

Constant current linear dimmable driver

CJL Series suffix M(1-10V/10V PWM/Rx dimming+12V auxiliary power)



Features

- Support 1-10V/10V PWM/Rx dimming+12V auxiliary power
- Provide 12V 100mA auxiliary power supply to power control module or sensor
- Auxiliary 12V supports fast power-down feature
- 10-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 lights is the same
- Standby power input<0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- SELV and Class I design, suitable for use inside of the light
- Passed CE, ENEC, UKCA, RCM, CCC, EL and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Interfaces

- 1-10V 3in1 Isolated(1-10V / 10V PWM / Rx)
- VCC Auxiliary power(12V,100mA)

Functions

- Support central emergency application (dimming normal in DC input)
- Support self-contained emergency application
- Protective features (short-circuit protection, no-load protection)

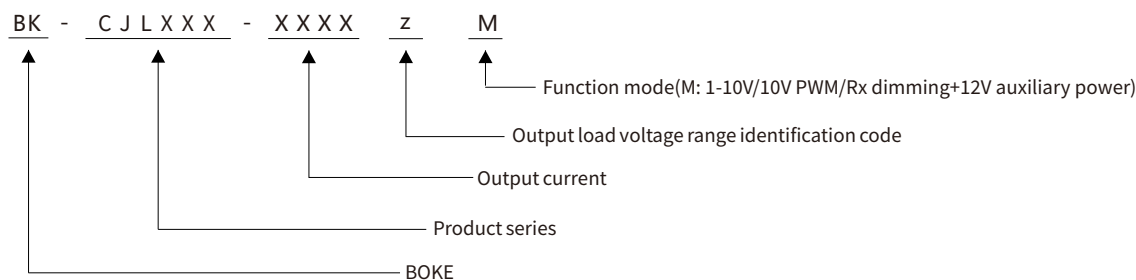
Suitable for lights

- 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 CJL series



Function list

Model	Suffix	Wired dimming		Aux power
		1-10V 3in1	3.3-10V PWM	12V/0.1A
BK-CJL030 BK-CJL040 BK-CJL050	M	√		√
BK-CJL060 BK-CJL080	Y		√	√

* The description in this specification is only applicable to the products with the suffix M and the model are CJL030,CJL040,CJL050,CJL060 and CJL080 .

Model list

Model	Input voltage	Output power	Output voltage	Output current	Dimension	Certifications
BK-CJL030-0800AM	200-240VAC/DC	30.4W MAX.	12-38/40/42VDC	0.35-0.8A	L245*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL030-0800AY	200-240VAC/DC	30.4W MAX.	12-38/40/42VDC	0.35-0.8A	L245*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL040-1050AM	200-240VAC/DC	40W MAX.	12-38/40/42VDC	0.6-1.05A	L285*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL040-1050AY	200-240VAC/DC	40W MAX.	12-38/40/42VDC	0.6-1.05A	L285*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL050-1300AM	200-240VAC/DC	50.4W MAX.	12-38/40/42VDC	0.85-1.3A	L285*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL050-1300AY	200-240VAC/DC	50.4W MAX.	12-38/40/42VDC	0.85-1.3A	L285*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL060-1650AM	200-240VAC/DC	63W MAX.	12-38/40/42VDC	1.2-1.65A	L355*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL060-1650AY	200-240VAC/DC	63W MAX.	12-38/40/42VDC	1.2-1.65A	L355*W30*H21mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL080-2000AM	200-240VAC/DC	80W MAX.	12-40/41/42VDC	1.55-2A	L355*W36*H23mm	CE, ENEC, UKCA, RCM, CCC, EL
BK-CJL080-2000AY	200-240VAC/DC	80W MAX.	12-40/41/42VDC	1.55-2A	L355*W36*H23mm	CE, ENEC, UKCA, RCM, CCC, EL

* The description in this specification is only applicable to the products with the suffix M and the model are CJL030,CJL040,CJL050,CJL060 and CJL080 .

Technical data

Product model	BK-CJL030-0800AM	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.35-0.8A	
Rated output voltage range	12- 38/40/42VDC	
Rated output power	30.4W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	± 2%	
Output current accuracy	± 1%	
Linear regulation	± 1%	
Load regulation	± 2%	
No load output voltage	50VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.102%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.003, SVM = 0.000, (The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage range	200-240VAC 200-240VDC	
Input voltage range	180-264VAC 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.19A (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	5% ,see the electrical values below for details	
Efficiency(Max)	88% ,see the electrical values below for details	
In-rush current	6.50A peak ,172us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	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(LED):3750V AC(LED,DIM port must be short-circuited),I/P-FG:1750V AC,O/P-FG:500V AC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:A)	
Leakage current	0.16mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
pushDIM dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-15V, interface current consumption: <0.6mA	
Auxiliary power supply	12V ±5% 100mA	
Dimming range	1%-100%	
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, CCC, EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	N/A	
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

Remarks

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

Technical data

Product model	BK-CJL040-1050AM	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.6-1.05A	
Rated output voltage range	12-38/40/42VDC	
Rated output power	40W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	± 2%	
Output current accuracy	± 1%	
Linear regulation	± 1%	
Load regulation	± 2%	
No load output voltage	50VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.117%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.000, SVM = 0.003, (The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage range	200-240VAC 200-240VDC	
Input voltage range	180-264VAC 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.24A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF: 0.98,DF: 0.98 ,see the electrical values below for details	
Input THD	6% ,see the electrical values below for details	
Efficiency(Max)	88.5% ,see the electrical values below for details	
In-rush current	6.60A peak ,162us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	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(LED):3750V AC(LED,DIM port must be short-circuited),I/P-FG:1750V AC,O/P-FG:500V AC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:A)	
Leakage current	0.55mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
pushDIM dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-15V, interface current consumption: <0.6mA	
Auxiliary power supply	12V ± 5% 100mA	
Dimming range	1%-100%	
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, CCC, EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	N/A	
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

Remarks

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

Technical data

Product model	BK-CJL050-1300AM	
Output parameters		
Regulation method	Constant Current	
Rated output current range	0.85-1.3A	
Rated output voltage range	12-38/40/42VDC	
Rated output power	49.4W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	±2%	
Output current accuracy	±1%	
Linear regulation	±1%	
Load regulation	±6%	
No load output voltage	50VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.140%, Flicker index(IEEE 1789)=0.000, Pst LM = 0.014, 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 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.3A (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	5% ,see the electrical values below for details	
Efficiency(Max)	89.5% ,see the electrical values below for details	
In-rush current	6.95A peak ,152us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	Full load(Pin):55.2W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750V AC(LED,DIM port must be short-circuited),I/P-FG:1750V AC,O/P-FG:500V AC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:A)	
Leakage current	0.52mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
pushDIM dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-15V, interface current consumption: <0.6mA	
Auxiliary power supply	12V ±5% 100mA	
Dimming range	1%-100%	
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, CCC, EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	N/A	
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

