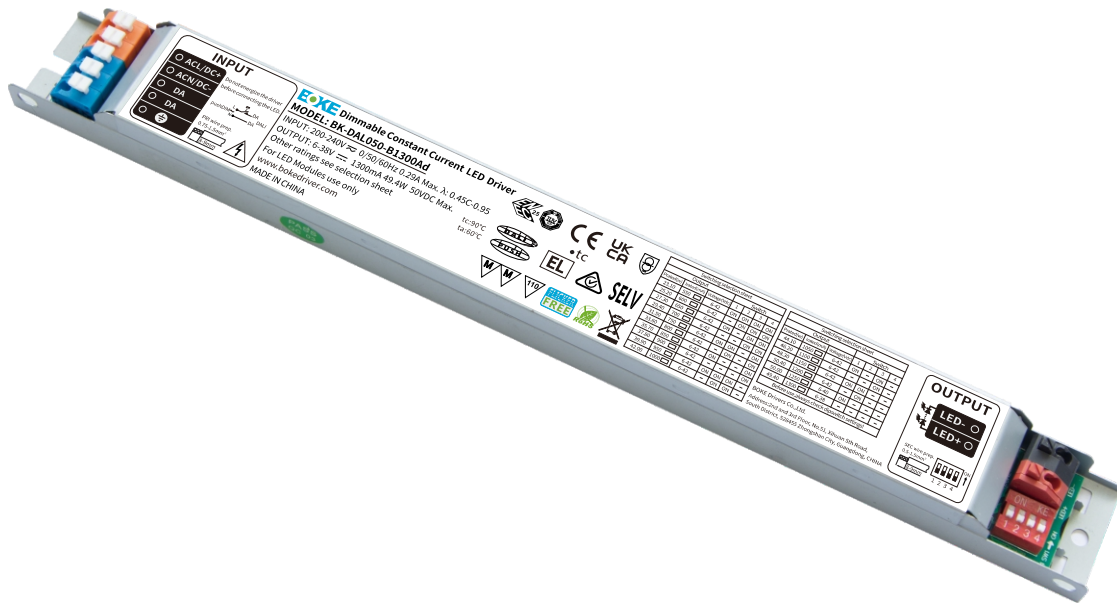


Constant current linear dimmable driver DAL Series suffix d(DALI-2+pushDIM)



Features

- DALI-2+pushDIM dimming interface
- 16-level current output can be realized by DIP-switch
- Soft dimming and flicker-free at any brightness, meets the new requirements of ErP certification
- Using HPC patented technology at any dimming level, the brightness between lights is same
- Dimming range 1~100%, output current accuracy 2%
- Standby power input<0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- Intelligent LED hot-plug protection function
- SELV and Class I design, suitable for use inside of the light
- Compliance with CE, ENEC, UKCA, RCM, EL, DALI-2 and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5.5-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, overload, no-load, hot plug-in protection)

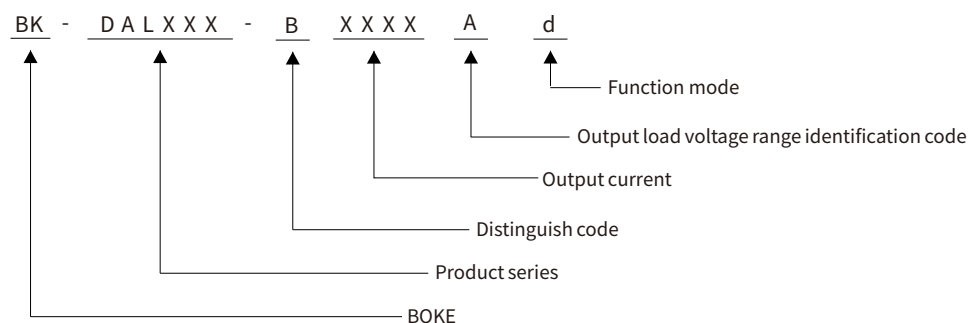
Suitable for lights

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

Typical applications

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

Model coding rules of DAL series



Function list

Model	Suffix	Wired dimming	
		DALI-2	pushDIM
BK-DAL030-B BK-DAL040-B BK-DAL050-B BK-DAL060-B BK-DAL080-B	d	√	√

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension
BK-DAL030-B0800Ad	200-240VAC/DC	30.4W MAX.	6-42VDC	0.275-0.8A	L245*W30*H21mm
BK-DAL040-B1050Ad	200-240VAC/DC	40W MAX.	6-42VDC	0.4-1.05	L285*W30*H21mm
BK-DAL050-B1300Ad	200-240VAC/DC	50.4W MAX.	6-42VDC	0.55-1.3A	L285*W30*H21mm
BK-DAL060-B1650Ad	200-240VAC/DC	63W MAX.	6-42VDC	0.9-1.65A	L355*W30*H21mm
BK-DAL080-B2000Ad	200-240VAC/DC	80W MAX.	6-42VDC	1.25-2A	L355*W36*H23mm

Technical data

Product model	BK-DAL030-B0800Ad
Output parameters	
Regulation method	Constant Current
Rated output current range	0.275-0.8A,see the DIP-switch for details
Rated output voltage range	6-42VDC,see the DIP-switch for details
Rated output power	30.4W Max,see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±2%
Output current accuracy	±2%
Linear regulation	±1%
Load regulation	±2%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.15%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.009, 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	<0.19A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typical)	PF:0.97,DF:0.98,see the electrical values below for details
Input THD(typical)	8% ,see the electrical values below for details
Efficiency(typical)	88% ,see the electrical values below for details
In-rush current(typical)	7.1A peak ,188us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.8s(AC start),<0.8s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typical)	Full load(Pin):34.5W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-O/P:3750VAC,I/P-FG:1750VAC,O/P-FG:500VAC ,I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(90°/270° , 5 times each with an interval of 60s)(Performance criterion:A)
Leakage current(typical)	0.61mA
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 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1%-100%(minimum current:8mA)
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=-20-60°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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.

Technical data

Product model	BK-DAL040-B1050Ad
Output parameters	
Regulation method	Constant Current
Rated output current range	0.4-1.05A, see the DIP-switch for details
Rated output voltage range	6-42VDC, see the DIP-switch for details
Rated output power	40W Max, see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±2%
Output current accuracy	±2%
Linear regulation	±1%
Load regulation	±2%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.136%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.000, SVM = 0.004, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.24A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typical)	PF:0.96, DF:0.96, see the electrical values below for details
Input THD(typical)	10% , see the electrical values below for details
Efficiency(typical)	88.5% , see the electrical values below for details
In-rush current(typical)	7.5A peak ,190us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.8s(AC start), <0.8s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typical)	Full load(Pin):45.2W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-O/P:3750VAC, I/P-FG:1750VAC, O/P-FG:500VAC , I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV, L-FG/N-FG:2KV(90°/270° , 5 times each with an interval of 60s)(Performance criterion:A)
Leakage current(typical)	0.67mA
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 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1%-100%(minimum current:10.5mA)
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=-20-60°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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.

Technical data

Product model	BK-DAL050-B1300Ad
Output parameters	
Regulation method	Constant Current
Rated output current range	0.55-1.3A, see the DIP-switch for details
Rated output voltage range	6-42VDC, see the DIP-switch for details
Rated output power	50.4W Max, see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±2%
Output current accuracy	±2%
Linear regulation	±1%
Load regulation	±2%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.177%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.009, SVM = 0.003, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.29A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typical)	PF:0.96, DF:0.97, see the electrical values below for details
Input THD(typical)	10% , see the electrical values below for details
Efficiency(typical)	89.5% , see the electrical values below for details
In-rush current(typical)	8.25A peak ,174us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.8s(AC start), <0.8s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typical)	Full load(Pin):56.3W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-O/P:3750VAC, I/P-FG:1750VAC, O/P-FG:500VAC , I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV, L-FG/N-FG:2KV(90°/270° , 5 times each with an interval of 60s)(Performance criterion:A)
Leakage current(typical)	0.65mA
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 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1%-100%(minimum current:13mA)
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=-20-60°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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.

