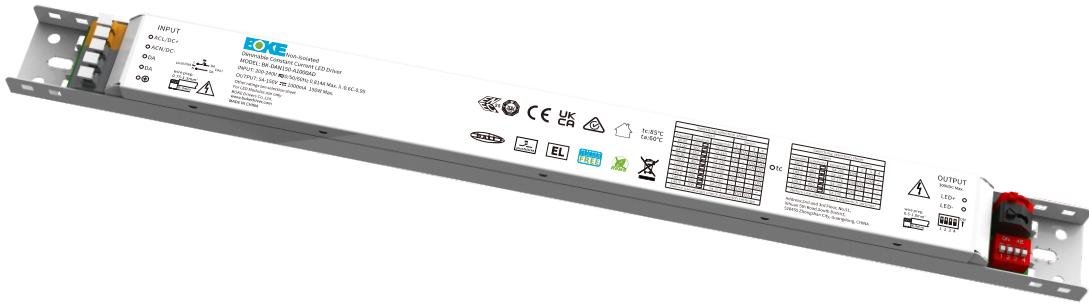


Non-isolated constant current linear dimmable driver
DAN Series suffix D(DALI-2+pushDIM)



Features

- Input and output non-isolated
- Support DALI-2+pushDIM dimming mode
- Suitable for emergency lighting acc. to EN 50172
- 11/14/16-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 of the luminaires is the same
- Dimming range 1~100%, output current accuracy 3%
- Standby power input < 0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- Suitable for built-in use of Class I lamps
- Compliance with CE, ENEC, UKCA, RCM, CCC, DALI-2, EL 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, overload protection)

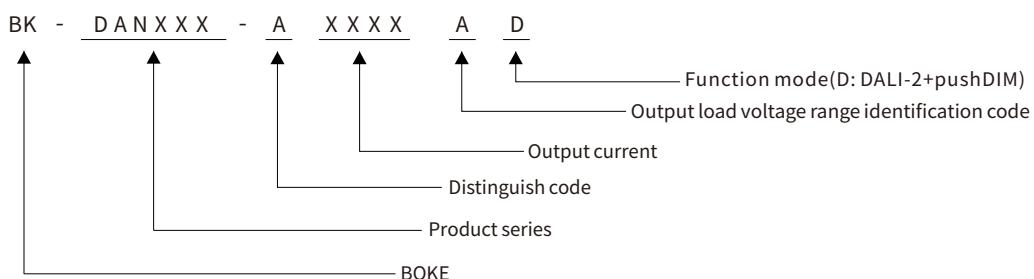
Suitable for lights

- 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 DAN series



Function list

Model	Suffix	Wired dimming	
		DALI-2	pushDIM
BK-DAN025-A BK-DAN040-A BK-DAN060-A BK-DAN075-A BK-DAN100-A BK-DAN150-A	D	√	√

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension	Certifications
BK-DAN025-A0300AD	200-240VAC/DC	25.2W MAX.	54-84/90/100/111/125/142/166/200 /240VDC	0.05-0.3A	L265*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2
BK-DAN040-A0400AD	200-240VAC/DC	40.0W MAX.	54-100/106/114/123/133/145/160/177 /200/228/240VDC	0.075-0.4A	L265*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2
BK-DAN060-A0450AD	200-240VAC/DC	60.3W MAX.	54-134/141/150/160/171/184/200/218 /240VDC	0.075-0.45A	L265*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2
BK-DAN075-A0550AD	200-240VAC/DC	75.4W MAX.	54-137/142/150/157/166/176/187/200 /214/230/240VDC	0.1-0.55A	L265*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2
BK-DAN100-A1000AD	200-240VAC/DC	100W MAX.	54-100/105/111/117/125/133/142/153 /166/181/200/222/240VDC	0.25-1A	L305*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2
BK-DAN150-A1000AD	200-240VAC/DC	150W MAX.	54-150/157/166/176/187/200/214/230 /240VDC	0.25-1A	L375*W30*H21mm	CE, ENEC, UKCA, RCM, EL, DALI-2

Technical data

Product model	BK-DAN025-A0300AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.05-0.3A
Rated output voltage range	54-84/90/100/111/125/142/166/200/240VDC
Rated output power	25.2W Max
Output current adjustment	DIP S.W(11 levels)
Output current ripple LF	±3%
Output current accuracy	±3%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.986%, Flicker index(IEEE 1789)=0.002, Pst LM = 0.012, SVM = 0.006, (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: 0.98,DF: 0.98,see the electrical values below for details
Input THD	8%, see the electrical values below for details
Efficiency(Max)	92.5%,see the electrical values below for details
In-rush current	11.23A peak ,238us 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):27.2W, No load(Pno): N/A, On stand-by(Psb) :<0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)
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=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	
Certification	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.

Technical data

Product model	BK-DAN040-A0400AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.075-0.4A
Rated output voltage range	54-100/106/114/123/133/145/160/177/200/228/240VDC
Rated output power	40W Max
Output current adjustment	DIP S.W(14 levels)
Output current ripple LF	±3%
Output current accuracy	±3%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=1.622%, Flicker index(IEEE 1789)=0.003, Pst LM = 0.007, 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 voltage shock	<380 V AC
Input current	<0.23A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF: 0.98,DF: 0.99,see the electrical values below for details
Input THD	10% ,see the electrical values below for details
Efficiency(Max)	93%,see the electrical values below for details
In-rush current	17.56A peak ,234us 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):43W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)
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=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	
Certification	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.

Technical data

Product model	BK-DAN060-A0450AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.075-0.45A
Rated output voltage range	54-134/141/150/160/171/184/200/218/240VDC
Rated output power	60.3W Max
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±3%
Output current accuracy	±3%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.505%, Flicker index(IEEE 1789)=0.001, Pst LM = 0.008, SVM = 0.008, (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	<0.332A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF: 0.98,DF: 0.99,see the electrical values below for details
Input THD	8%, see the electrical values below for details
Efficiency(Max)	94%,see the electrical values below for details
In-rush current	17.37A peak ,296us 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):63.8W, No load(Pno): N/A, On stand-by(Psb) :<0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)
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=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	
Certification	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.

Technical data

Product model	BK-DAN075-A0550AD
Output parameters	
Regulation method	Constant Current
Rated output current range	0.1-0.55A
Rated output voltage range	54-137/142/150/157/166/176/187/200/214/230/240VDC
Rated output power	75.4W Max
Output current adjustment	DIP S.W(16 levels)
Output current ripple LF	±3%
Output current accuracy	±3%
Linear regulation	±5%
Load regulation	±5%
No load output voltage	300VDC
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.616%, Flicker index(IEEE 1789)=0.003, Pst LM = 0.006, 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	<0.42A (Rated input voltage)
Input frequency	0/50/60Hz
Input PF/Input DF	PF: 0.98,DF: 0.99,see the electrical values below for details
Input THD	9%, see the electrical values below for details
Efficiency(Max)	94%,see the electrical values below for details
In-rush current	17.81A peak ,288us 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):80.2W, No load(Pno): N/A, On stand-by(Psb) :<0.5W, Network stand-by(Pnet) : N/A
Safety	
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)
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, not condensed
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed
IP grade	IP20
MTBF	500,000H,MIL-HDBK-217F(25°C)
Life-time	Nominal life-time up to 100,000 h, see the description below for details
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes
Acoustic Noise	<25dB(30cm, Normal operation)
Environmental protection	RoHS
Certifications and standards	
Certification	CE, ENEC, UKCA, RCM, 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.