Remarks

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

Technical data

Product model	BK-CJL060-1650AM	
Output parameters		
Regulation method	Constant Current	
Rated output current range	1.2-1.65A	
Rated output voltage range	12-38/40/42VDC	
Rated output power	62.7W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	±2%	
Output current accuracy	±1%	
Linear regulation	±1%	
Load regulation	±2%	
No load output voltage	50VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.201%, Flicker index(IEEE 1789)=0.000, 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 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.38A (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	5% ,see the electrical values below for details	
Efficiency(Max)	90% ,see the electrical values below for details	
In-rush current	9.63A peak ,156us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	Full load(Pin):69.7W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750V AC(LED,DIM port must be short-circuited),I/P-FG:1750V AC,O/P-FG:500V AC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:A)	
Leakage current	0.64mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
pushDIM dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-15V, interface current consumption: <0.6mA	
Auxiliary power supply	12V ±5% 100mA	
Dimming range	1%-100%	
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, CCC, EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	N/A	
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

Remarks

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

Technical data

Product model	BK-CJL080-2000AM	
Output parameters		
Regulation method	Constant Current	
Rated output current range	1.55-2A	
Rated output voltage range	12- 40/41/42VDC	
Rated output power	80W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	±2%	
Output current accuracy	±1%	
Linear regulation	±1%	
Load regulation	±2%	
No load output voltage	50VDC	
Flicker-free(typical)	Flickering percent(IEEE 1789)=0.214%, Flicker index(IEEE 1789)=0.000, 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 200-264VDC	
Input votage shock	<380 V AC	
Input current	<0.47A (Rated input voltage)	
Input frequency	0/50/60Hz	
Input PF/Input DF	PF: 0.97,DF: 0.98 ,see the electrical values below for details	
Input THD	6%,see the electrical values below for details	
Efficiency(Max)	90.5%,see the electrical values below for details	
In-rush current	13.25A peak ,194us duration(50 % Ipeak), see the description below for details	
Start/Switchover/Turn off	<0.5s(AC start),<0.5s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off)	
Switching cycles	> 50,000 switching cycles	
Power consumption	Full load(Pin):88.4W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A	
Safety		
Withstand voltage	I/P-O/P(LED):3750V AC(LED,DIM port must be short-circuited),I/P-FG:1750V AC,O/P-FG:500V AC	
Mains surge capability	L-N:2KV,L-FG/N-FG:2KV(Performance criterion:A)	
Leakage current	0.57mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
pushDIM dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-15V, interface current consumption: <0.6mA	
Auxiliary power supply	12V ±5% 100mA	
Dimming range	1%-100%	
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, CCC, EL	
Safety	EN61347-1, EN61347-2-13, EN62384	
EMC	EN55015, EN61000-3-2 , EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547	
DALI-2	N/A	
EL	Compatible IEC 61347-2- 13 Annex J, compatible with EN 60598-2-22 and EN 50172	
RF	N/A	