Technical data

Product model	BK-DAL060-B1650Ad
Output parameters	
Regulation method	Constant Current
Rated output current range	0.9-1.65A, see the DIP-switch for details
Rated output voltage range	6-42VDC, see the DIP-switch for details
Rated output power	63W Max, see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±2%
Output current accuracy	±2%
Linear regulation	±1%
Load regulation	±2%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.04%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.000, SVM = 0.001, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.38A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typical)	PF:0.96, DF:0.97, see the electrical values below for details
Input THD(typical)	9%, see the electrical values below for details
Efficiency(typical)	89.5%, see the electrical values below for details
In-rush current(typical)	10.25A peak, 214us duration(50% Ipeak), see the description below for details
Start/Switchover/Turn off	<0.8s(AC start), <0.8s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typical)	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:3750VAC, I/P-FG:1750VAC, O/P-FG:500VAC, I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV, L-FG/N-FG:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A)
Leakage current(typical)	0.68mA
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 3in1 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=-20-60°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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.

Technical data

Product model	BK-DAL080-B2000Ad
Output parameters	
Regulation method	Constant Current
Rated output current range	1.25-2A, see the DIP-switch for details
Rated output voltage range	6-42VDC, see the DIP-switch for details
Rated output power	80W Max, see the DIP-switch for details
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±2%
Output current accuracy	±2%
Linear regulation	±1%
Load regulation	±2%
No load output voltage	50VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.033%(100Hz), Flicker index(IEEE 1789)=0.000(100Hz), Pst LM = 0.013, SVM = 0.001, (The above parameters are obtained from testing the panel lights)
Input parameters	
Rated input voltage range	200-240VAC 200-240VDC
Input voltage range	180-264VAC 180-264VDC
Input voltage shock	<380 V AC
Input current	<0.47A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF(typical)	PF:0.96, DF:0.97, see the electrical values below for details
Input THD(typical)	10% , see the electrical values below for details
Efficiency(typical)	90% , see the electrical values below for details
In-rush current(typical)	14A peak ,194us duration(50 % Ipeak), see the description below for details
Start/Switchover/Turn off	<0.8s(AC start), <0.8s(DC start), <0.3s(AC/DC switchover), <0.5s(Turn off)
Switching cycles	> 100,000 switching cycles
Power consumption(typical)	Full load(Pin):88.9W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-O/P:3750VAC, I/P-FG:1750VAC, O/P-FG:500VAC , I/P-DALI: 1500V AC, O/P-DALI: 1500V AC.
Mains surge capability	L-N:2KV, L-FG/N-FG:2KV(90°/270°, 5 times each with an interval of 60s)(Performance criterion:A)
Leakage current(typical)	0.64mA
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 3in1 dimming port	N/A
Auxiliary power supply	N/A
Dimming range	1%-100%(minimum current:20mA)
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=-20-60°C
Case temperature	Tc=90°C
Operating humidity	5-85% RH, non-condensing
Storage temp./humidity	-40-80°C, 5-85% RH, non-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, 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

