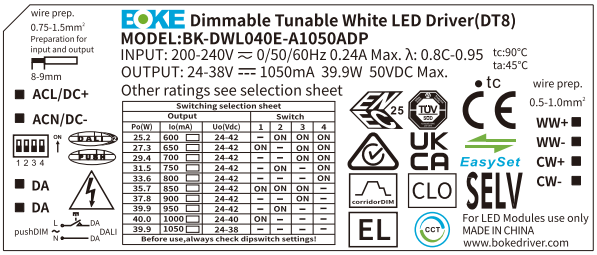
Isolation	Input	Output	Case	DALI	PUSH
Input	-	Double	Double	Basic	-
Output	Double	-	Basic	Double	Double
Case	Double	Basic	-	Double	Double

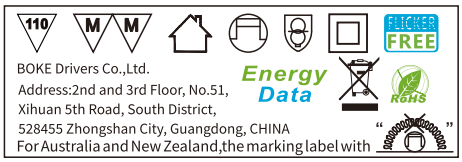
Label

BK-DWL022E-A0600ADP



BK-DWL040E-A1050ADP





DIP-switch&outputcurrent

BK-DWL022E-A0600ADP

Output			1	2	3	4
Po(w)	lo(mA)	Uo(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-DWL040E-A1050ADP

Output			1	2	3	4
Po(w)	lo(mA)	Uo(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	--	--	--	--

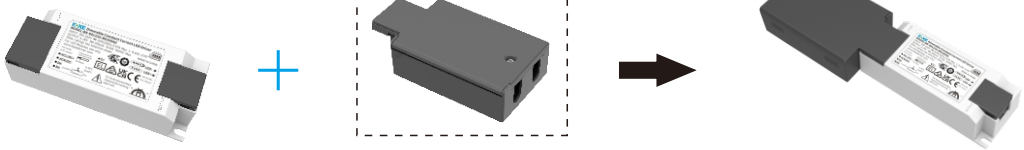
Remarks:

1.★ It means that this item is the factory default current.

2. -- It means that this channel is OFF.

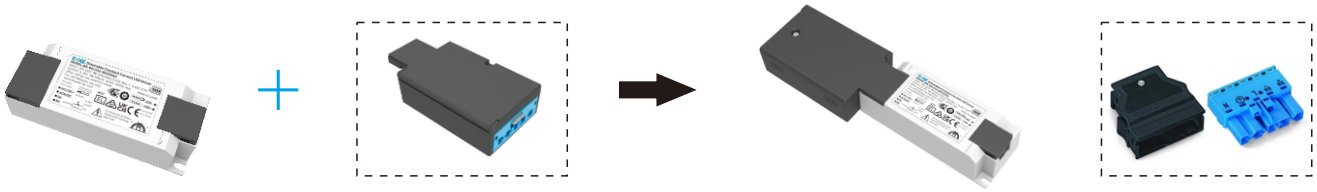
Optional accessories（See the parts specification for details）

Optional 1：Wiring type



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

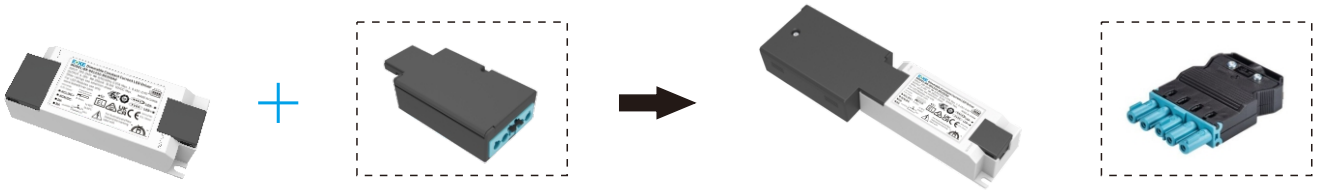
Optional2：Pluggable connector type,5Pole(WAGO)



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)