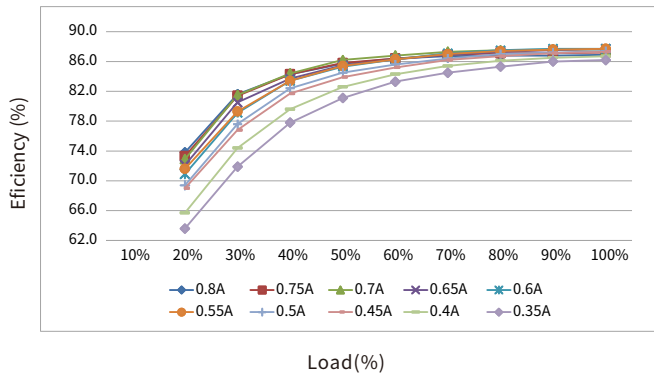
Remarks

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

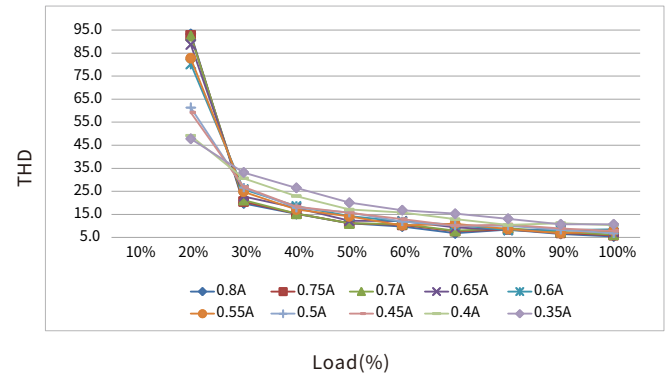
Electrical values

BK-CJL030-0800AM

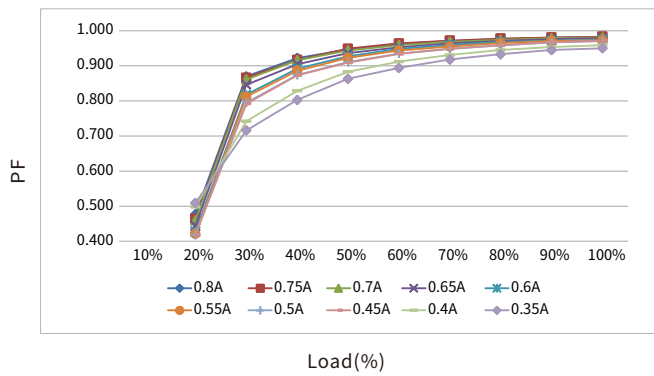
Efficiency vs Load



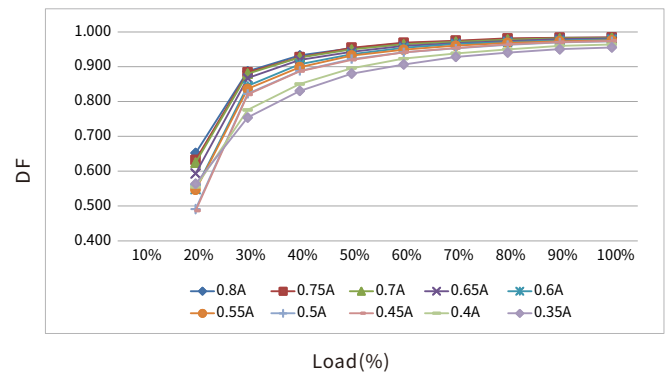
THD vs. Load



Power factor vs. Load

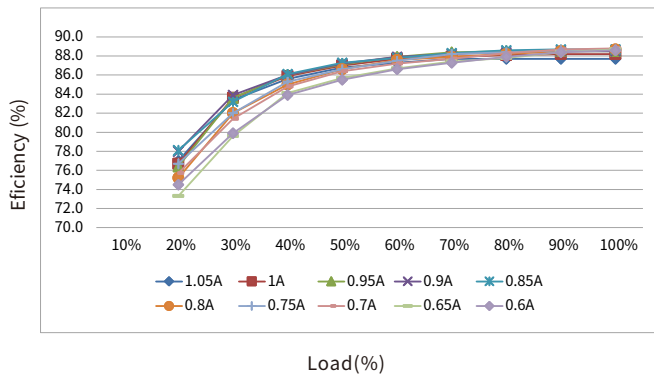


Displacement factor vs. Load

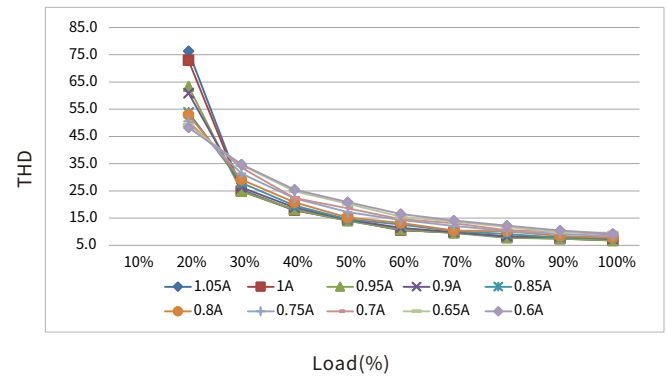


BK-CJL040-1050AM

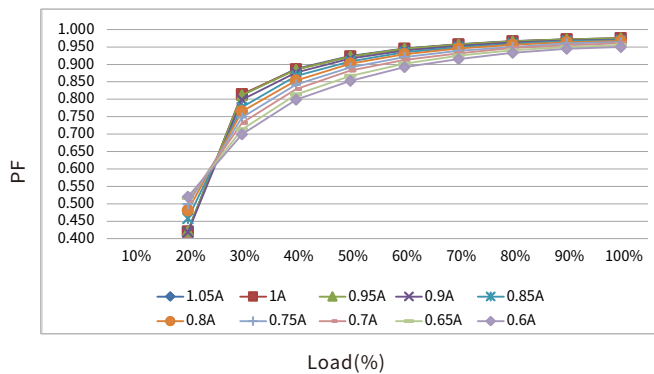
Efficiency vs Load



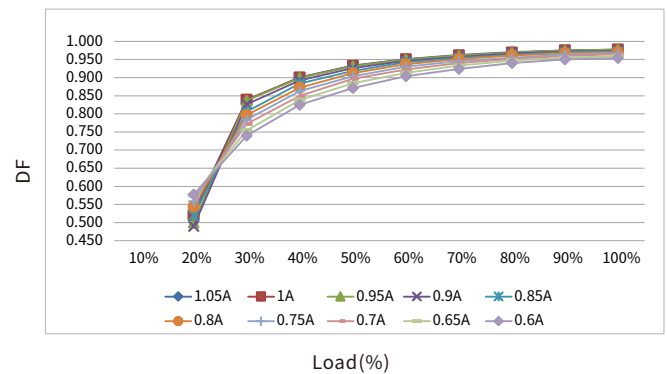
THD vs. Load



Power factor vs. Load



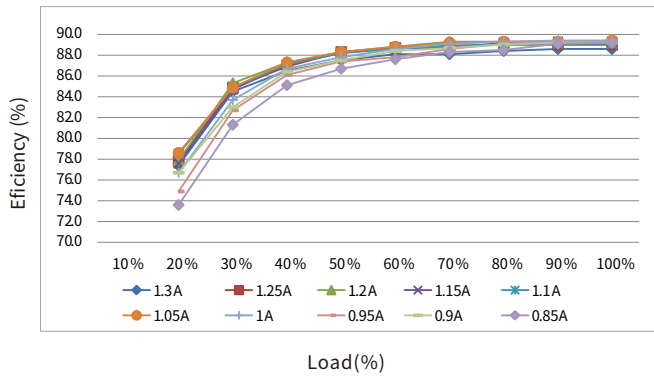
Displacement factor vs. Load



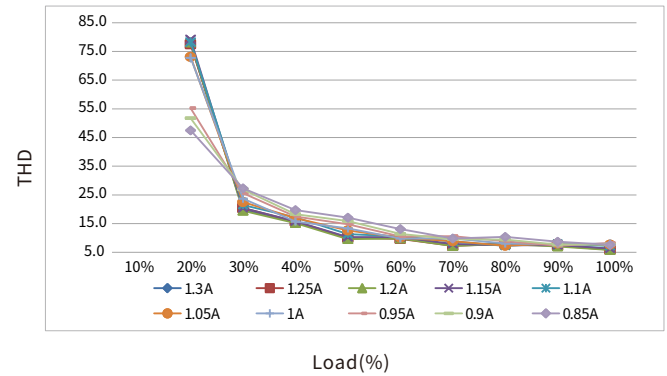