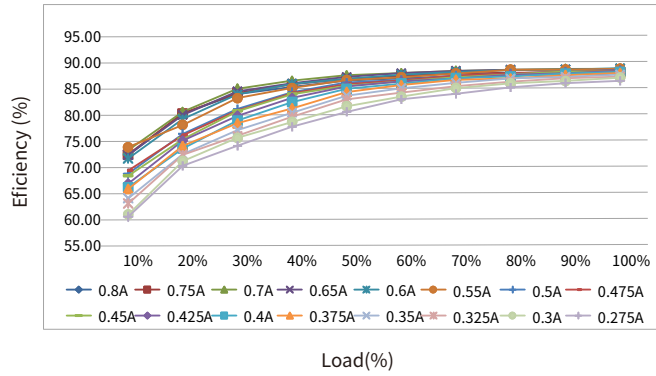
Remarks

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

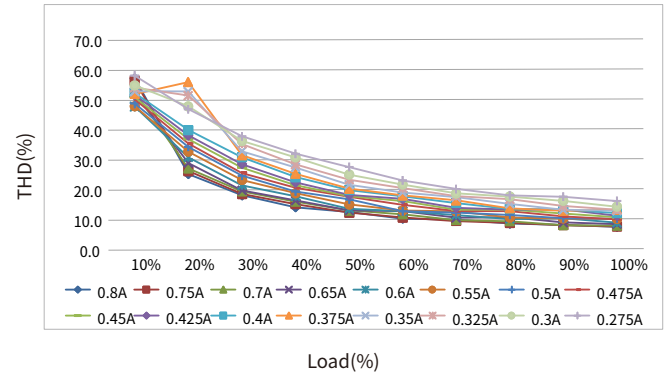
Electrical values

BK-DAL030-B0800Ad

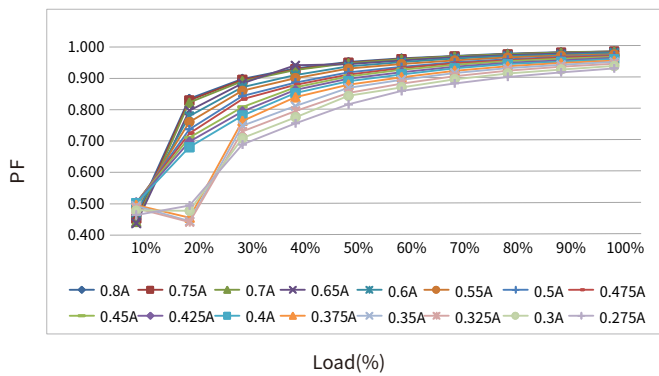
Efficiency vs Load



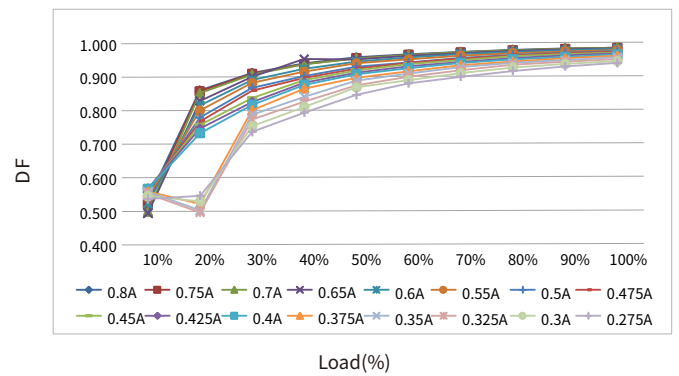
THD vs. Load



Power factor vs. Load

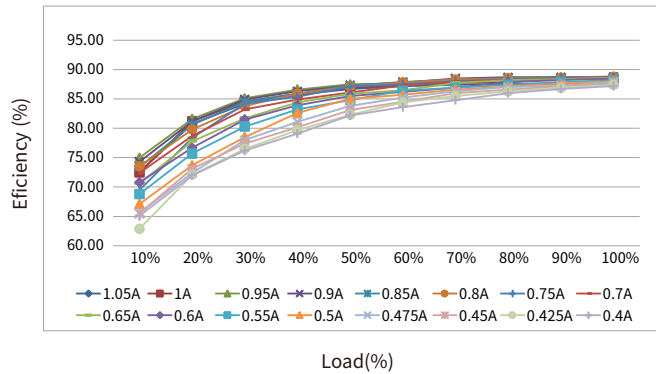


Displacement factor vs. Load

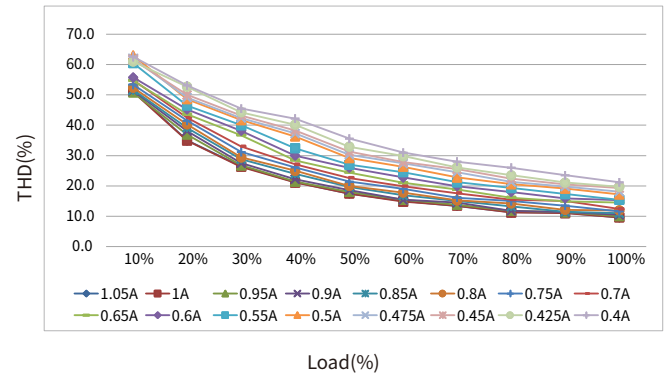


BK-DAL040-B1050Ad

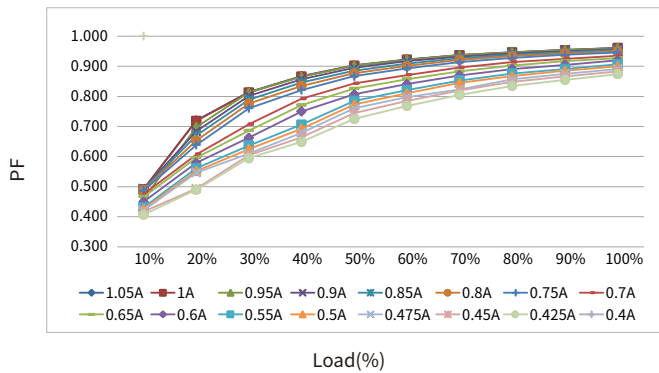
Efficiency vs Load



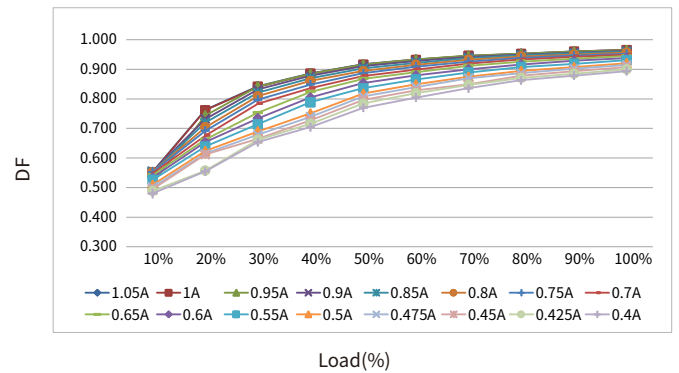
THD vs. Load



Power factor vs. Load



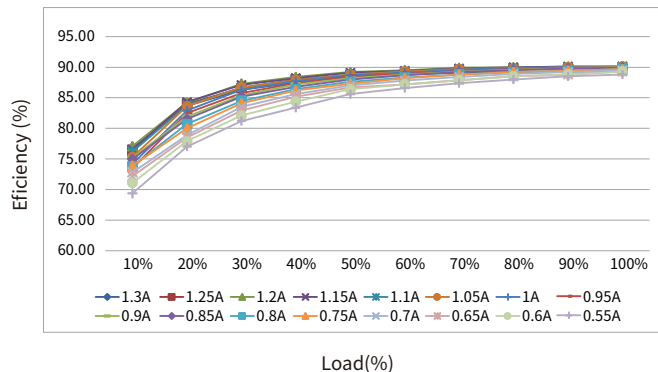
Displacement factor vs. Load



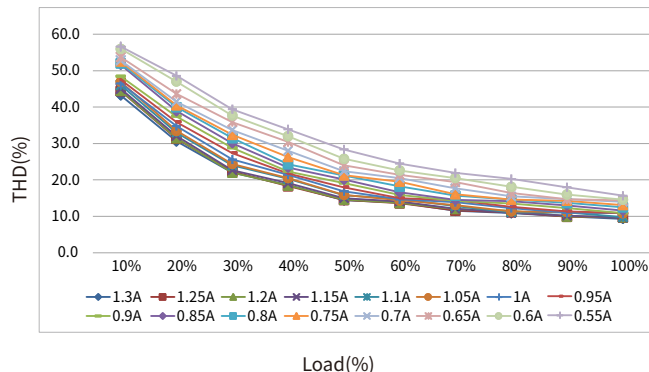
Electrical values

BK-DAL050-B1300Ad

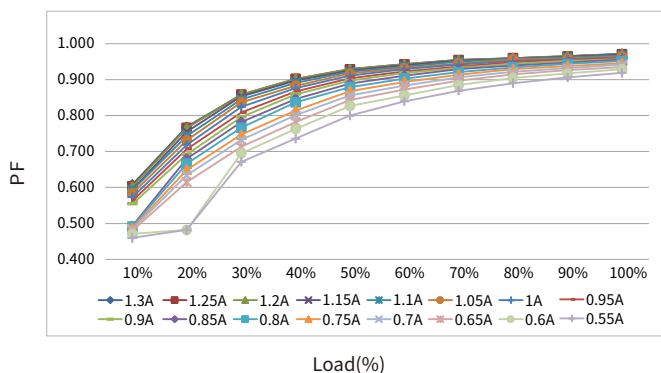
Efficiency vs Load



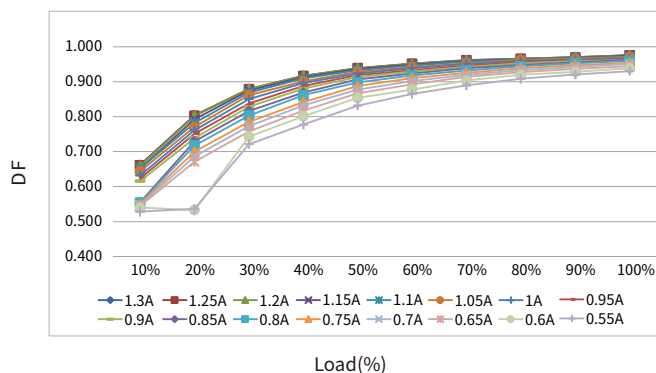
THD vs. Load



Power factor vs. Load

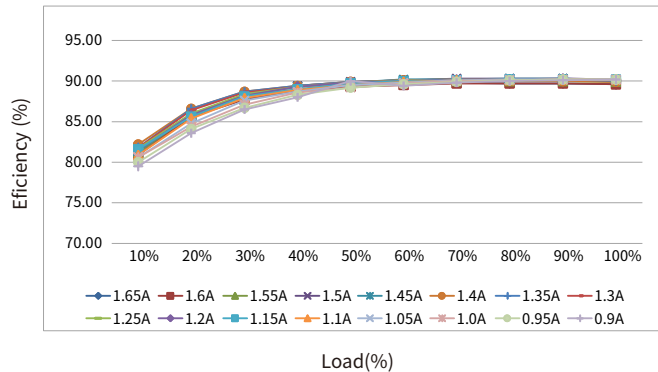


Displacement factor vs. Load

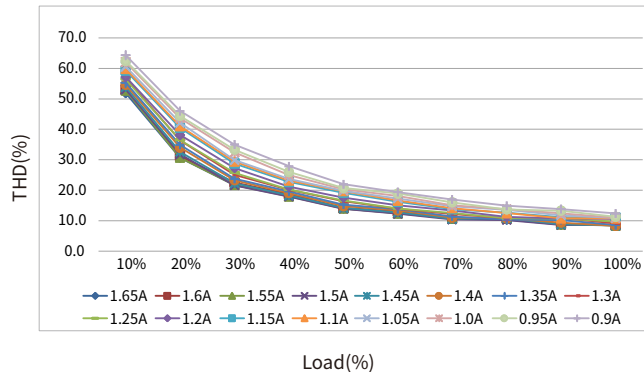


BK-DAL060-B1650Ad

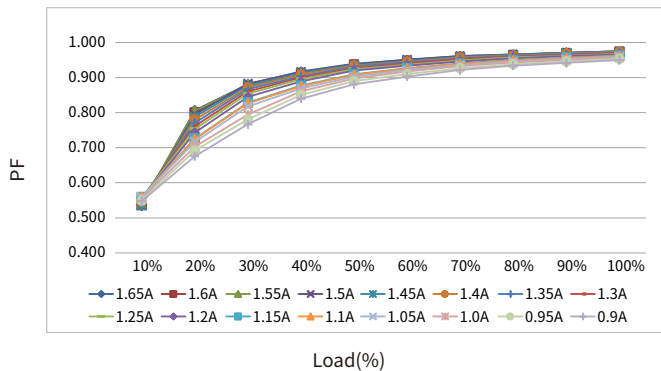
Efficiency vs Load



THD vs. Load



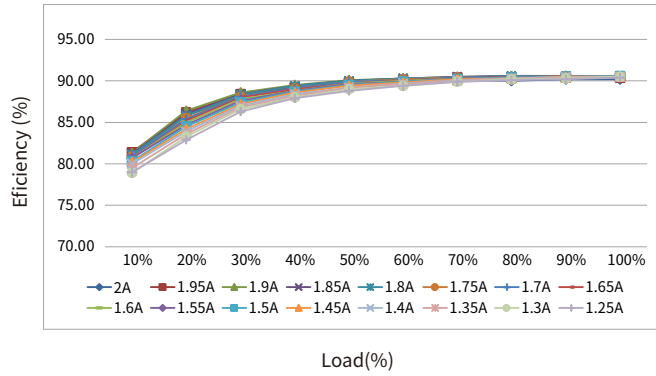
Power factor vs. Load



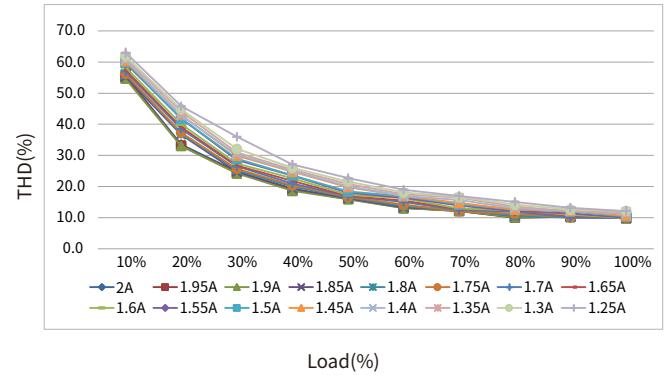
Electrical values

BK-DAL080-B2000Ad

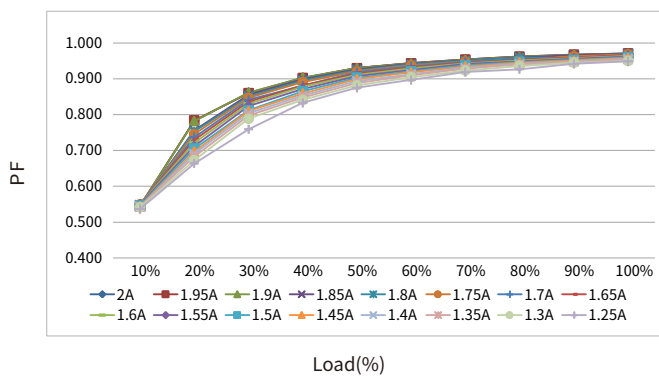
Efficiency vs Load



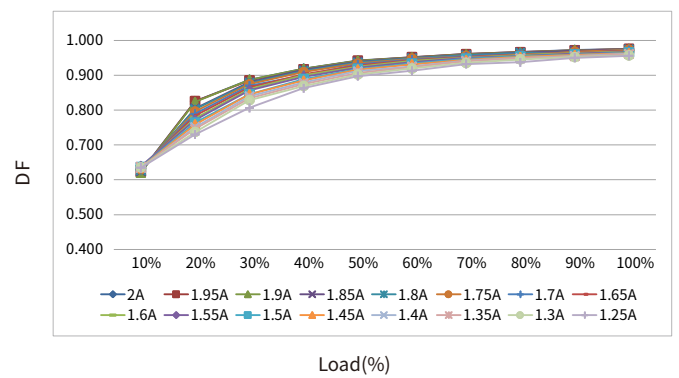
THD vs. Load



Power factor vs. Load



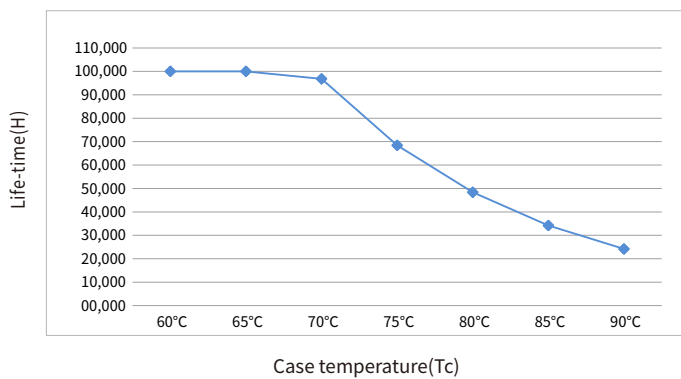
Displacement factor vs. Load



Expected life-time

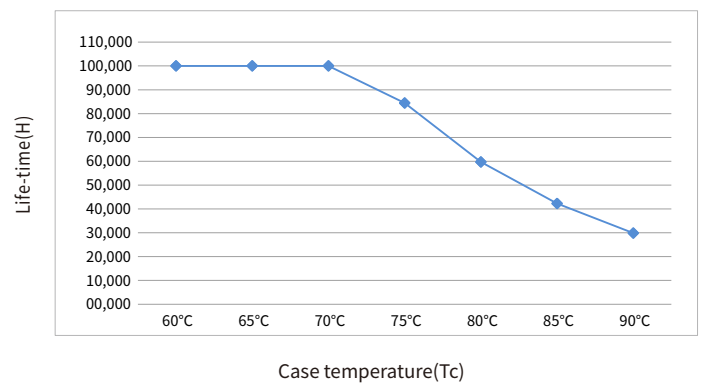
BK-DAL030-B0800Ad

Life-time vs. case temperature



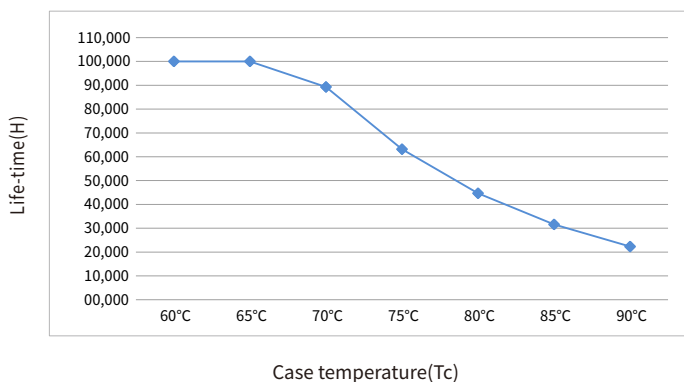
BK-DAL040-B1050Ad

Life-time vs. case temperature



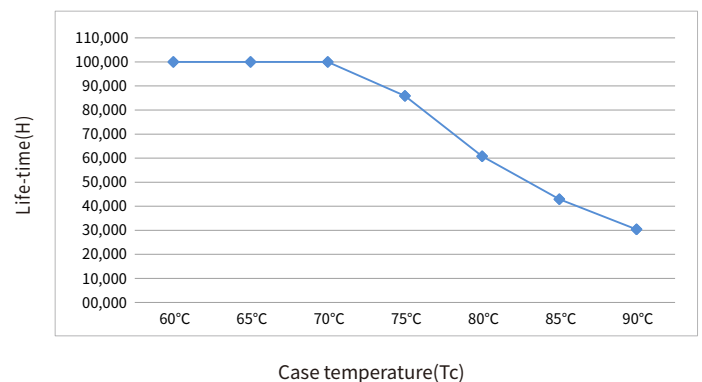
BK-DAL050-B1300Ad

Life-time vs. case temperature



BK-DAL060-B1650Ad