Technical data

Product model	BK-DAN100-A1000AD	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.25-1A	
Rated output voltage range	54-100/105/111/117/125/133/142/153/166/181/200/222/240VDC	
Rated output power	100W Max	
Output current adjustment	DIP S.W(16 levels)	
Output current ripple LF	±3%	
Output current accuracy	±3%	
Linear regulation	±5%	
Load regulation	±5%	
No load output voltage	300VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=1.401%, Flicker index(IEEE 1789)=0.002, Pst LM = 0.171, SVM = 0.006, (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	<0.54A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF: 0.99,DF: 0.99,see the electrical values below for details	
Input THD	7.5%,see the electrical values below for details	
Efficiency(Max)	95%,see the electrical values below for details	
In-rush current	23.5A peak,416us 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):105.3W, No load(Pno): N/A, On stand-by(Psb) :<0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)	
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)	
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, not condensed	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed	
IP grade	IP20	
MTBF	500,000H,MIL-HDBK-217F(25°C)	
Life-time	Nominal life-time up to 100,000 h, see the description below for details	
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes	
Acoustic Noise	<25dB(30cm, Normal operation)	
Environmental protection	RoHS	
Certifications and standards		
Certification	CE, ENEC, UKCA, RCM, 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.

Technical data

Product model	BK-DAN150-A1000AD	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.25-1A	
Rated output voltage range	54-150/157/166/176/187/200/214/230/240VDC	
Rated output power	150W Max	
Output current adjustment	DIP S.W(16 levels)	
Output current ripple LF	±3%	
Output current accuracy	±3%	
Linear regulation	±5%	
Load regulation	±5%	
No load output voltage	300VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.370%, Flicker index(IEEE 1789)=0.001, Pst LM = 0.009, SVM = 0.006, (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	<0.814A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF: 0.98,DF: 0.99,see the electrical values below for details	
Input THD	6.5%,see the electrical values below for details	
Efficiency(Max)	95%,see the electrical values below for details	
In-rush current	31A peak ,420us 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):157.9W, No load(Pno): N/A, On stand-by(Psb) :<0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-FG:1750VAC, I/P-DA:1500VAC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:B)	
Isolation resistance	I/P-FG: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% (The minimum current of each dip gear is 3mA)	
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, not condensed	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed	
IP grade	IP20	
MTBF	500,000H,MIL-HDBK-217F(25°C)	
Life-time	Nominal life-time up to 100,000 h, see the description below for details	
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes	
Acoustic Noise	<25dB(30cm, Normal operation)	
Environmental protection	RoHS	
Certifications and standards		
Certification	CE, ENEC, UKCA, RCM, 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	

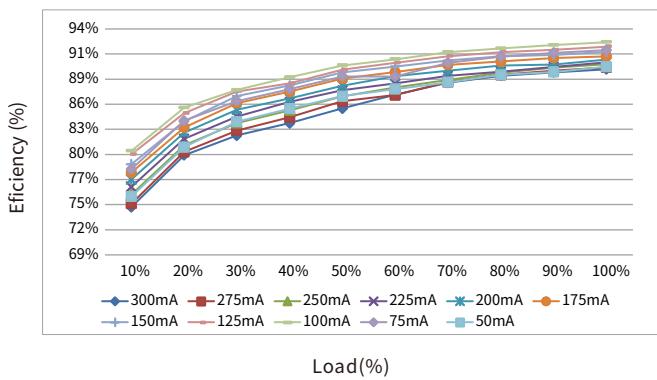
Remarks

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

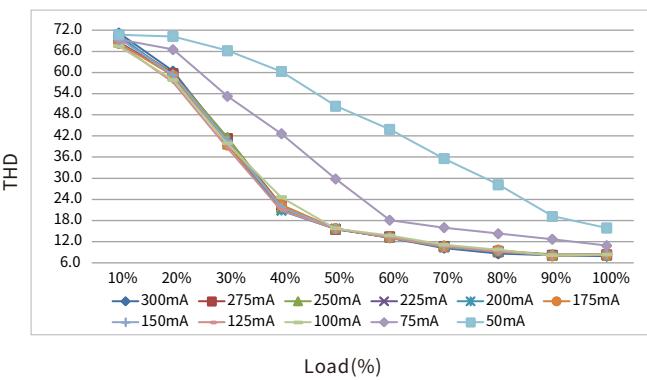
Electrical values

BK-DAN025-A0300AD

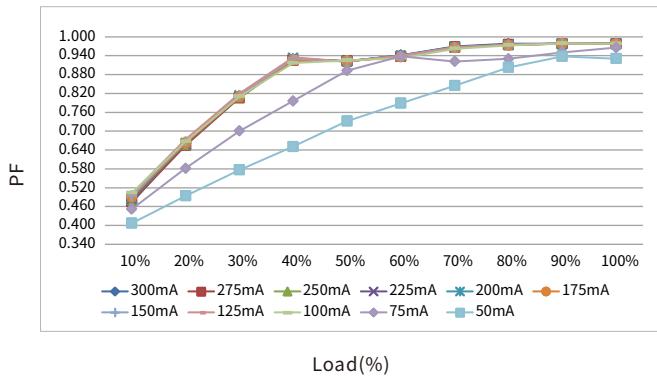
Efficiency vs. Load



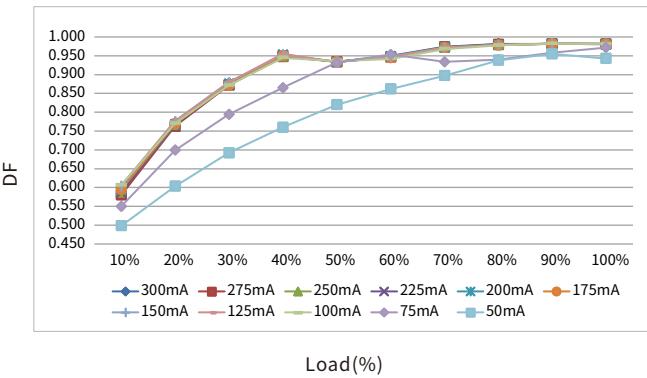
THD vs. Load



Power factor vs. Load

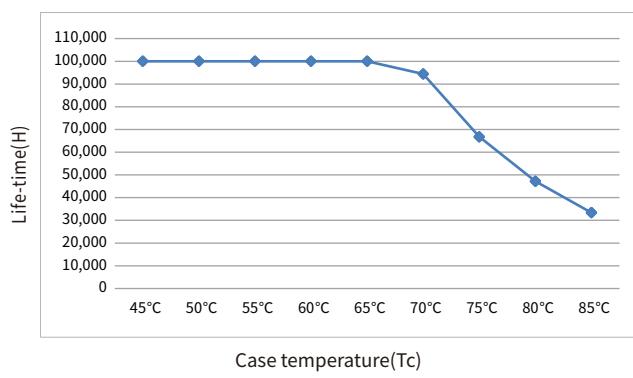


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



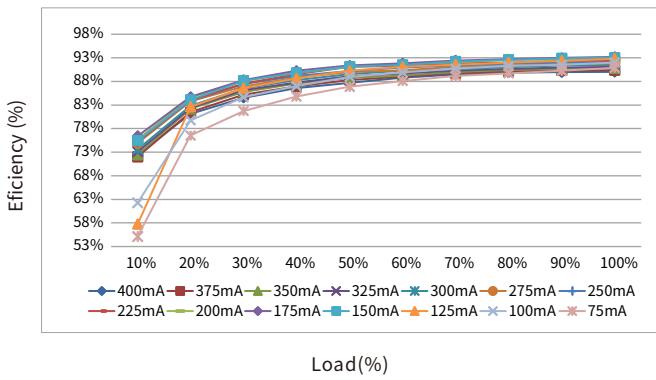
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