Electrical values

BK-CJL050-1300AM

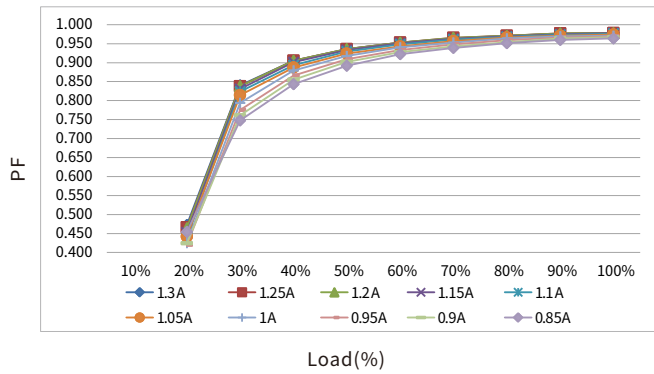
Efficiency vs Load



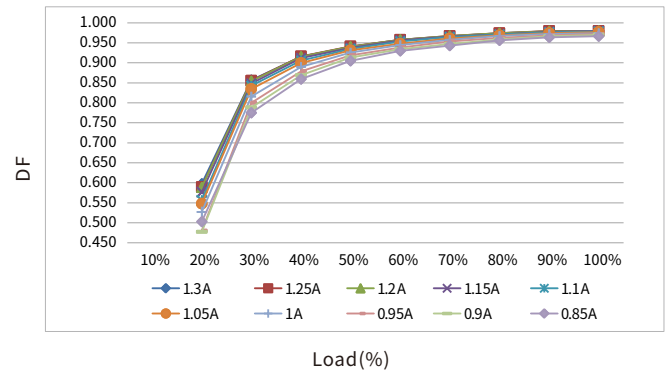
THD vs. Load



Power factor vs. Load

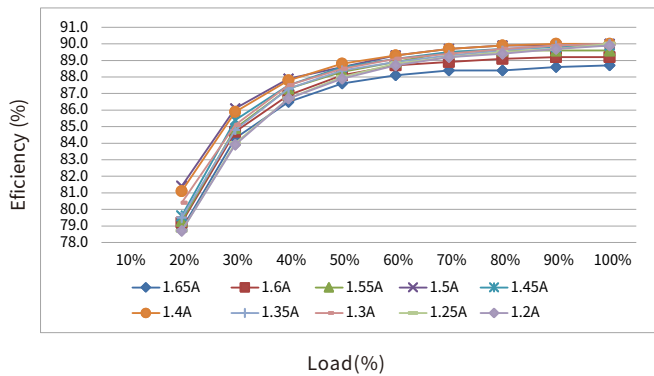


Displacement factor vs. Load

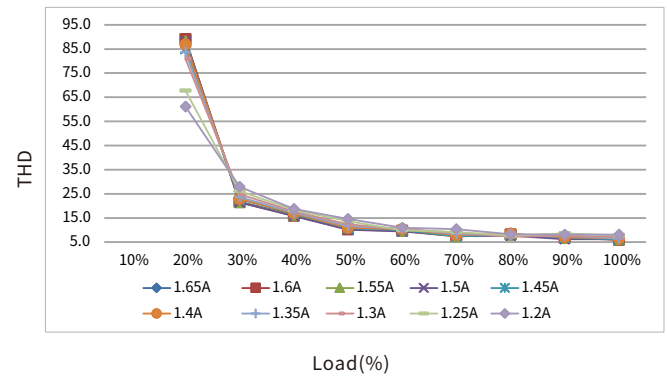


BK-CJL060-1650AM

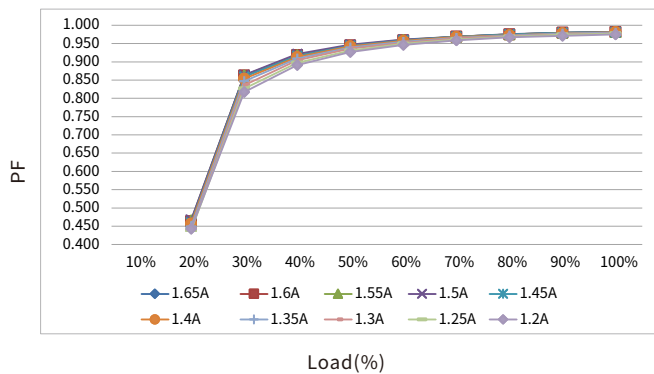
Efficiency vs Load



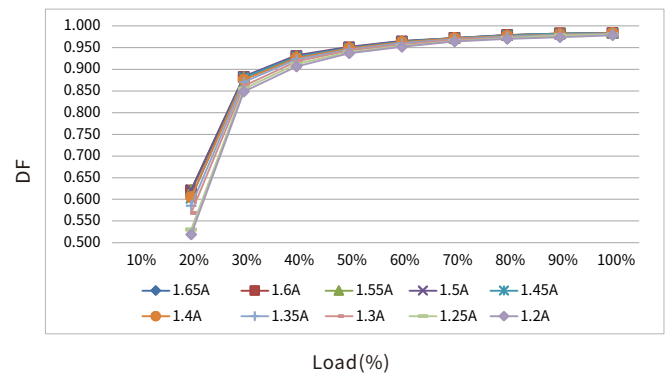
THD vs. Load



Power factor vs. Load



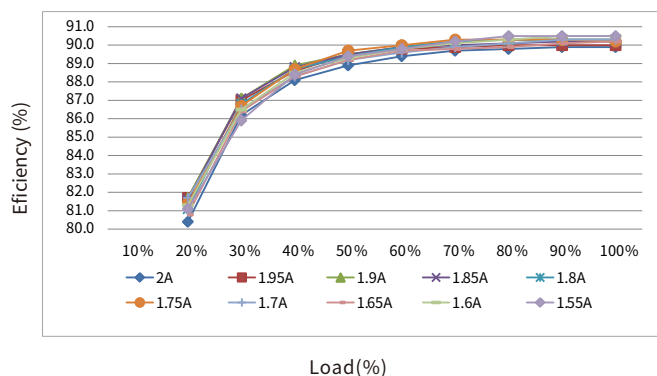
Displacement factor vs. Load



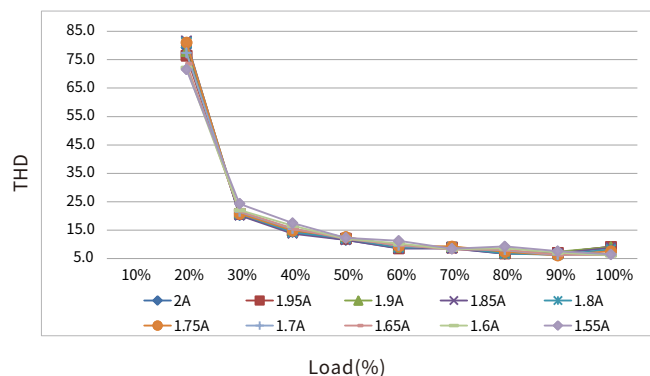
Electrical values

BK-CJL080-2000AM

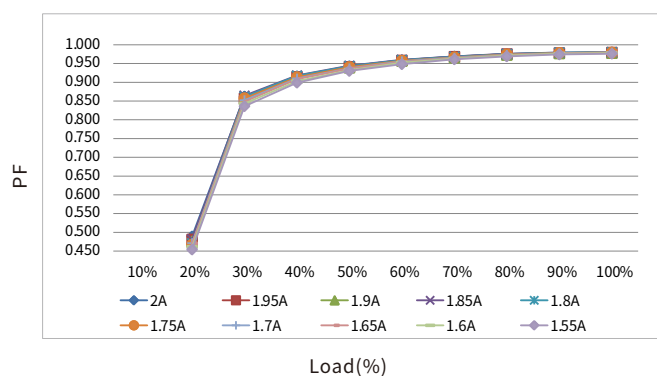
Efficiency vs Load