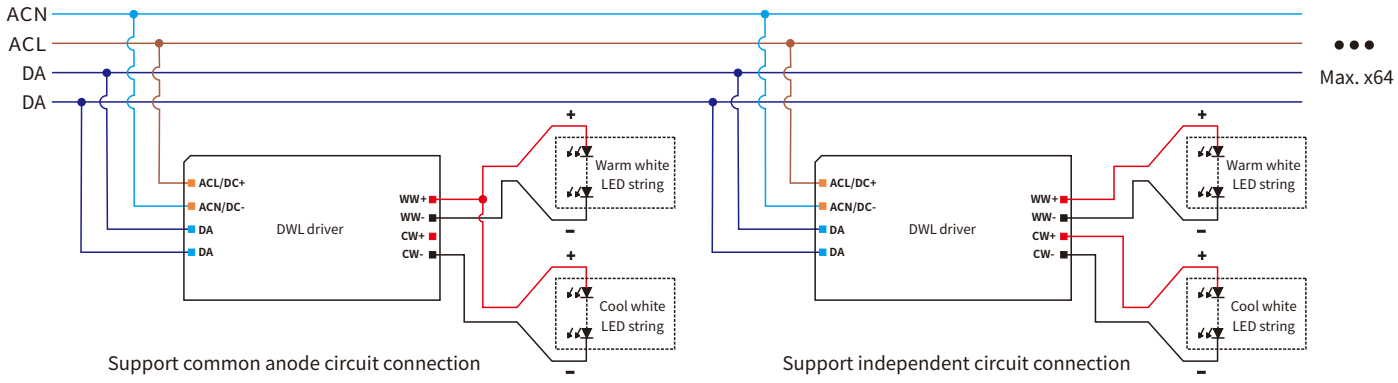


Model: BK-BAS010B
Pluggable connector type：
Wieland(92.052.8658.0)

Pluggable connector other side：
Wieland(92.953.5453.0)

DALI dimming application

Wiring diagram



Note: The voltage deviation of warm white and cool white light strings should be less than 0.5V

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.

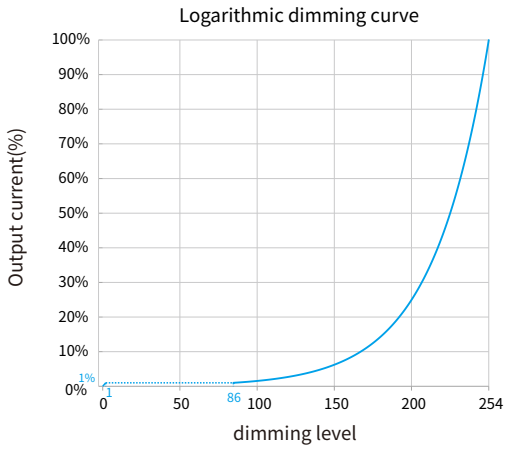
Remarks:

- 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.

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

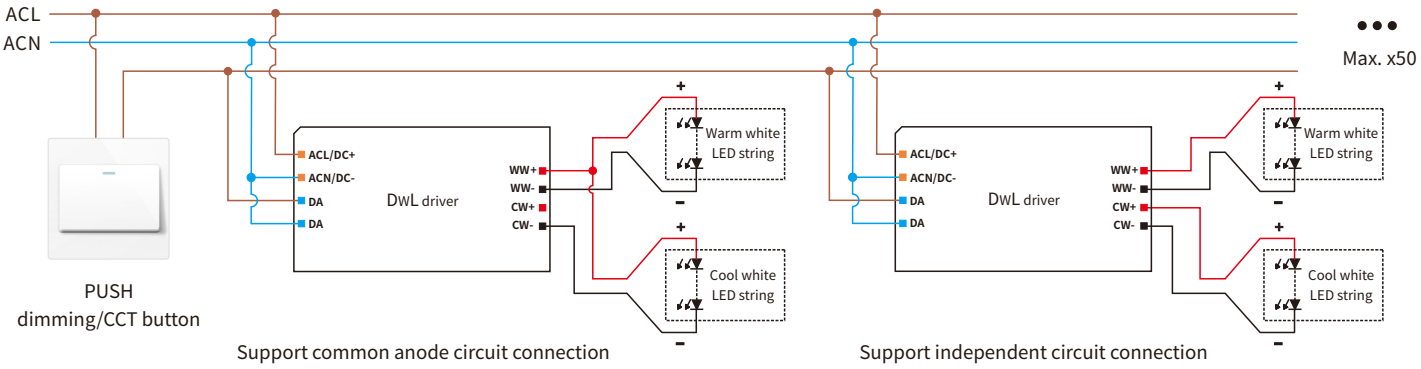
Dimming curve



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

pushDIM dimming and color temperature application

Wiring diagram



Note: The voltage deviation of warm white and cool white light strings should be less than 0.5V