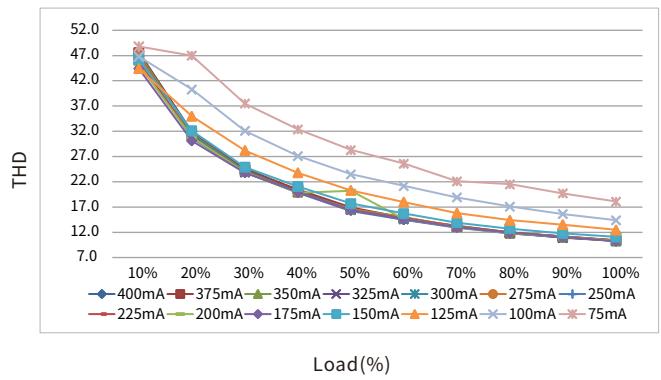
Electrical values

BK-DAN040-A0400AD

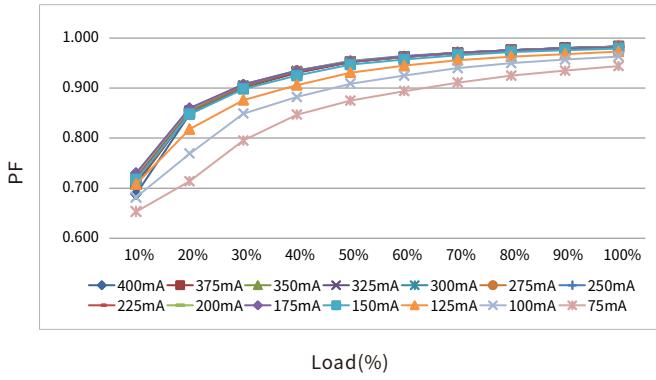
Efficiency vs. Load



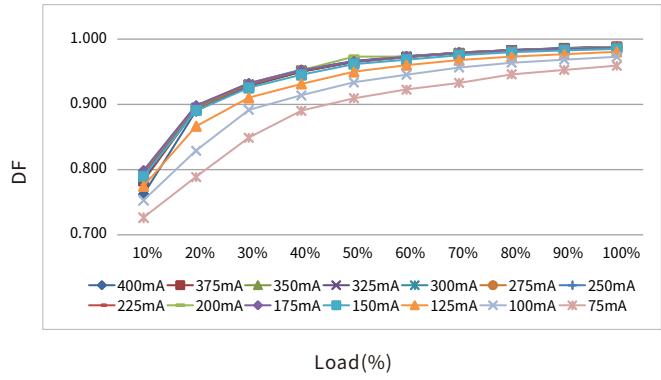
THD vs. Load



Power factor vs. Load

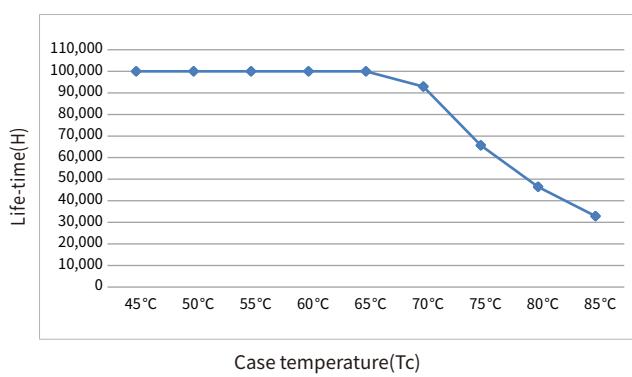


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



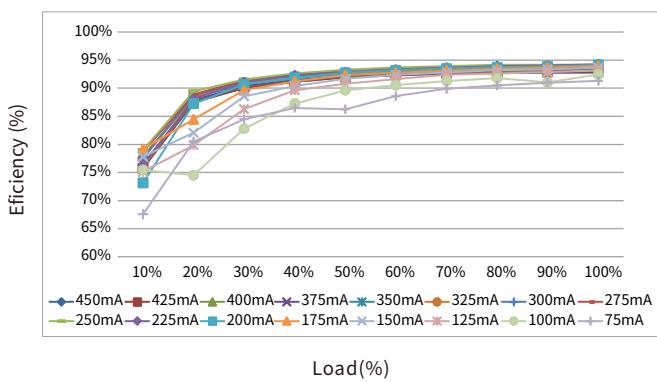
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of T_c to T_a temperature depends also on the luminaire design.

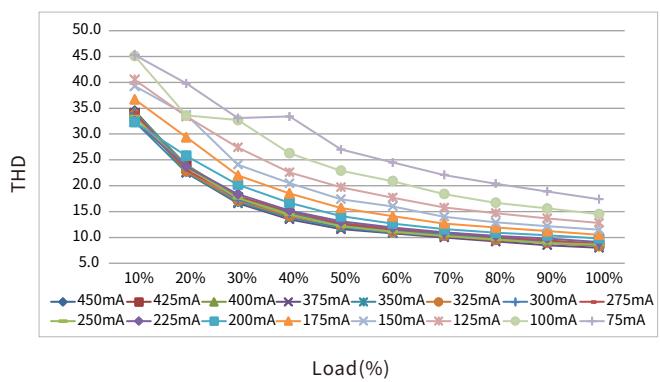
Electrical values

BK-DAN060-A0450AD

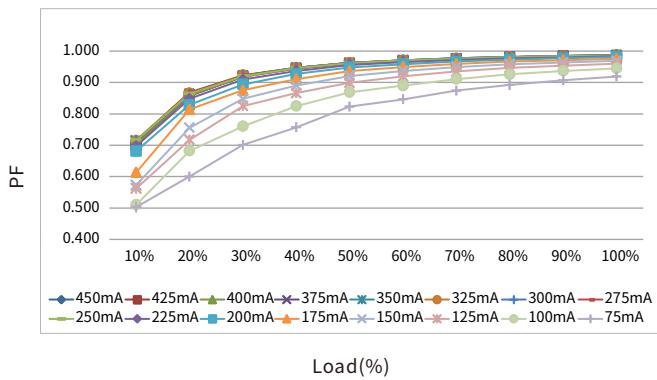
Efficiency vs. Load



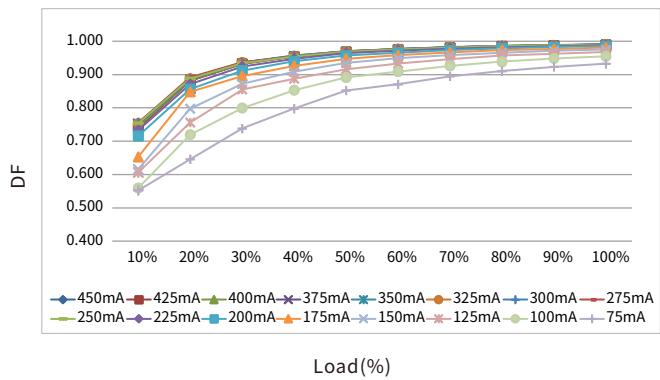
THD vs. Load



Power factor vs. Load

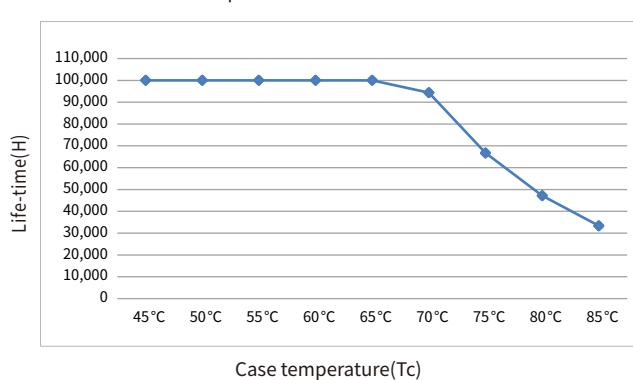


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



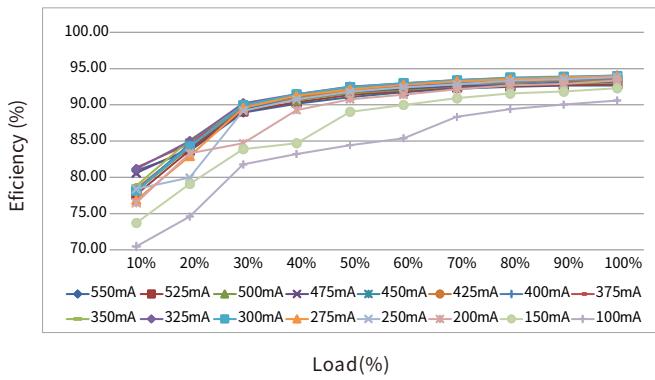
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