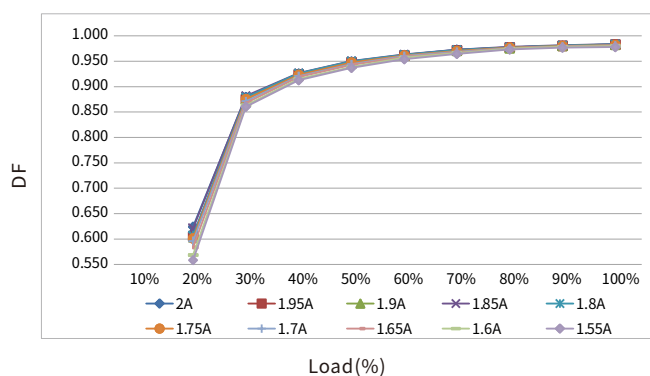
THD vs. Load



Power factor vs. Load



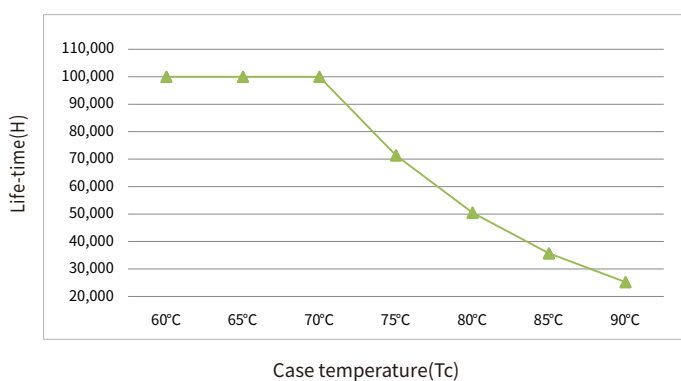
Displacement factor vs. Load



Expected life-time

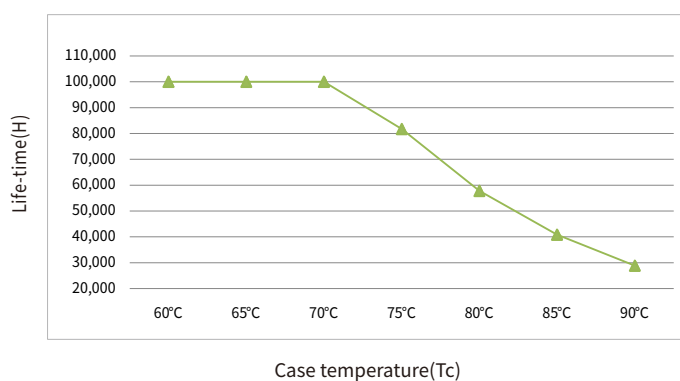
BK-CJL030-0800AM

Life-time vs. case temperature



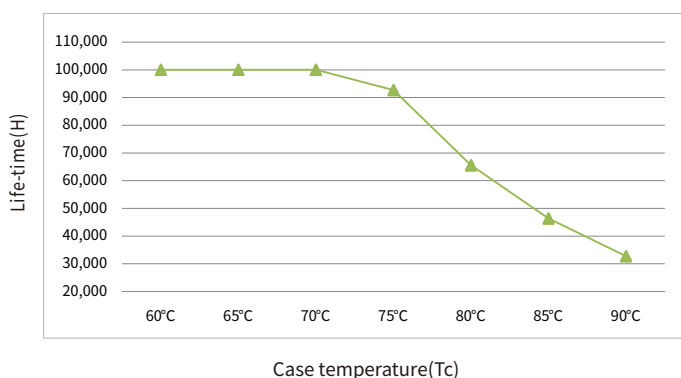
BK-CJL040-1050AM

Life-time vs. case temperature



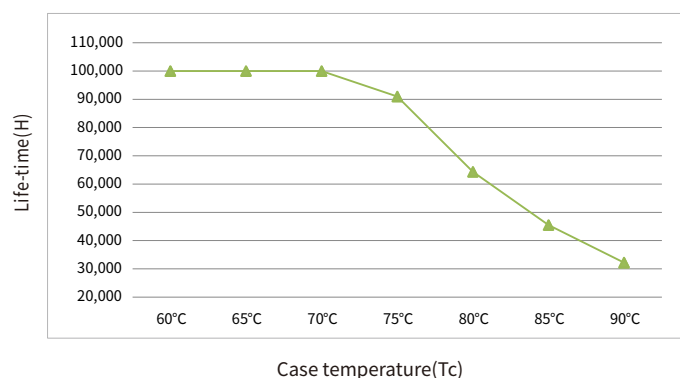
BK-CJL050-1300AM

Life-time vs. case temperature



BK-CJL060-1650AM

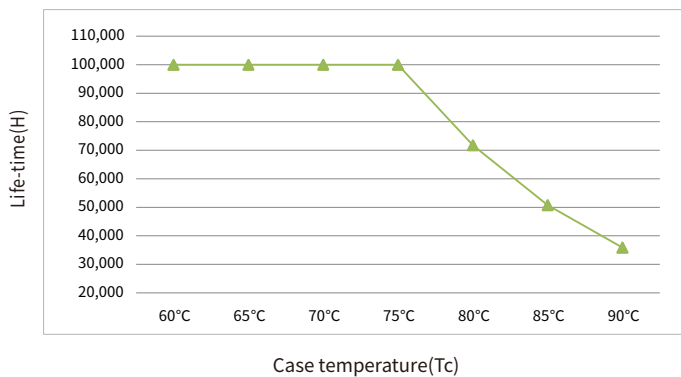
Life-time vs. case temperature



Expected life-time

BK-CJL080-2000AM

Life-time vs. case temperature

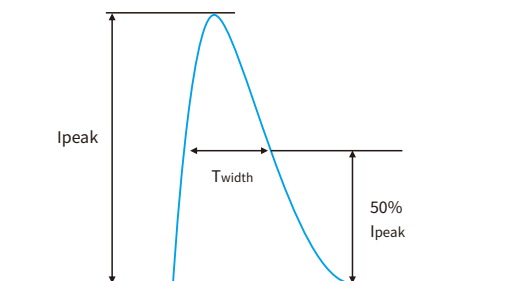


- The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).