Swatch to pushDIM,pushCCT control mode

- After installation according to the wiring diagram of pushDIM,pushCCT control application, short press the pushbutton(PUSH port) 5 times within 3 seconds, the driver will automatically switch to pushDIM,pushCCT control mode.
- After switch to the pushDIM control mode, CorridorDIM mode will be automatically closed.

PUSH dimming switch operating instructions

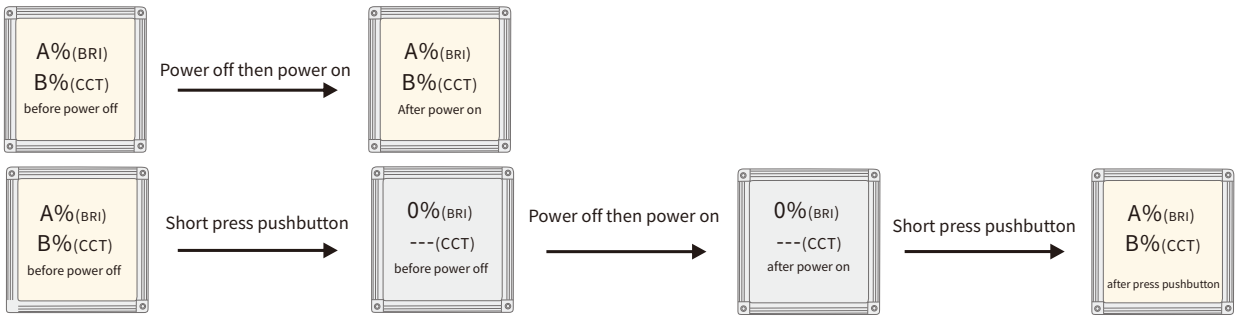
- Turn on or turn off: short press pushbutton for 0.2-1s.
- Stepless dimming : long press pushbutton to adjust the brightness (default dimming time is 6s), Press again to switch dimming directions.

PUSH CCT switch operating instructions

- Stepless CCT adjustment: long press the pushbutton until the brightness output is maximum, continue to press the pushbutton, the color temperature will automatically switch to the coldest, and then slowly gradually change to the warmest, and change back and forth. When the pushbutton is released when the desired color temperature is adjusted, the power supply will stop the color temperature change and save the current color temperature.

Power on status:

- After power on,the light state will be the same as the last dimming level and the last CCT level.
- If the light is on before the power is turned off, after turning the power back on, the brightness will be the same as the last time, and the color temperature will be the same as the last time.
- If the light is off before the power is turned off, the light will be turned off after the power is turned back on. You need to press the pushbutton for a short time to turn on the light. The brightness after lighting will be the same as the last time, and the color temperature will be the same as the last time.



Multiple lights synchronize brightness operations

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.