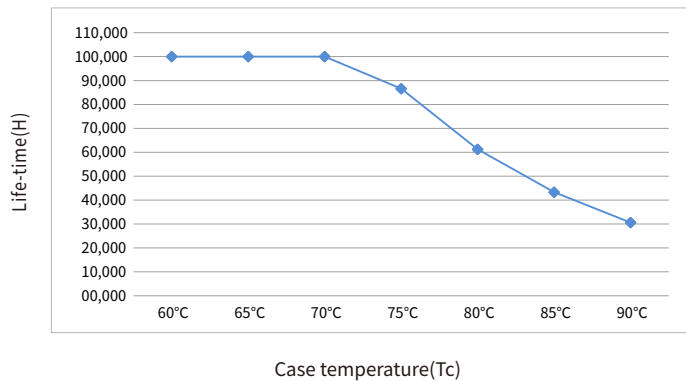
Life-time vs. case temperature



Expected life-time

BK-DAL080-B2000Ad

Life-time vs. case temperature

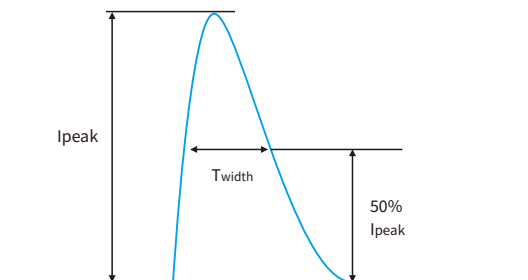


-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- 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-DAL030-B0800Ad	7.1A	188us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	52	67	83	104	130	52	67	83	104	130	52	67	83	104	130	
BK-DAL040-B1050Ad	7.5A	190us		40	51	63	79	99	40	51	63	79	99	40	51	63	79	99	
BK-DAL050-B1300Ad	8.25A	174us		33	42	52	65	81	33	42	52	65	81	33	42	52	65	81	
BK-DAL060-B1650Ad	10.25A	214us		26	33	41	51	64	26	33	41	51	64	26	33	41	51	64	
BK-DAL080-B2000Ad	14A	194us		20	26	32	40	50	20	26	32	40	50	20	26	32	40	50	



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.

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

- 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	Basic	Basic	-
Output	Double	-	Basic	Double	Double
Case	Basic	Basic	-	Basic	Basic

DIP-switch & output current

BK-DAL030-B0800Ad

Prated(w)	Output		1	2	3	4
	Irated(mA)	Voltage(Vdc)				
11.55	275	6-42	ON	ON	ON	ON
12.60	300	6-42	--	ON	ON	ON
13.65	325	6-42	ON	--	ON	ON
14.70	350	6-42	--	--	ON	ON
15.75	375	6-42	ON	ON	--	ON
16.80	400	6-42	--	ON	--	ON
17.85	425	6-42	ON	--	--	ON
18.90	450	6-42	--	--	--	ON
19.95	475	6-42	ON	ON	ON	--
21.00	500	6-42	--	ON	ON	--
23.10	550	6-42	ON	--	ON	--
25.20	600	6-42	--	--	ON	--
27.30	650	6-42	ON	ON	--	--
29.40	700	6-42	--	ON	--	--
30.00	750	6-40	ON	--	--	--
30.40	800 ★	6-38	--	--	--	--

BK-DAL050-B1300Ad

Prated(w)	Output		1	2	3	4
	Irated(mA)	Voltage(Vdc)				
23.10	550	6-42	ON	ON	ON	ON
25.20	600	6-42	--	ON	ON	ON
27.30	650	6-42	ON	--	ON	ON
29.40	700	6-42	--	--	ON	ON
31.50	750	6-42	ON	ON	--	ON
33.60	800	6-42	--	ON	--	ON
35.70	850	6-42	ON	--	--	ON
37.80	900	6-42	--	--	--	ON