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

Surge

Model	Ipeak	Twidth	Condition	Relative number of MCB															
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25	
BK-CJL030-0800AM	6.50A	172us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	52	67	83	103	129	52	67	83	103	129	52	67	83	103	129	
BK-CJL040-1050AM	6.60A	162us		39	51	63	79	99	39	51	63	79	99	39	51	63	79	99	
BK-CJL050-1300AM	6.95A	152us		32	42	52	62	81	32	42	52	65	81	32	42	52	65	81	
BK-CJL060-1650AM	9.63A	156us		26	33	41	51	64	26	33	41	51	64	26	33	41	51	64	
BK-CJL080-2000AM	13.25A	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 point, the driver will automatically restore output.

Output no-load operation

- Output no-load will not damage the driver.

Please turn off the power supply of the driver first if you need to connect the LED load.

Insulation between circuits

Isolation	Input	Output	Case	DIM	VCC
Input	-	Double	Basic	Double	Double
Output	Double	-	Basic	-	-
Case	Basic	Basic	-	Basic	Basic

DIP-switch & output current

BK-CJL030-0800AM

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
16.9	14.7	350	12-42	--	ON	ON	ON
19.3	16.8	400	12-42	ON	--	ON	ON
21.6	18.9	450	12-42	--	--	ON	ON
24.1	21.0	500	12-42	--	ON	--	ON
26.4	23.1	550	12-42	--	--	--	ON
28.9	25.2	600	12-42	ON	ON	ON	--
31.2	27.3	650	12-42	--	--	ON	--
33.6	29.4	700	12-42	--	ON	--	--
34.5	30.0	750	12-40	ON	--	--	--
35.0	30.4	800 ★	12-38	--	--	--	--

BK-CJL050-1300AM

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
40.1	35.7	850	12-42	--	ON	ON	ON
42.5	37.8	900	12-42	ON	--	ON	ON
44.8	39.9	950	12-42	--	--	ON	ON
47.2	42.0	1000	12-42	--	ON	--	ON
49.6	44.1	1050	12-42	--	--	--	ON
51.9	46.2	1100	12-42	ON	ON	ON	--
54.3	48.3	1150	12-42	--	--	ON	--
56.6	50.4	1200	12-42	--	ON	--	--
56.4	50.0	1250	12-40	ON	--	--	--
55.7	49.4	1300 ★	12-38	--	--	--	--

BK-CJL080-2000AM

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
72.2	65.10	1550	12-42	--	ON	ON	ON
74.5	67.20	1600	12-42	ON	--	ON	ON
76.7	69.30	1650	12-42	--	--	ON	ON
79.2	71.40	1700	12-42	--	ON	--	ON
81.4	73.50	1750	12-42	--	--	--	ON
83.7	75.60	1800	12-42	ON	ON	ON	--
86.0	77.70	1850	12-42	--	--	ON	--
88.5	79.80	1900	12-42	--	ON	--	--
88.8	79.95	1950	12-41	ON	--	--	--
89.0	80.00	2000 ★	12-40	--	--	--	--

BK-CJL040-1050AM

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
28.4	25.2	600	12-42	--	ON	ON	ON
30.7	27.3	650	12-42	ON	--	ON	ON
33.0	29.4	700	12-42	--	--	ON	ON
35.4	31.5	750	12-42	--	ON	--	ON
37.7	33.6	800	12-42	--	--	--	ON
40.1	35.7	850	12-42	ON	ON	ON	--
42.5	37.8	900	12-42	--	--	ON	--
44.8	39.9	950	12-42	--	ON	--	--
45.1	40.0	1000	12-40	ON	--	--	--
45.2	39.9	1050 ★	12-38	--	--	--	--

BK-CJL060-1650AM

Pin(W) typ.	Output			1	2	3	4
	Prated(W)	Irated(mA)	Voltage(Vdc)				
56.0	50.4	1200	12-42	--	ON	ON	ON
58.3	52.5	1250	12-42	ON	--	ON	ON
60.6	54.6	1300	12-42	--	--	ON	ON
62.9	56.7	1350	12-42	--	ON	--	ON
62.2	58.8	1400	12-42	--	--	--	ON
67.6	60.9	1450	12-42	ON	ON	ON	--
70.0	63.0	1500	12-42	--	--	ON	--
69.3	62.0	1550	12-40	--	ON	--	--
67.9	60.8	1600	12-38	ON	--	--	--
70.4	62.7	1650 ★	12-38	--	--	--	--

Remarks:

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

Label

INPUT

- ACL/DC+
- ACN/DC-
- NC

Pin wire prep: 0.75-1.5mm

BOKE

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, CHINA
MADE IN CHINA

Dimmable Constant Current LED Driver
MODEL: BK-CJL030-0800AM

INPUT: 200-240V $\approx$ 0/50/60Hz 0.19A Max. λ : 0.95
OUTPUT: 12-38V $\approx$ 800mA 30.4W 50VDC Max.
Other ratings see selection sheet
For LED Modules use only
www.bokedriver.com

OUTPUT

SEC wire prep: 0.5-1.0mm

LED+
LED-
GND
DIM+
DIM-
VCC

VCC: 12V 1.2W MAX.
DIM is connected to the SELV source.
Do not connect LED+ and VCC/DIM/GND wires.