Multiple lights synchronized color temperature operation

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

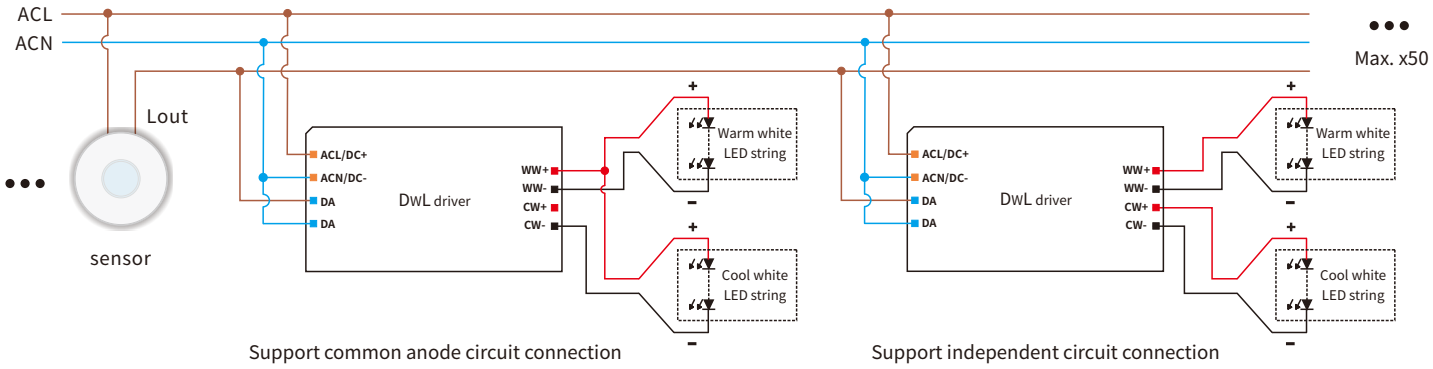
Step 2:short press the pushbutton,confirm each light is off.

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

Step 4:continue to press and hold the pushbutton until all driver color temperatures change simultaneously.

corridorDIM dimming and color temperature application

Wiring diagram



Support common anode circuit connection

Support independent circuit connection

Note: The voltage deviation of warm white and cool white light strings should be less than 0.5V

Switch to the corridorDIM dimming and color temperature mode

- Method 1: Switch by sensor.

After installation according to the wiring diagram of corridorDIM dimming and color temperature application, you can use the following two methods to switched.

Method 1: Keep the movement in the effective sensing area for 5 minutes, the corridorDIM dimming and color temperature function of the driver will be switched and output 100% brightness 100% color temperature (under the default setting).

Method 2: Switch by Hold-time

Set the hold-time of the sensor to more than 5 minutes. When the motion sensor detects a person and turns on the output for 5 minutes, the corridorDIM dimming and color temperature function will be switched and output 100% brightness 100% color temperature (Default), finally restore the hold-time that the sensor actually needs.

-Method 2: Switch by normal switch

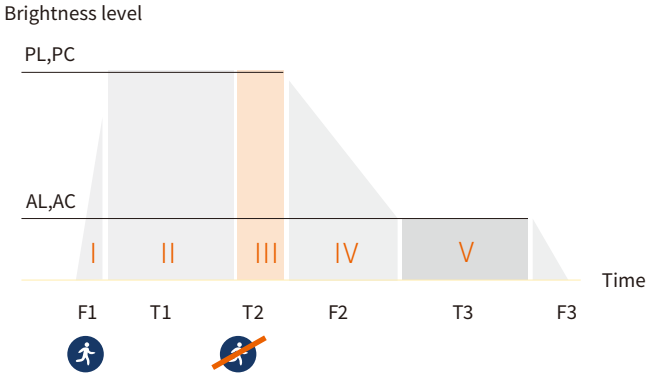
After installation according to the wiring diagram of the corridorDIM dimming and color temperature application, first replace the sensor with a normal switch, and then turn on the normal switch for 5 minutes, and the driver will automatically switch to corridorDIM dimming and color temperature mode, then remove the normal switch and replace it with the sensor.

- After switch to the corridorDIM dimming and color temperature mode, the pushDIM dimming and color temperature mode will be automatically deactivate .

Remarks

- During normal working,It is recommended to set the hold-time of the motion sensor to the minimum.
- Need to use a motion sensor with AC switch.