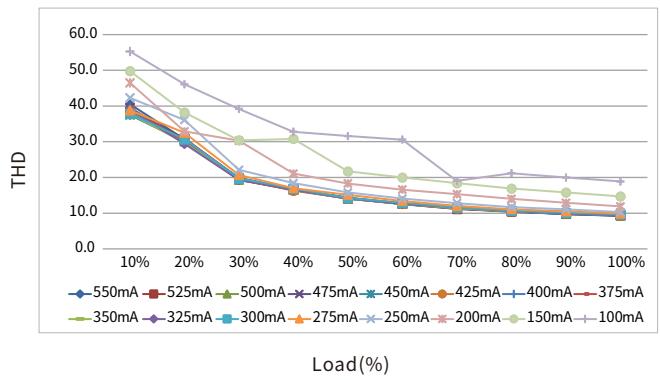
Electrical values

BK-DAN075-A0550AD

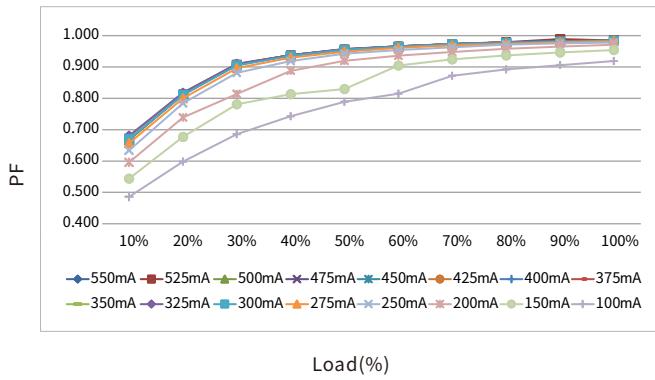
Efficiency vs. Load



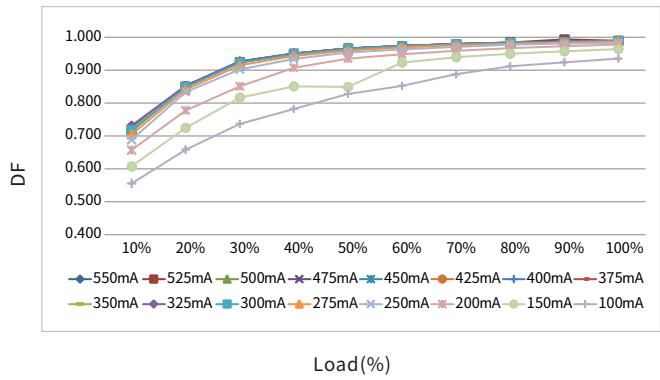
THD vs. Load



Power factor vs. Load

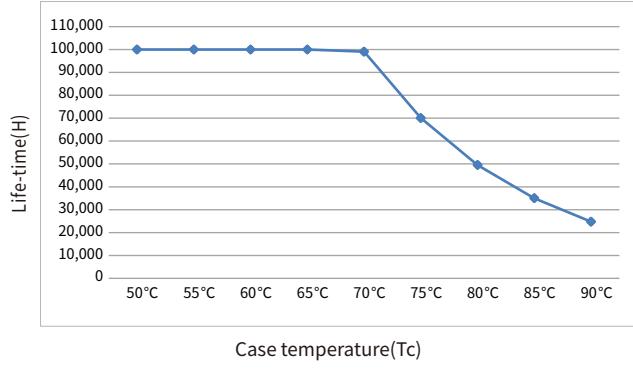


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



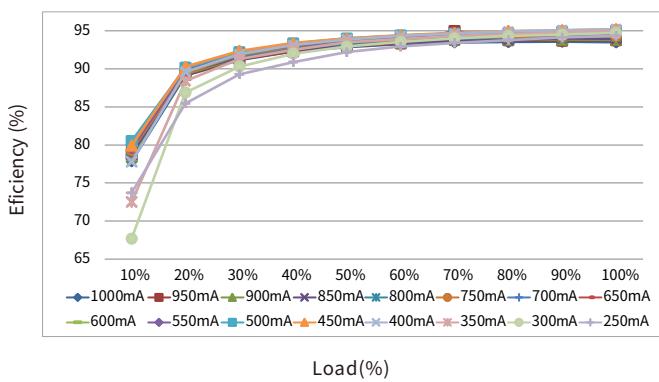
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

-The relation of T_c to T_a temperature depends also on the luminaire design.