39.90	950	6-42	ON	ON	ON	--
42.00	1000	6-42	--	ON	ON	--
44.10	1050	6-42	ON	--	ON	--
46.20	1100	6-42	--	--	ON	--
48.30	1150	6-42	ON	ON	--	--
50.40	1200	6-42	--	ON	--	--
50.00	1250	6-40	ON	--	--	--
49.40	1300 ★	6-38	--	--	--	--

BK-DAL080-B2000Ad

Prated(w)	Output		1	2	3	4
	Irated(mA)	Voltage(Vdc)				
52.50	1250	6-42	ON	ON	ON	ON
54.60	1300	6-42	--	ON	ON	ON
56.70	1350	6-42	ON	--	ON	ON
58.80	1400	6-42	--	--	ON	ON
60.90	1450	6-42	ON	ON	--	ON
63.00	1500	6-42	--	ON	--	ON
65.10	1550	6-42	ON	--	--	ON
67.20	1600	6-42	--	--	--	ON
69.30	1650	6-42	ON	ON	ON	--
71.40	1700	6-42	--	ON	ON	--
73.50	1750	6-42	ON	--	ON	--
75.60	1800	6-42	--	--	ON	--
77.70	1850	6-42	ON	ON	--	--
79.80	1900	6-42	--	ON	--	--
80.00	1950	6-41	ON	--	--	--
80.00	2000 ★	6-40	--	--	--	--

BK-DAL040-B1050Ad

Prated(w)	Output		1	2	3	4
	Irated(mA)	Voltage(Vdc)				
16.80	400	6-42	ON	ON	ON	ON
17.85	425	6-42	--	ON	ON	ON
18.90	450	6-42	ON	--	ON	ON
19.95	475	6-42	--	--	ON	ON
21.00	500	6-42	ON	ON	--	ON
23.10	550	6-42	--	ON	--	ON
25.20	600	6-42	ON	--	--	ON
27.30	650	6-42	--	--	--	ON
29.40	700	6-42	ON	ON	ON	--
31.50	750	6-42	--	ON	ON	--
33.60	800	6-42	ON	--	ON	--
35.70	850	6-42	--	--	ON	--
37.80	900	6-42	ON	ON	--	--
39.90	950	6-42	--	ON	--	--
40.00	1000	6-40	ON	--	--	--
39.90	1050 ★	6-38	--	--	--	--

BK-DAL060-B1650Ad

Prated(w)	Output		1	2	3	4
	Irated(mA)	Voltage(Vdc)				
37.80	900	6-42	ON	ON	ON	ON
39.90	950	6-42	--	ON	ON	ON
42.00	1000	6-42	ON	--	ON	ON
44.10	1050	6-42	--	--	ON	ON
46.20	1100	6-42	ON	ON	--	ON
48.30	1150	6-42	--	ON	--	ON
50.40	1200	6-42	ON	--	--	ON
52.50	1250	6-42	--	--	--	ON
54.60	1300	6-42	ON	ON	ON	--
56.70	1350	6-42	--	ON	ON	--
58.80	1400	6-42	ON	--	ON	--
60.90	1450	6-42	--	--	ON	--
63.00	1500	6-42	ON	ON	--	--
62.00	1550	6-40	--	ON	--	--
60.80	1600	6-38	ON	--	--	--
62.70	1650 ★	6-38	--	--	--	--

Remarks:

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

Label

INPUT

- AC/DC/+/ - Do not energize the driver before connecting the driver
- AC/DC/0 - Do not energize the driver before connecting the driver
- 0/A - Do not energize the driver before connecting the driver
- 0/A - Do not energize the driver before connecting the driver

Wiring diagram
0-1.5mm

Dimmable Constant Current LED Driver

MODEL: BK-DAL300-B080A0Z

INPUT: 200-240V ~ 50/60Hz/0.19A Max. 0.4 < AC/0.95

OUTPUT: 6-38V ~ 800mA/3.4W 5000V Max

Output dimming: 0.1%~100% 100KHz

For LED Modules use only

madeindriver.com

MADE IN CHINA

OUTPUT

LED+
LED-
LED+

Wiring diagram
0-1.5mm

Output		Input	
Output	Input	Output	Input
6.0V	0.80A	200V	0.19A
6.3V	0.76A	210V	0.18A
6.6V	0.73A	220V	0.17A
6.9V	0.70A	230V	0.16A
7.2V	0.67A	240V	0.15A
7.5V	0.64A		
7.8V	0.61A		
8.1V	0.58A		
8.4V	0.55A		
8.7V	0.52A		
9.0V	0.50A		
9.3V	0.47A		
9.6V	0.45A		
9.9V	0.43A		
10.2V	0.41A		
10.5V	0.39A		
10.8V	0.37A		
11.1V	0.35A		
11.4V	0.33A		
11.7V	0.31A		
12.0V	0.30A		
12.3V	0.28A		
12.6V	0.27A		
12.9V	0.25A		
13.2V	0.24A		
13.5V	0.23A		
13.8V	0.22A		
14.1V	0.21A		
14.4V	0.20A		
14.7V	0.19A		
15.0V	0.18A		
15.3V	0.17A		
15.6V	0.16A		
15.9V	0.15A		
16.2V	0.14A		
16.5V	0.13A		
16.8V	0.12A		
17.1V	0.11A		
17.4V	0.10A		
17.7V	0.09A		
18.0V	0.08A		
18.3V	0.07A		
18.6V	0.06A		
18.9V	0.05A		
19.2V	0.04A		
19.5V	0.03A		
19.8V	0.02A		
20.1V	0.01A		

Output		Input	
Output	Input	Output	Input
20.4V	0.01A	200V	0.19A
20.7V	0.01A	210V	0.18A
21.0V	0.01A	220V	0.17A
21.3V	0.01A	230V	0.16A
21.6V	0.01A	240V	0.15A
21.9V	0.01A		
22.2V	0.01A		
22.5V	0.01A		
22.8V	0.01A		
23.1V	0.01A		
23.4V	0.01A		
23.7V	0.01A		
24.0V	0.01A		
24.3V	0.01A		
24.6V	0.01A		
24.9V	0.01A		
25.2V	0.01A		
25.5V	0.01A		
25.8V	0.01A		
26.1V	0.01A		
26.4V	0.01A		
26.7V	0.01A		
27.0V	0.01A		
27.3V	0.01A		
27.6V	0.01A		
27.9V	0.01A		
28.2V	0.01A		
28.5V	0.01A		
28.8V	0.01A		
29.1V	0.01A		
29.4V	0.01A		
29.7V	0.01A		
30.0V	0.01A		
30.3V	0.01A		
30.6V	0.01A		
30.9V	0.01A		
31.2V	0.01A		
31.5V	0.01A		
31.8V	0.01A		
32.1V	0.01A		
32.4V	0.01A		
32.7V	0.01A		
33.0V	0.01A		
33.3V	0.01A		
33.6V	0.01A		
33.9V	0.01A		
34.2V	0.01A		
34.5V	0.01A		
34.8V	0.01A		
35.1V	0.01A		
35.4V	0.01A		
35.7V	0.01A		
36.0V	0.01A		
36.3V	0.01A		
36.			

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INPUT

○ ACL/DC+
○ ACN/DC-
○ DA
○ DA
○

Do not energize the driver before connecting the LED.

push(DA) → DA → MALI

P8H wire prep. 0.75-1.5mm

0.5-1mm

EOKE Dimmable Constant Current LED Driver

MODEL: BK-DAL080-B2000AD

INPUT: 200-240V $\approx$ 0/50/60Hz 0.47A Max. λ : 0.45C-0.95

OUTPUT: 6-40V $\approx$ 2000mA 80W 50VDC Max.

Other ratings see selection sheet

For LED Modules use only

www.bokedriver.com

MADE IN CHINA

•tc

tc:90°C

OUTPUT

LED-
LED+○

SEC wire prep. 0.5-1.5mm

0.5mm

Switching selection sheet

Output (V)	Internal (V)	Output (A)	Switch
32-50	1250	6-42	ON
54-60	1500	6-42	ON
56-70	1350	6-42	ON
58-80	1400	6-42	ON
60-90	1450	6-42	ON
63-100	1500	6-42	ON
65-100	1550	6-42	ON
68-120	1600	6-42	ON
70-130	1700	6-42	ON
71-140	1800	6-42	ON

Before use, always check dimming settings!

EOKE Drivers Co., Ltd.
Address: 2nd and 3rd floor, No.33, Xihuan 5th Road,
South District, 528555 Zhongshan City, Guangdong, CHINA

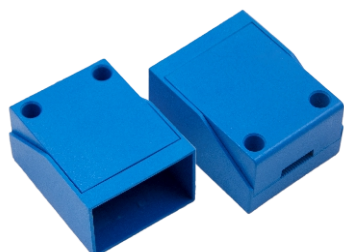
Switching selection sheet

Output (V)	Internal (V)	Output (A)	Switch
73-50	11500	6-42	ON
76-60	12000	6-42	ON
77-70	15000	6-42	ON
79-80	15500	6-42	ON
80-90	16000	6-42	ON
80-100	16500	6-42	ON

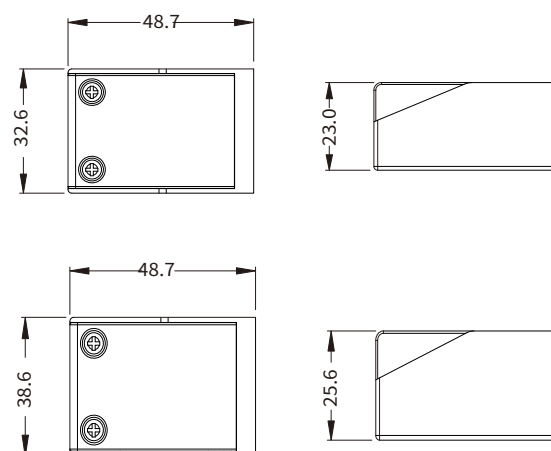
Before use, always check dimming settings!

EOKE Drivers Co., Ltd.
Address: 2nd and 3rd floor, No.33, Xihuan 5th Road,
South District, 528555 Zhongshan City, Guangdong, CHINA

Optional accessories



(Model:BK-BAS003A)

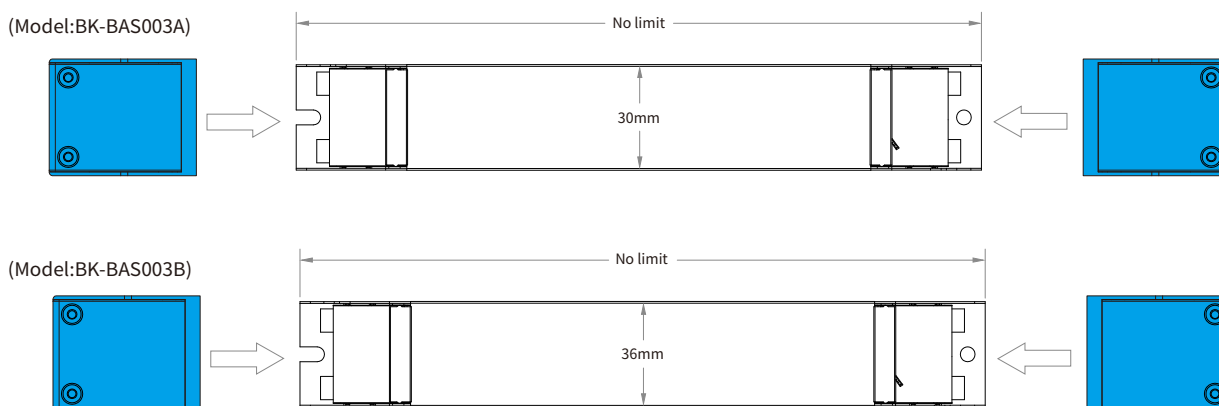


(Model:BK-BAS003B)

Remark: BK-BAS003A apply to DAL030-B,DAL040-B,DAL050-B,DAL060-B;
BK-BAS003B apply to DAL080-B.