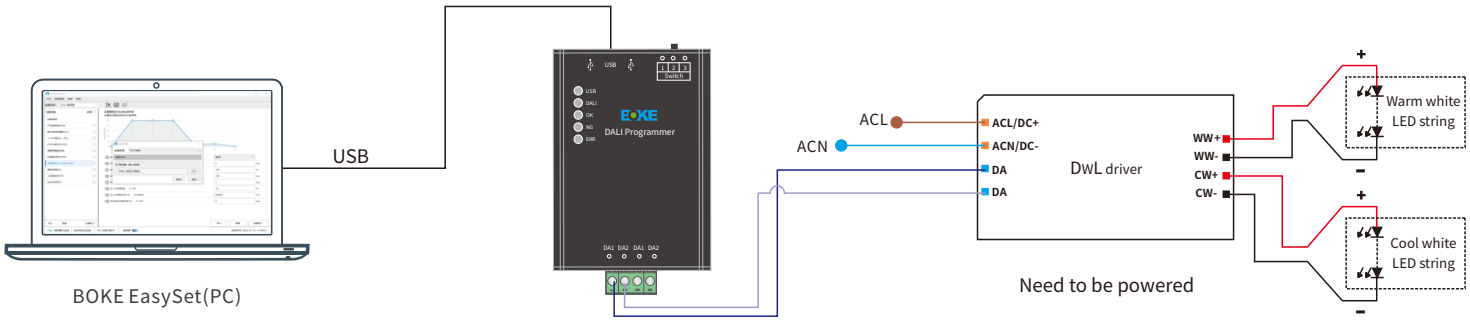
corridorDIM working process



- The parameters of corridorDIM can be set through the configuration tool.
- corridorDIM is not activated by default.

Name	Symbol	Factory setting	Settable range
Fade-in time	F1	1s	0-100s
Presence level	PL	100%	0-100%
Presence CCT	PC	100%(the coldest)	0-100%
Hold-on time	T1	By sensor setting	
Run-on time	T2	180s	0-60000s
Fade-out time	F2	5s	0-100s
Absence level	AL	10%	0-100%
Absence CCT	AC	100%(the coldest)	0-100%
Stand-by Time	T3	unlimited	0-59999s,60000s(unlimited)
Fade-off time	F3	0s	0-100s

Device configuration



Note:
- The voltage deviation of warm white and cool white light strings should be less than 0.5V
- Support independent and anode circuit connection

Software download(PC&mobile)

PC:Windows7/Windows10/Windows1132bit/64bit;
Mobile:Androidsystem≥6.0, iossystem≥14.0.

Configure tools and software

Type	Name	Brand	Name	BOKE EasySet minimum version
				PC
Programmer	DALI programmer	BOKE	BK-CS01-SDL	V1.0.0
Software	PC Software	BOKE	BOKE EasySet	V1.0.0

Parameters configure

Configuration items	Factory settings	Parameter configuration	Read/Wirte
Product information	-	NO	Read Only
Adjustable output current(AOC)	Activated	YES	Read/Wirte
PUSH dimming(pushDIM/pushCCT)	Activated	YES	Read/Wirte
Corridor dimming(corridorDIM)	Activated	YES	Read/Wirte
Emergency lighting(EL)	Activated	YES	Read/Wirte
Power-on fadeing(POF)	Deactivated	YES	Read/Wirte
Constant light output(CLO)	Deactivated	YES	Read/Wirte
Hot plug-in protection(HPP)	Deactivated	YES	Read/Wirte
Run-time(RT)		NO	Read Only
DALI Address(DA)	Activated	YES	Read/Wirte
DALI basic parameters(DP)	Activated	YES	Read/Wirte
DALI scene setting(DS)	Activated	YES	Read/Wirte
Other parameters		YES	

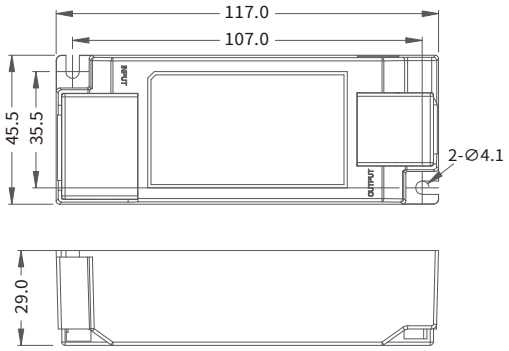
Note: The default factory mode of emergency lighting is derated mode, and the emergency brightness is 15%