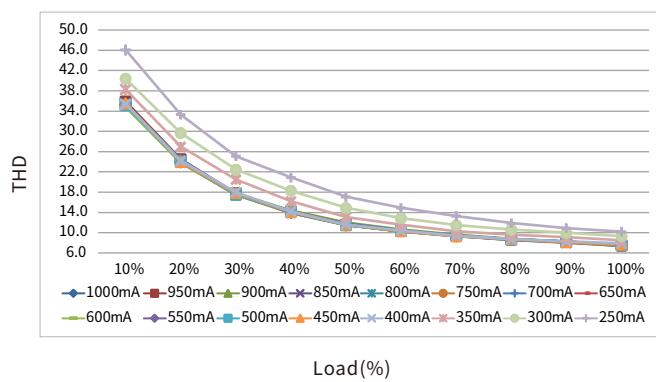
Electrical values

BK-DAN100-A1000AD

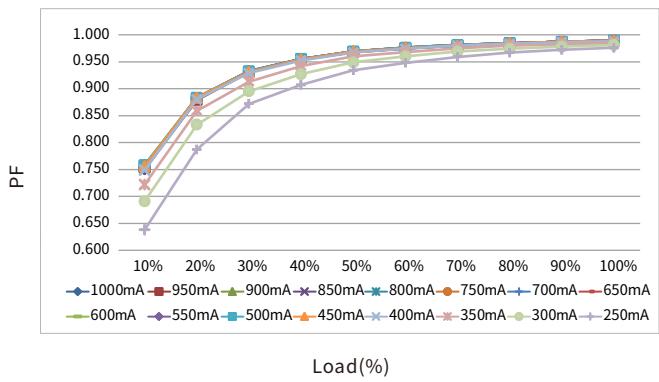
Efficiency vs. Load



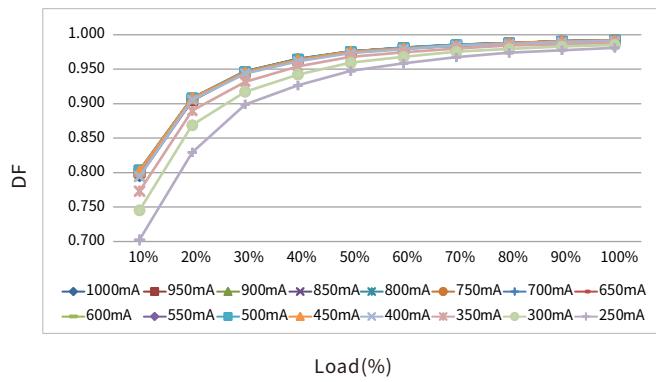
THD vs. Load



Power factor vs. Load

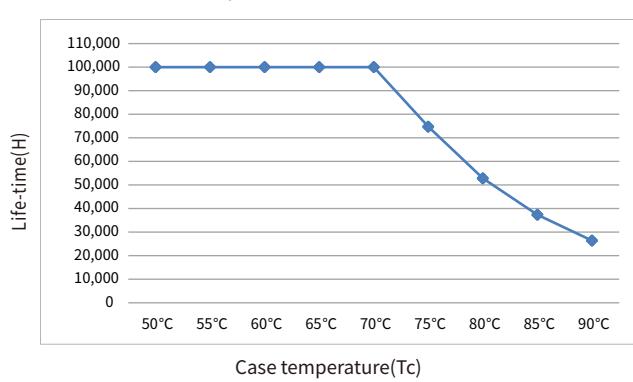


Displacement factor vs. Load



Expected life-time

Life-time vs. case temperature



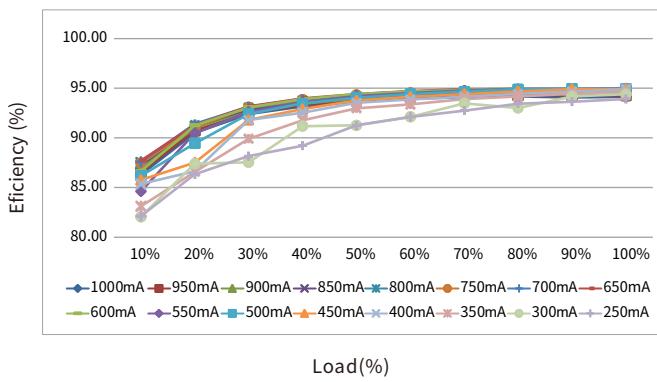
-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

- The relation of T_c to T_a temperature depends also on the luminaire design.

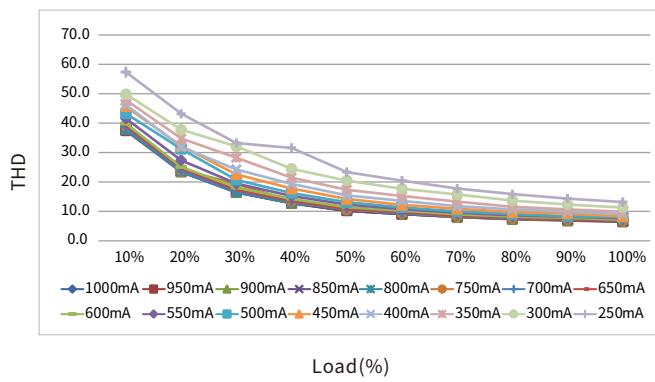
Electrical values

BK-DAN150-A1000AD

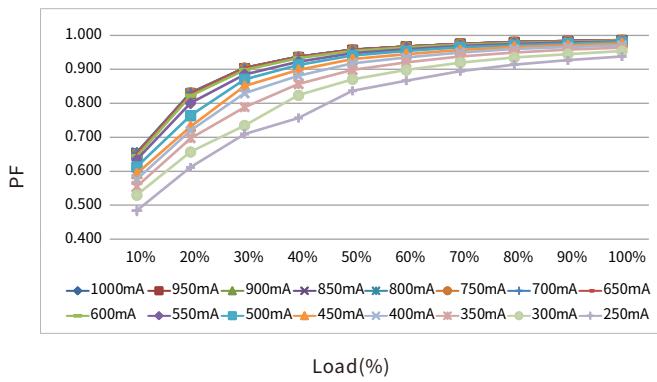
Efficiency vs. Load



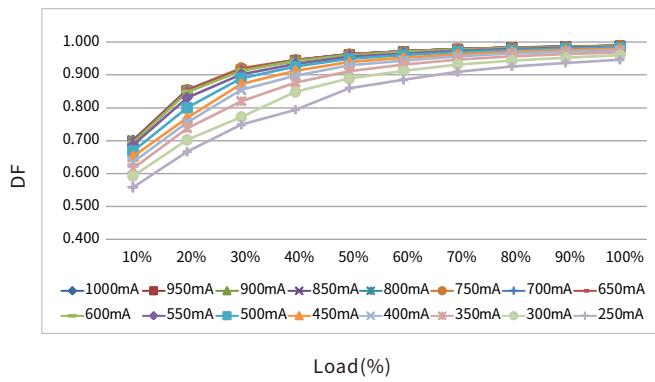
THD vs. Load



Power factor vs. Load

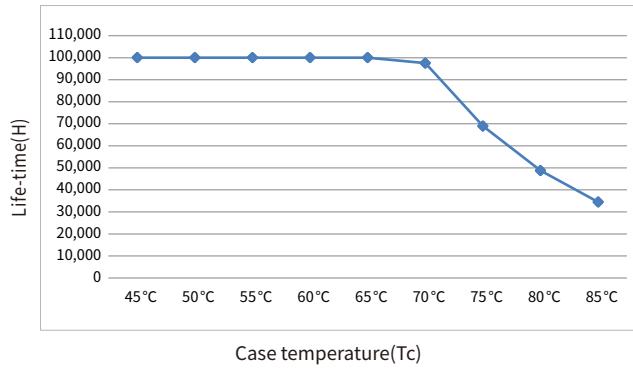


Displacement factor vs. Load



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 T_c to T_a temperature depends also on the luminaire design.

Surge

Model	Ipeak	Twidth	Condition	Relative number of MCB												Unit: pcs		
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25
BK-DAN025-A0300AD	11.23A	238us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	27	35	43	53	67	45	58	71	89	111	63	81	100	125	157
BK-DAN040-A0400AD	17.56A	234us		17	22	27	34	43	28	37	46	57	71	40	52	64	80	100
BK-DAN060-A0450AD	17.37A	296us		13	17	20	25	32	21	28	34	42	53	27	36	44	55	69
BK-DAN075-A0550AD	17.81A	288us		13	17	21	26	32	22	28	35	44	54	22	28	35	44	54
BK-DAN100-A1000AD	23.5A	416us		7	8	10	13	16	11	14	17	22	27	17	21	26	33	41
BK-DAN150-A1000AD	22.93A	420us		7	9	11	13	16	11	14	18	22	27	11	14	18	22	28

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.