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
16.9	14.7	350	12-42	ON	ON	ON	ON
19.3	16.8	400	12-42	ON	ON	ON	ON
21.6	18.9	450	12-42	ON	ON	ON	ON
24.1	21.0	500	12-42	ON	ON	ON	ON
26.4	23.1	550	12-42	ON	ON	ON	ON
28.9	25.2	600	12-42	ON	ON	ON	ON
31.2	27.3	650	12-42	ON	ON	ON	ON
33.6	29.4	700	12-42	ON	ON	ON	ON
34.5	30.0	750	12-40	ON	ON	ON	ON
35.0	30.4	800	12-38	ON	ON	ON	ON

INPUT

- ACL/DC+
- ACN/DC-
- NC

Pin wire prep: 0.75-1.5mm

BOKE

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, CHINA
MADE IN CHINA

Dimmable Constant Current LED Driver
MODEL: BK-CJL040-1050AM

INPUT: 200-240V $\approx$ 0/50/60Hz 0.24A Max. λ : 0.95
OUTPUT: 12-38V $\approx$ 1050mA 39.9W 50VDC Max.
Other ratings see selection sheet
For LED Modules use only
www.bokedriver.com

OUTPUT

SEC wire prep: 0.5-1.0mm

LED+
LED-
GND
DIM+
DIM-
VCC

VCC: 12V 1.2W MAX.
DIM is connected to the SELV source.
Do not connect LED+ and VCC/DIM/GND wires.

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
28.4	25.2	600	12-42	ON	ON	ON	ON
30.7	27.3	650	12-42	ON	ON	ON	ON
33.0	29.4	700	12-42	ON	ON	ON	ON
35.4	31.5	750	12-42	ON	ON	ON	ON
37.7	33.6	800	12-42	ON	ON	ON	ON
40.1	35.7	850	12-42	ON	ON	ON	ON
42.5	37.8	900	12-42	ON	ON	ON	ON
44.8	39.9	950	12-42	ON	ON	ON	ON
45.1	40.0	1000	12-40	ON	ON	ON	ON
45.2	39.9	1050	12-38	ON	ON	ON	ON

INPUT

- ACL/DC+
- ACN/DC-
- NC

Pin wire prep: 0.75-1.5mm

BOKE

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, CHINA
MADE IN CHINA

Dimmable Constant Current LED Driver
MODEL: BK-CJL050-1300AM

INPUT: 200-240V $\approx$ 0/50/60Hz 0.3A Max. λ : 0.95
OUTPUT: 12-38V $\approx$ 1300mA 49.4W 50VDC Max.
Other ratings see selection sheet
For LED Modules use only
www.bokedriver.com

OUTPUT

SEC wire prep: 0.5-1.0mm

LED+
LED-
GND
DIM+
DIM-
VCC

VCC: 12V 1.2W MAX.
DIM is connected to the SELV source.
Do not connect LED+ and VCC/DIM/GND wires.

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
40.1	35.7	850	12-42	ON	ON	ON	ON
42.5	37.8	900	12-42	ON	ON	ON	ON
44.8	39.9	950	12-42	ON	ON	ON	ON
47.2	42.0	1000	12-42	ON	ON	ON	ON
49.6	44.1	1050	12-42	ON	ON	ON	ON
51.9	46.2	1100	12-42	ON	ON	ON	ON
54.3	48.3	1150	12-42	ON	ON	ON	ON
56.6	50.4	1200	12-42	ON	ON	ON	ON
56.4	50.0	1250	12-40	ON	ON	ON	ON
55.7	49.4	1300	12-38	ON	ON	ON	ON

INPUT

- ACL/DC+
- ACN/DC-
- NC

Pin wire prep: 0.75-1.5mm

BOKE

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, CHINA
MADE IN CHINA

Dimmable Constant Current LED Driver
MODEL: BK-CJL060-1650AM

INPUT: 200-240V $\approx$ 0/50/60Hz 0.38A Max. λ : 0.95
OUTPUT: 12-38V $\approx$ 1650mA 62.7W 50VDC Max.
Other ratings see selection sheet
For LED Modules use only
www.bokedriver.com

OUTPUT

SEC wire prep: 0.5-1.0mm

LED+
LED-
GND
DIM+
DIM-
VCC

VCC: 12V 1.2W MAX.
DIM is connected to the SELV source.
Do not connect LED+ and VCC/DIM/GND wires.

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
56.0	50.4	1200	12-42	ON	ON	ON	ON
58.3	52.5	1250	12-42	ON	ON	ON	ON
60.6	54.6	1300	12-42	ON	ON	ON	ON
62.9	56.7	1350	12-42	ON	ON	ON	ON
62.2	58.8	1400	12-42	ON	ON	ON	ON
67.6	60.9	1450	12-42	ON	ON	ON	ON
70.0	63.0	1500	12-42	ON	ON	ON	ON
69.3	62.0	1550	12-40	ON	ON	ON	ON
67.9	60.8	1600	12-38	ON	ON	ON	ON
70.4	62.7	1650	12-38	ON	ON	ON	ON

INPUT

- ACL/DC+
- ACN/DC-
- NC

Pin wire prep: 0.75-1.5mm

BOKE

BOKE Drivers Co., Ltd.
Address: 2nd and 3rd Floor, No. 51, Xihuan 5th Road, South District, 528455 Zhongshan City, Guangdong, CHINA
MADE IN CHINA

Dimmable Constant Current LED Driver
MODEL: BK-CJL080-2000AM

INPUT: 200-240V $\approx$ 0/50/60Hz 0.47A Max. λ : 0.95
OUTPUT: 12-40V $\approx$ 2000mA 80W 50VDC Max.
Other ratings see selection sheet
For LED Modules use only
www.bokedriver.com