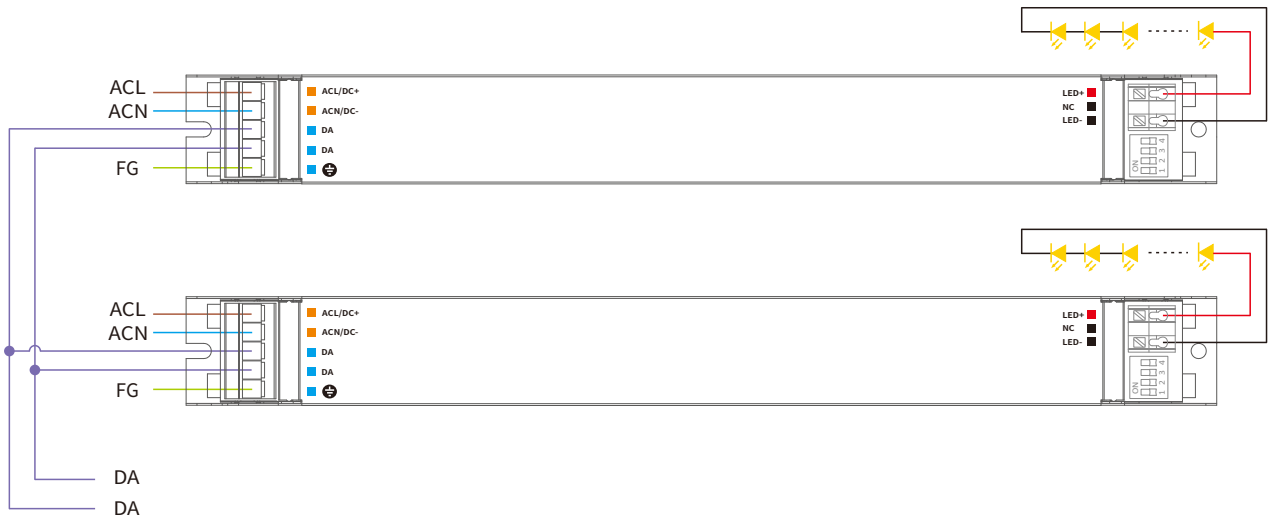
Unit:mm

Installation diagram of accessories



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 $2 \times 1.5\text{mm}^2$.
- 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
$2 \times 0.50\text{mm}^2$	max.100m
$2 \times 0.75\text{mm}^2$	max.150m
$2 \times 1.00\text{mm}^2$	max.200m
$\geq 2 \times 1.50\text{mm}^2$	max.300m

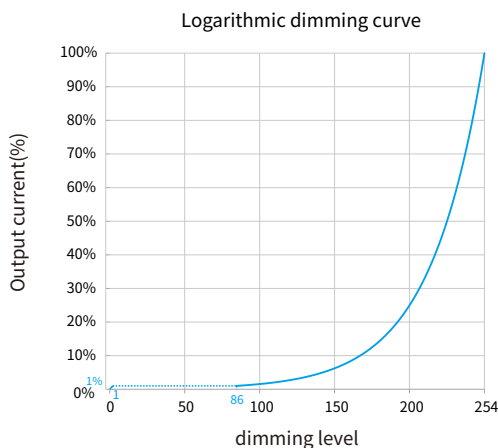
Power-on level :

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.

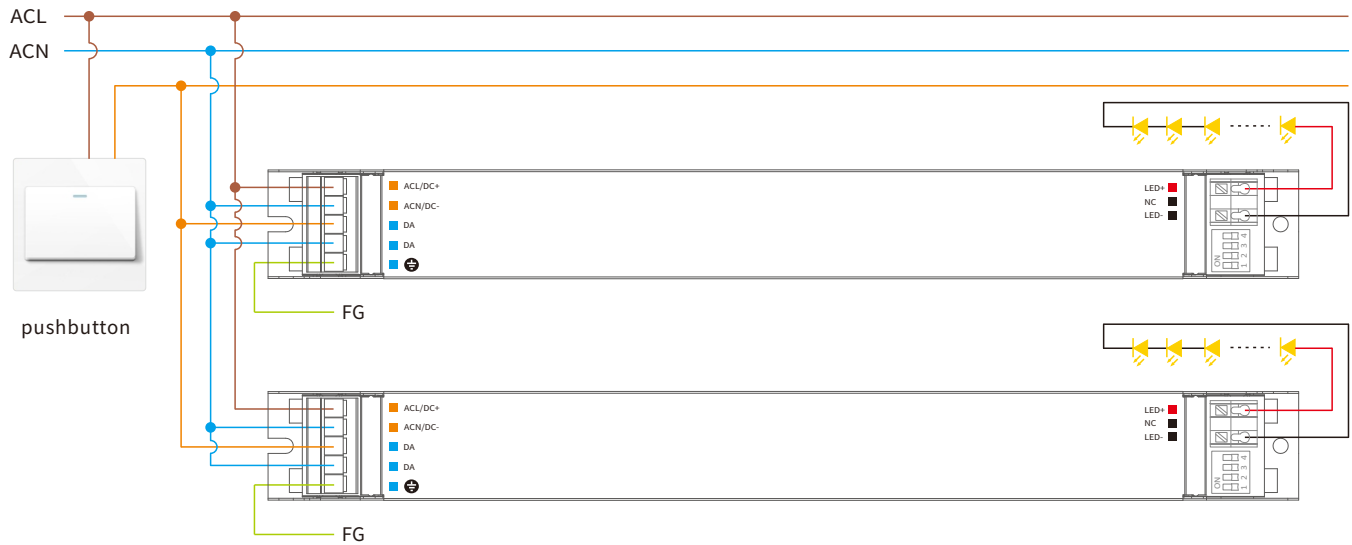
Dimming curve



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, long press the pushbutton 1 seconds, the driver will automatically switch to the pushDIM dimming mode.

Remarks:

Max. 50 drivers per pushDIM control line.

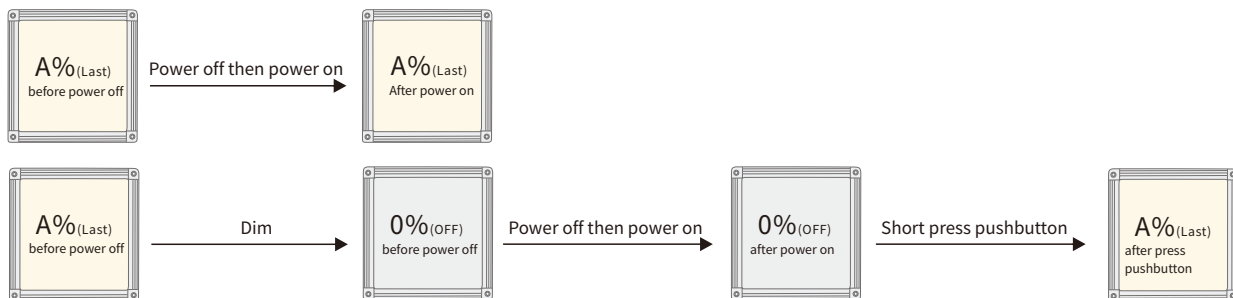
Turn on or turn off: short press pushbutton for 0.2-1s.