Insulation between circuits

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

DIP-switch & output current
BK-DAN025-A0300AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
12.00	50	54-240	—	ON	—	ON	6.0%(3mA)
18.00	75	54-240	ON	—	—	ON	4.0%(3mA)
24.00	100	54-240	—	—	—	ON	3.0%(3mA)
25.00	125	54-200	ON	ON	ON	—	2.4%(3mA)
24.90	150	54-166	—	ON	ON	—	2.0%(3mA)
24.85	175	54-142	ON	—	ON	—	1.7%(3mA)
25.00	200	54-125	—	—	ON	—	1.5%(3mA)
24.98	225	54-111	ON	ON	—	—	1.3%(3mA)
25.00	250	54-100	—	ON	—	—	1.2%(3mA)
24.75	275	54-90	ON	—	—	—	1.1%(3mA)
25.20	300 ★	54-84	—	—	—	—	1.0%(3mA)

BK-DAN040-A0400AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
18.0	75	54-240	ON	—	ON	ON	4.0%(3mA)
24.0	100	54-240	—	—	ON	ON	3.0%(3mA)
30.0	125	54-240	ON	—	ON	—	2.4%(3mA)
36.0	150	54-240	—	ON	ON	—	2.0%(3mA)
39.9	175	54-228	ON	—	—	ON	1.7%(3mA)
40.0	200	54-200	—	—	—	ON	1.5%(3mA)
39.8	225	54-177	ON	ON	ON	—	1.3%(3mA)
40.0	250	54-160	—	ON	ON	—	1.2%(3mA)
39.9	275	54-145	ON	—	ON	—	1.1%(3mA)
39.9	300	54-133	—	—	ON	—	1.0%(3mA)
40.0	325	54-123	ON	ON	—	—	0.9%(3mA)
39.9	350	54-114	—	ON	—	—	0.9%(3mA)
39.8	375	54-106	ON	—	—	—	0.8%(3mA)
40.0	400 ★	54-100	—	—	—	—	0.8%(3mA)

BK-DAN060-A0450AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
18.00	75	54-240	ON	ON	ON	ON	4.0%(3mA)
24.00	100	54-240	—	ON	ON	ON	3.0%(3mA)
30.00	125	54-240	ON	—	ON	ON	2.4%(3mA)
36.00	150	54-240	—	—	ON	ON	2.0%(3mA)
42.00	175	54-240	ON	ON	—	ON	1.7%(3mA)
48.00	200	54-240	—	ON	—	ON	1.5%(3mA)
54.00	225	54-240	ON	—	—	ON	1.3%(3mA)
60.00	250	54-240	—	—	—	ON	1.2%(3mA)
59.95	275	54-218	ON	ON	ON	—	1.1%(3mA)
60.00	300	54-200	—	ON	ON	—	1.0%(3mA)
59.80	325	54-184	ON	—	ON	—	0.9%(3mA)
59.85	350	54-171	—	—	ON	—	0.9%(3mA)
60.00	375	54-160	ON	ON	—	—	0.8%(3mA)
60.00	400	54-150	—	ON	—	—	0.8%(3mA)
59.93	425	54-141	ON	—	—	—	0.7%(3mA)
60.30	450 ★	54-134	—	—	—	—	0.7%(3mA)

BK-DAN075-A0550AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
24.0	100	54-240	ON	ON	ON	ON	3.0%(3mA)
36.0	150	54-240	—	ON	ON	ON	2.0%(3mA)
48.0	200	54-240	ON	—	ON	ON	1.5%(3mA)
60.0	250	54-240	—	—	ON	ON	1.2%(3mA)
66.0	275	54-240	ON	ON	—	ON	1.1%(3mA)
72.0	300	54-240	—	ON	—	ON	1.0%(3mA)
74.8	325	54-230	ON	—	—	ON	0.9%(3mA)
74.9	350	54-214	—	—	—	ON	0.9%(3mA)
75.0	375	54-200	ON	ON	ON	—	0.8%(3mA)
74.8	400	54-187	—	ON	ON	—	0.8%(3mA)
74.8	425	54-176	ON	—	ON	—	0.7%(3mA)
74.7	450	54-166	—	—	ON	—	0.7%(3mA)
74.6	475	54-157	ON	ON	—	—	0.6%(3mA)
75.0	500	54-150	—	ON	—	—	0.6%(3mA)
74.6	525	54-142	ON	—	—	—	0.6%(3mA)
75.4	550 ★	54-137	—	—	—	—	0.5%(3mA)

BK-DAN100-A1000AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
60.0	250	54-240	ON	ON	ON	ON	2.0%(5mA)
72.0	300	54-240	—	ON	ON	ON	1.7%(5mA)
84.0	350	54-240	ON	—	ON	ON	1.4%(5mA)
96.0	400	54-240	—	—	ON	ON	1.3%(5mA)
99.9	450	54-222	ON	ON	—	ON	1.1%(5mA)
100	500	54-200	—	ON	—	ON	1.0%(5mA)
99.6	550	54-181	ON	—	—	ON	0.9%(5mA)
99.6	600	54-166	—	—	—	ON	0.8%(5mA)
99.5	650	54-153	ON	ON	ON	—	0.8%(5mA)
99.4	700	54-142	—	ON	ON	—	0.7%(5mA)
99.8	750	54-133	ON	—	ON	—	0.7%(5mA)
100	800	54-125	—	—	ON	—	0.6%(5mA)
99.5	850	54-117	ON	ON	—	—	0.6%(5mA)
99.9	900	54-111	—	ON	—	—	0.6%(5mA)
99.8	950	54-105	ON	—	—	—	0.5%(5mA)
100	1000 ★	54-100	—	—	—	—	0.5%(5mA)

BK-DAN150-A1000AD

Output			1	2	3	4	Dimming depth
Prated(w)	Irated(mA)	Voltage(Vdc)					
60.00	250	54-240	ON	ON	ON	ON	2.0%(5mA)
72.00	300	54-240	—	ON	ON	ON	1.7%(5mA)
84.00	350	54-240	ON	—	ON	ON	1.4%(5mA)
96.00	400	54-240	—	—	ON	ON	1.3%(5mA)
108.0	450	54-240	ON	ON	—	ON	1.1%(5mA)
120.0	500	54-240	—	ON	—	ON	1.0%(5mA)
132.0	550	54-240	ON	—	—	ON	0.9%(5mA)
144.0	600	54-240	—	—	—	ON	0.8%(5mA)
149.5	650	54-230	ON	ON	ON	—	0.8%(5mA)
149.8	700	54-214	—	ON	ON	—	0.7%(5mA)
150.0	750	54-200	ON	—	ON	—	0.7%(5mA)
149.6	800	54-187	—	—	ON	—	0.6%(5mA)
149.6	850	54-176	ON	ON	—	—	0.6%(5mA)
149.4	900	54-166	—	ON	—	—	0.6%(5mA)
149.2	950	54-157	ON	—	—	—	0.5%(5mA)
150.0	1000 ★	54-150	—	—	—	—	0.5%(5mA)

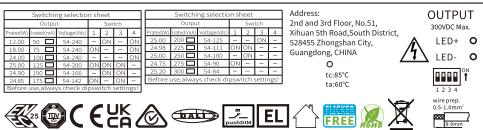
Remarks:

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

Label

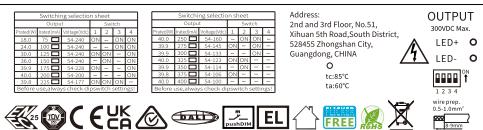
BK-DAN025-A

BOKÉ Non-isolated Dimmable Constant Current LED Driver
 MODEL: BOKÉ-DPA005-A0300AD
 INPUT: 200-240VAC/0.150(50Hz) 0.144 Max. λ: 0.95-0.95
 INPUT: 55-94V AC/DC 0.150 Max. 25.2W.
 Other ratings see selection sheet
 For LED modules use only
 BOKÉ Drivers Co.,Ltd.
www.boke.com
 MADE IN CHINA



BK-DAN040-A

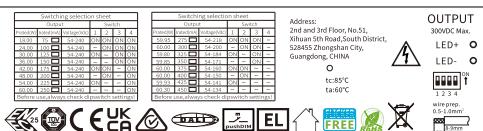
This image shows the second page of the BOKÉ LED driver datasheet. It contains a large blue header 'BOKÉ' with 'Non-isolated' below it. Below the header is a detailed technical specification table. The table includes columns for 'MODEL', 'INPUT', 'OUTPUT', 'OTHER', and 'MARKING'. Specific entries include 'MODEL: BY-DA040-A040AD', 'INPUT: 200-240VAC 50/60Hz 0.23A Max.', 'OUTPUT: 54-120V DC 400mA 40W Max.', and 'MARKING: BOKÉ Drives Co., Ltd. www.boke.com MADE IN CHINA'. There are also several small diagrams and text snippets related to component placement and ratings.