Mechanical Specification

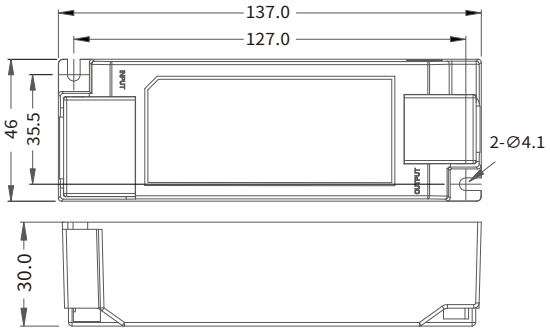
Size(Excluding accessories)

Unit:mm

DWL022E-A



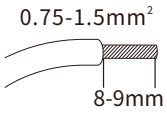
DWL040E-A



INPUT

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

Input wire

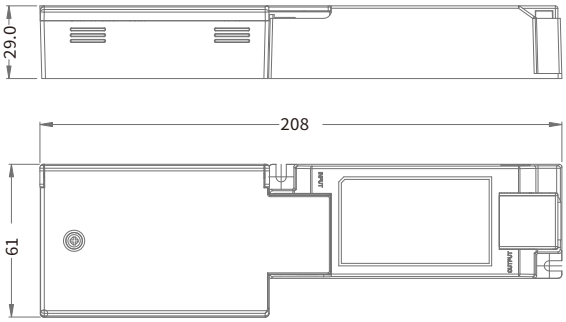


Mechanical Specification

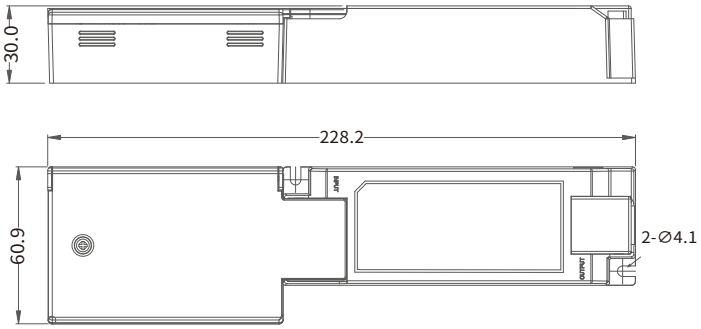
Size(Include accessories)

Unit:mm

DWL022E-A



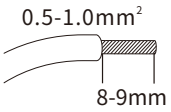
DWL040E-A



OUTPUT

Numbering	function	colour
1	WW+	red
2	WW-	black
3	CW+	red
4	CW-	black

Output wire



Installation note

Hot plug-in

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

Wiring guidelines

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

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 40°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.

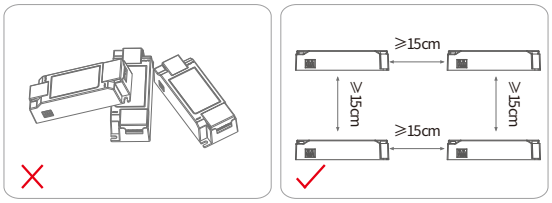


Figure 1

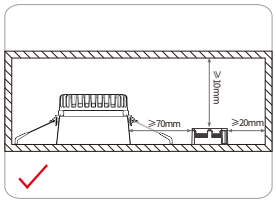
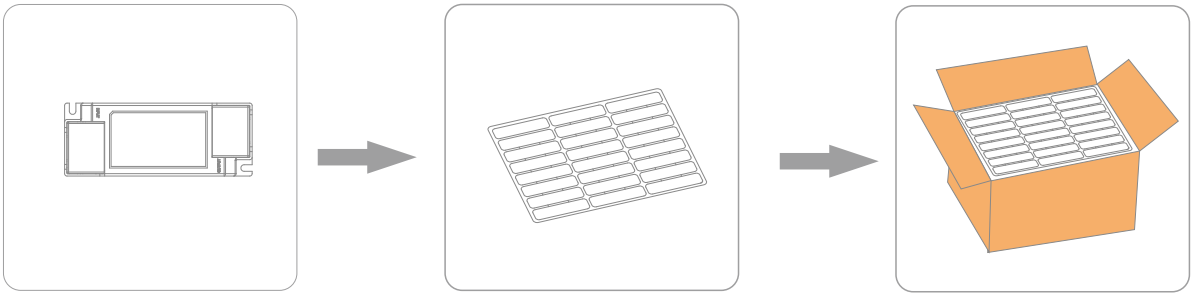