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:

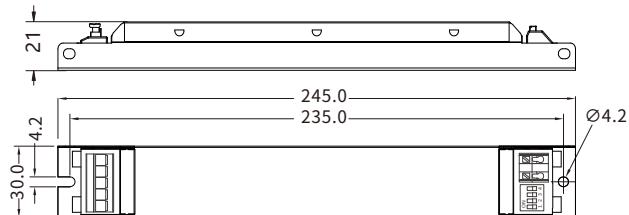
- Long press the pushbutton 15s, all lights output to the brightest state.

Installation

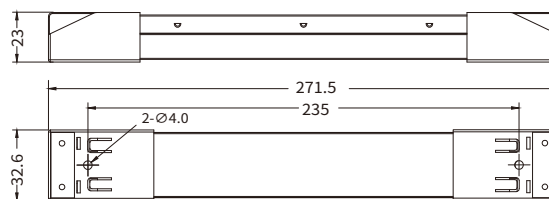
Mechanical dimensions

Unit:mm

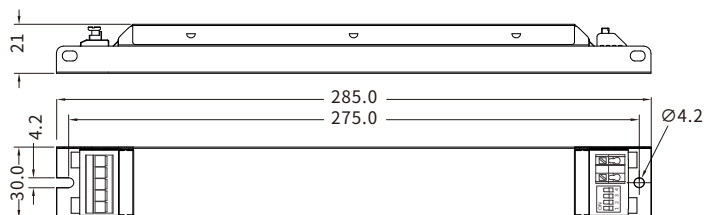
DAL030



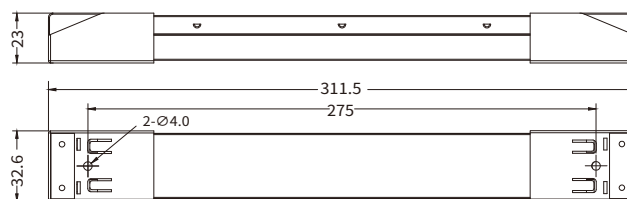
DAL030



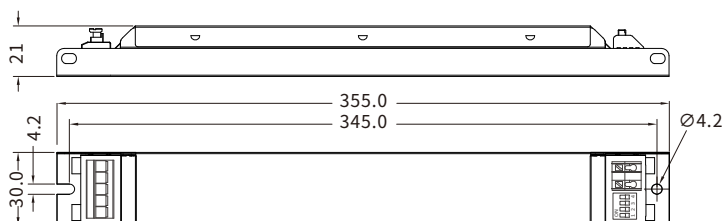
DAL040/DAL050



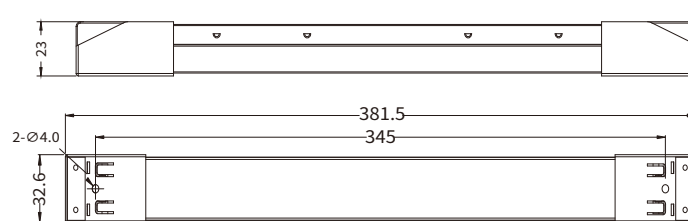
DAL040/DAL050



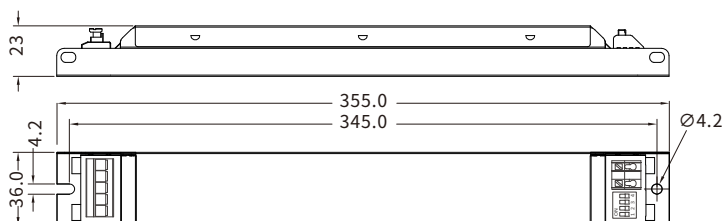
DAL060



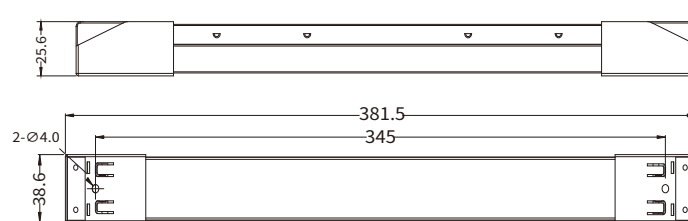
DAL060



DAL080



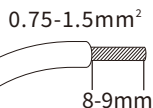
DAL080



INPUT

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

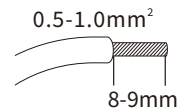
Input wire



OUTPUT

Pin Numbering	function	colour
1	LED-	black
2	NC	black
3	LED+	red

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.

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

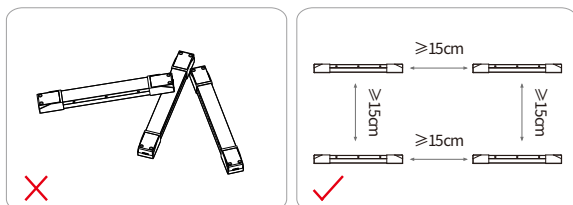


Figure 1

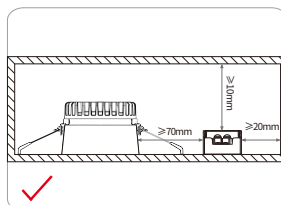
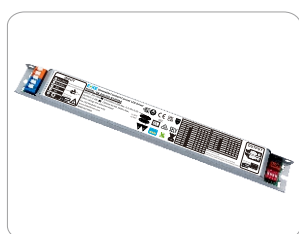
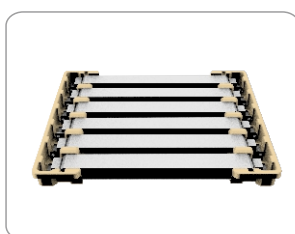


Figure 2

Packaging



Product



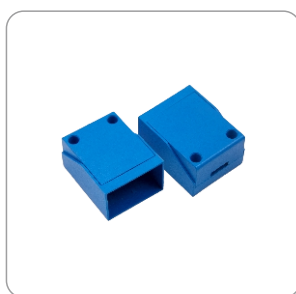
Pearl wool



7pcs*6layer=42pcs/CTN
7pcs*5layer=35pcs/CTN
7pcs*4layer=28pcs/CTN
6pcs*4layer=24pcs/CTN

Model	Product size	Weight	Pearl wool	Carton size	Qty/carton	N.W	G.W
DAL030-B	L245*W30*H21mm	166g	L340*W75*H29mm	L355*W285*H205mm	42pcs	6.97KG	8.27KG
DAL040-B	L285*W30*H21mm	206g	L340*W75*H29mm	L355*W325*H170mm	35pcs	7.21KG	8.53KG
DAL050-B	L285*W30*H21mm	223g	L340*W75*H29mm	L355*W325*H170mm	35pcs	7.81KG	9.02KG
DAL060-B	L355*W30*H21mm	281g	L340*W75*H29mm	L395*W355*H140mm	28pcs	7.87KG	9.08KG
DAL080-B	L355*W36*H23mm	370g	L340*W75*H33mm	L395*W355*H160mm	24pcs	8.88KG	10.1KG

Accessories



End cap + screws



100 sets/CTN

Model	Product size	Weight/set	Carton size	Qty/carton	N.W	G.W
BK-BAS003A	L48.7*W32.6*H23mm	22g	L450*W350*H180mm	100 sets	2.2kg	2.7kg
BK-BAS003B	L48.7*W38.6*H25.6mm	27g	L450*W350*H180mm	100 sets	2.7kg	3.2kg

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.