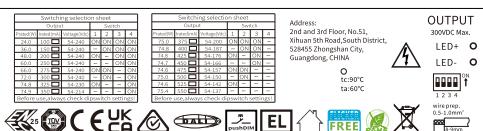
BK-DAN060-A

The image shows the EKE DMD06-40450AD data sheet. It includes the following sections:

- INPUT** (radio buttons for ACL/DC or ACN/DC)
- DA** (radio buttons for pushIN or pushOUT)
- DA** (radio buttons for pushIN or pushOUT)
- DA** (radio buttons for wire, pin, or 0.75-1.5mm²)
- DA** (radio buttons for 1.5mm or 3mm)
- EKE** Non-isolated Dimmable Constant Current LED Driver
MDDE06-40450AD
Input: 100-240VAC 50/60Hz 0.332A Max. $\lambda=3.6\text{C-0.6}$
Output: 541.342V $\pm 2\%$ 450mA 60.3W Max.
Other ratings see selection sheet
- For LED modules only**
- OKI Driver** (radio button) OkiDriver.com.cn
www.okidriver.com.cn
MADE IN CHINA

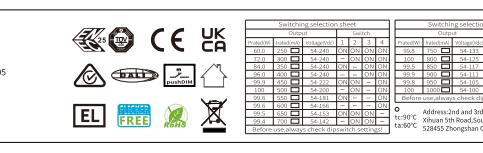


BK-DAN075-A



BK-DAN100-A

EOKE Non-Isolated
Dimmable Constant Current LED Driver
MODEL: BK-NA100-41000AD
INPUT: 200~240V AC/50~60Hz/0.54A Max. λ<0.6C
OUTPUT: 54~100mA / 1000mA / 100W Max.
Other rating see selection sheet
For more information contact only
EOKE Drivers Co.,Ltd
www.eokedrivers.com
Nordic Office

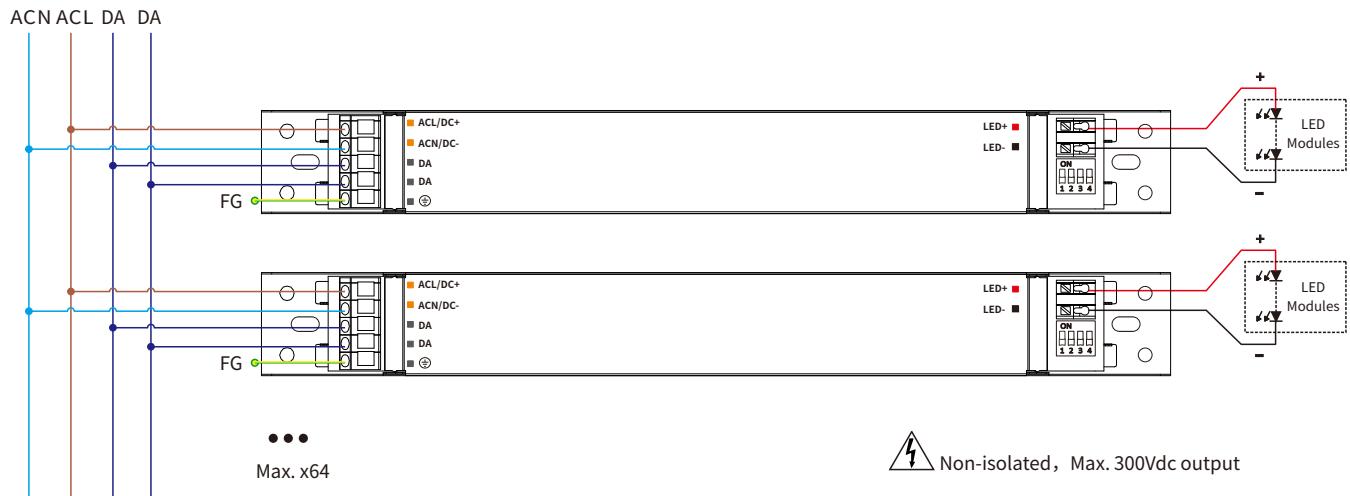


BK-DAN150-A



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

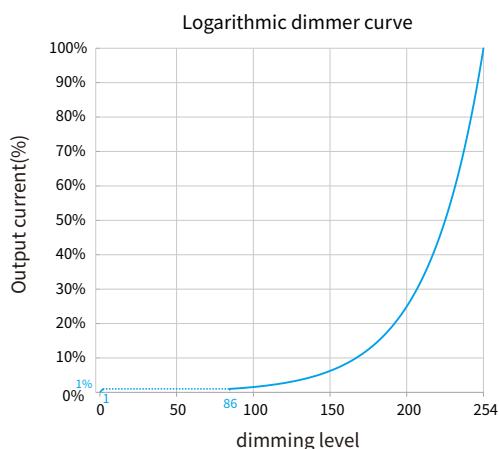
Power-on level :

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.

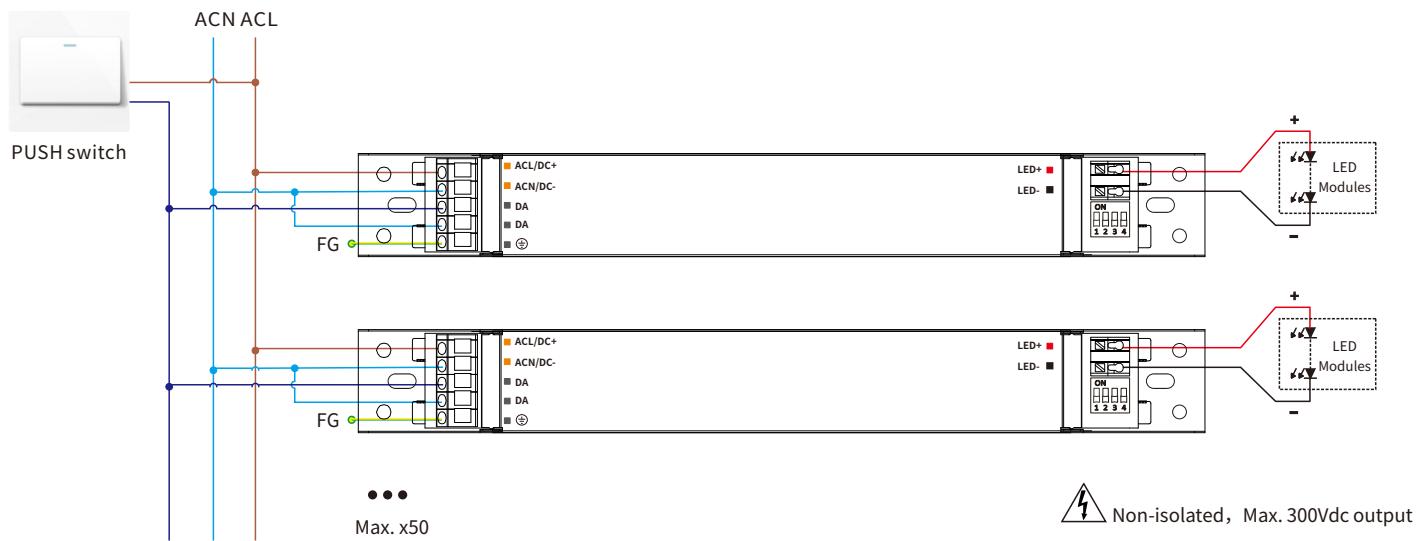
Dimming curve



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

- According to the wiring diagram of the pushDIM dimming application, short press(<1s) the pushbutton 5 times quickly within 3s , then long press(>1s) the pushbutton 1 time,The driver will automatically switch to the pushDIM dimming mode.