Figure 2

Packaging(Excluding accessories)

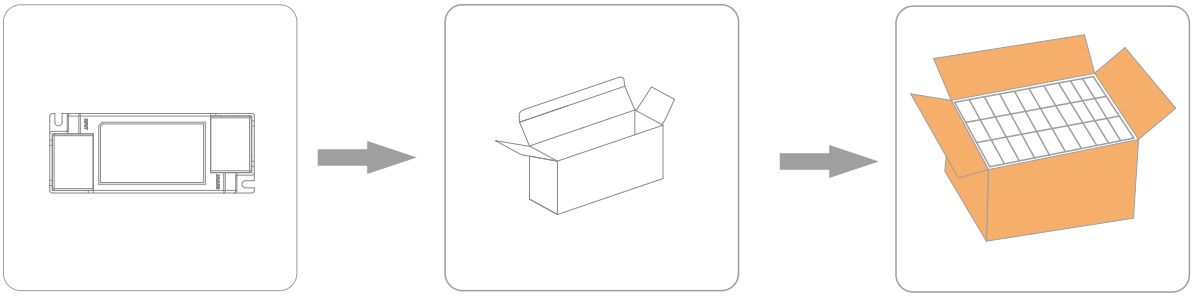
Optional 1: factory default



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

Model	Product size	Weight	Blister size	Carton size	Qty/carton	N.W	G.W
DWL022E-A	L117*W45.5*H29mm	103g	L430*W340*H47mm	L450*W350*H180mm	72pcs	7.12kg	8.41kg
DWL040E-A	L137*W46*H30mm	138g	L430*W340*H48mm	L450*W350*H180mm	54pcs	7.45kg	8.71kg

Optional 2:



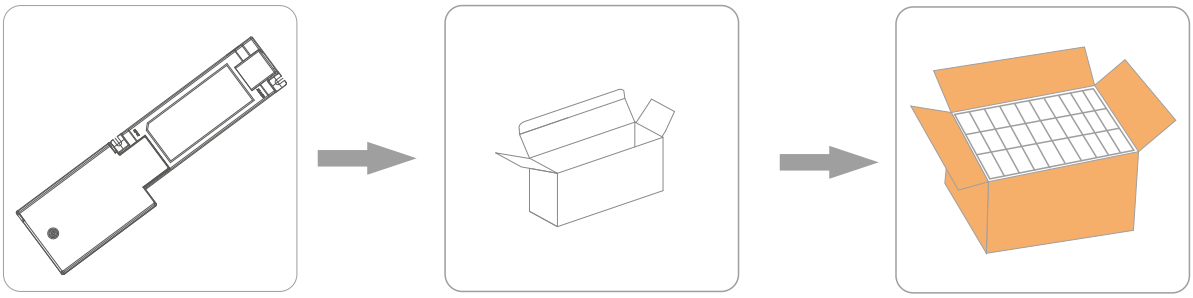
Product　　Packaging　　60pcs×1layer=60pcs/CTN
18pcs×3layer=54pcs/CTN

Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DWL022E-A	L117*W45.5*H29mm	103g	L140*W35*H50mm	L345*W310*H170mm	54pcs	5.56kg	6.93kg
DWL040E-A	L137*W46*H30mm	138g	L169*W42*H55mm	L450*W350*H180mm	60pcs	8.28kg	9.53kg

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.

Packaging(Include accessories)



Product

Packaging

35pcs×1layer=35pcs/CTN
10pcs×4layer=40pcs/CTN

Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
DWL022E-A	L208*W61*H29mm	161g	L230*W40*H80mm	L415*W290*H255mm	35pcs	5.64kg	6.91kg
DWL040E-A	L228.2*W60.9*H30mm	200g	L245*W40*H90mm	L425*W260*H380mm	40pcs	8.00kg	9.38kg

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.
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