Remarks:

Max. 50 drivers per pushDIM control line.

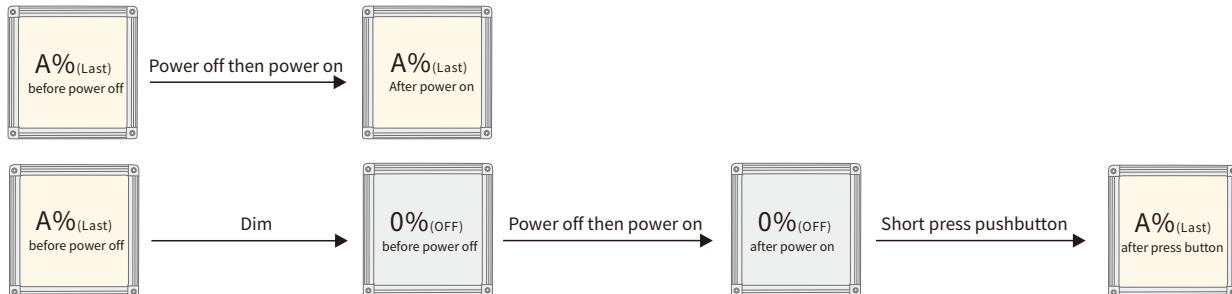
Turn on or turn off:short press pushbutton for 0.2-1s.

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 off,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 luminare is on.

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

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

method 2:

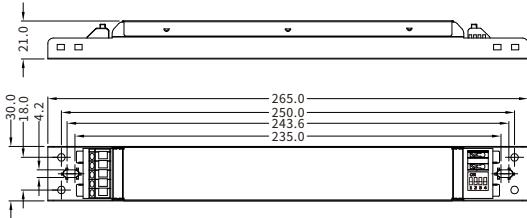
- Long press the pushbutton 15s,all lights output to the brightest state.

Mechanical Specification

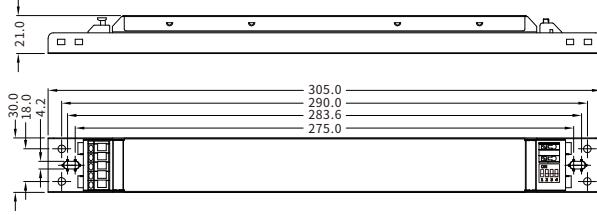
Size(Excluding accessories)

Unit:mm

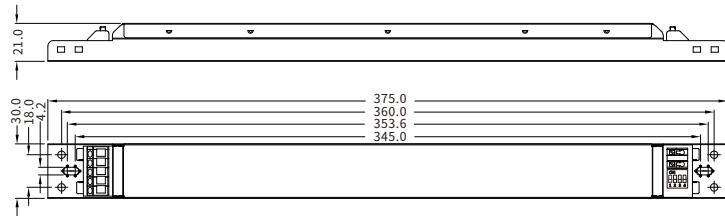
DAN025-A/DAN040-A/DAN060-A/DAN075-A



DAN100-A



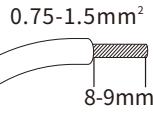
DAN150-A



INPUT

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

Input wire

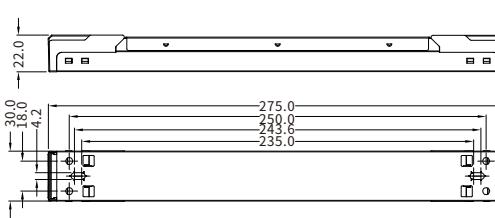


Mechanical Specification

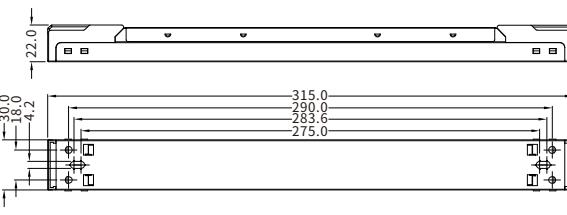
Size(Include accessories)

Unit:mm

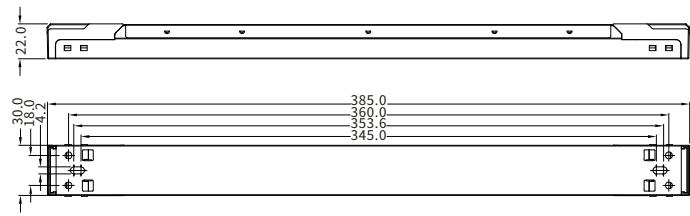
DAN025-A/DAN040-A/DAN060-A/DAN075-A



DAN100-A



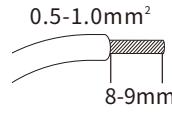
DAN150-A



OUTPUT

Numbering	function	colour
1	LED+	red
2	NG	black
3	LED-	black

Output wire



Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of > 0 V and Non-isolated, high voltage output.

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.

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.

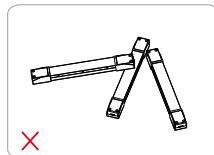


Figure 1

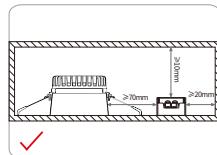
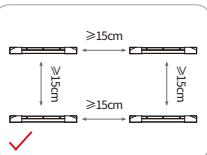


Figure 2

Mounting screw specifications and torque

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

Replace LED module

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

Packaging(Excluding accessories)



Product

Paper tray

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

Model	Product size	Weight	Paper tray	Carton size	Packing	N.W	G.W
DAN025-A	L265*W30*H21mm	155g	L345*W75*H29mm	L355*W305*H205mm	42pcs	6.51kg	7.77kg
DAN040-A	L265*W30*H21mm	161g	L345*W75*H29mm	L355*W305*H205mm	42pcs	6.76kg	7.97kg
DAN060-A	L265*W30*H21mm	161g	L345*W75*H29mm	L355*W305*H205mm	42pcs	6.76kg	7.97kg
DAN075-A	L265*W30*H21mm	191g	L345*W75*H29mm	L355*W305*H205mm	42pcs	8.02kg	9.21kg
DAN100-A	L305*W30*H21mm	234g	L345*W75*H29mm	L355*W345*H170mm	35pcs	8.19kg	9.42kg
DAN150-A	L375*W30*H21mm	291g	L345*W75*H29mm	L415*W355*H140mm	28pcs	8.15kg	9.31kg

Packaging(Include accessories)



Product

Paper tray

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

Model	Product size	Weight	Paper tray	Carton size	Packing	N.W	G.W
DAN025-A	L275*W30*H21mm	170g	L345*W75*H29mm	L355*W315*H205mm	42pcs	7.14kg	8.57kg
DAN040-A	L275*W30*H21mm	176g	L345*W75*H29mm	L355*W315*H205mm	42pcs	7.39kg	8.77kg
DAN060-A	L275*W30*H21mm	176g	L345*W75*H29mm	L355*W315*H205mm	42pcs	7.39kg	8.77kg
DAN075-A	L275*W30*H21mm	206g	L345*W75*H29mm	L355*W315*H205mm	42pcs	8.65kg	9.91kg
DAN100-A	L315*W30*H21mm	249g	L345*W75*H29mm	L355*W355*H170mm	35pcs	8.72kg	9.99kg
DAN150-A	L385*W30*H21mm	306g	L345*W75*H29mm	L425*W355*H140mm	28pcs	8.57kg	9.79kg

Additional information

- The life and MTBF of the product are for reference only, and do not represent a warranty statement.
- For more information, please send an email to info@bokedriver.com.