OUTPUT

SEC wire prep: 0.5-1.0mm

LED+
LED-
GND
DIM+
DIM-
VCC

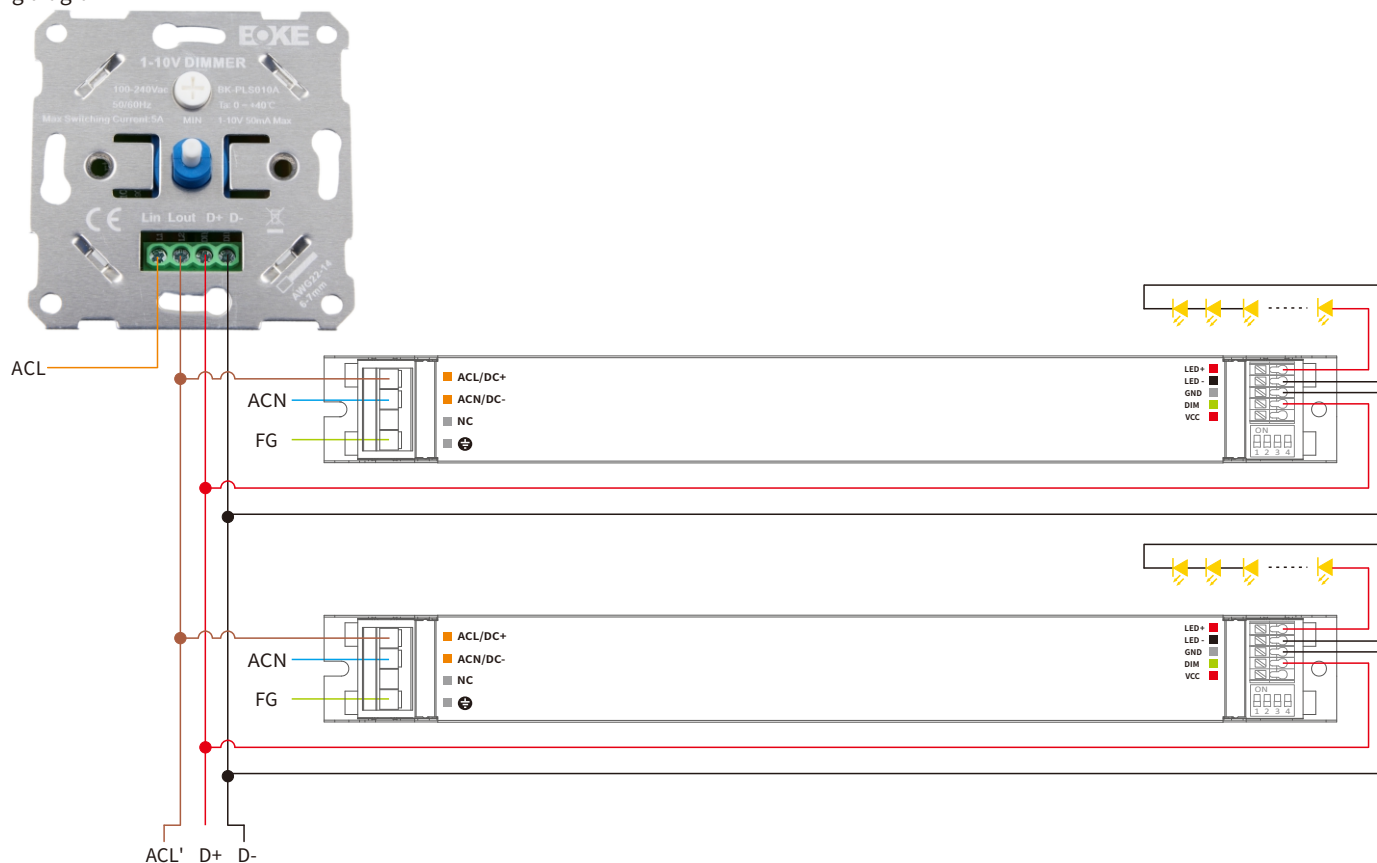
VCC: 12V 1.2W MAX.
DIM is connected to the SELV source.
Do not connect LED+ and VCC/DIM/GND wires.

Switching selection sheet

Pin(W)	Prated(W)	Irated(mA)	Voltage(Vdc)	1	2	3	4
72.2	65.10	1550	12-42	ON	ON	ON	ON
74.5	67.20	1600	12-42	ON	ON	ON	ON
76.7	69.30	1650	12-42	ON	ON	ON	ON
79.2	71.40	1700	12-42	ON	ON	ON	ON
81.4	73.50	1750	12-42	ON	ON	ON	ON
83.7	75.60	1800	12-42	ON	ON	ON	ON
86.0	77.70	1850	12-42	ON	ON	ON	ON
88.5	79.80	1900	12-42	ON	ON	ON	ON
88.8	79.95	1950	12-41	ON	ON	ON	ON
89.0	80.00	2000	12-40	ON	ON	ON	ON

1-10V/10V PWM dimming application

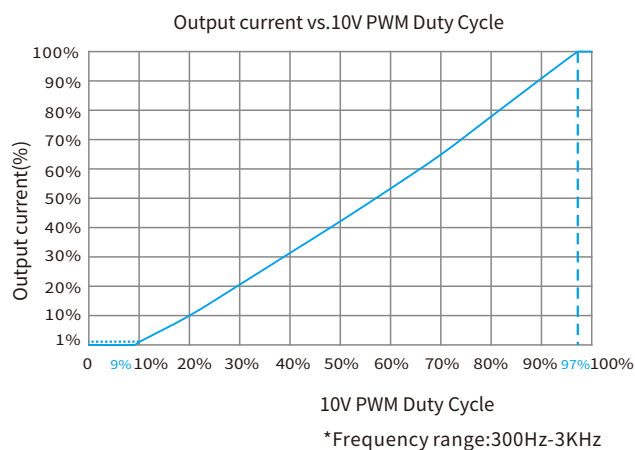
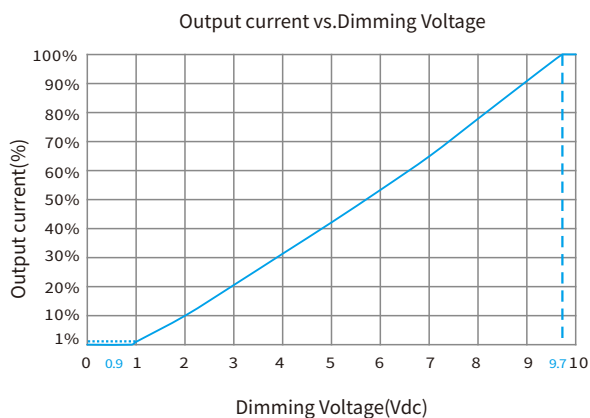
Wiring diagram



Remarks

- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative, DIM is positive, GND is negative, please do not reverse.
- Dimming interface does not support voltage access higher than 15V, otherwise it will cause damage to the internal components.
- When the dimming interface is open, the driver outputs the maximum current. When the interface is short-circuited, the current output is closed.
- When multiple synchronous dimming is required, the positive poles of the dimming interface of each driver are connected together, and the negative poles are connected together.
- Support passive dimmer or isolated active dimmer dimming, does not support non-isolated active dimmer dimming.
- In general, it is recommended that the number of mounted drives does not exceed 30pcs, and the wiring length does not exceed 100m.
- It is recommended that the dimming wires should not be lower than the 22AWG wire.
- Do not put the dimming wires with high voltage or interference sources. If it is unavoidable, please use the shielded wires.
- If you need a drive with 0-10V dimming characteristics, please contact BOKE.

Dimming curve



1-10V/10V PWM+12V application

Wiring diagram



Remarks

VCC: +12VDC $\pm 5\%$, 100mA MAX.

DIM/GND:

1-10V signal: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.

10V PWM signal: 9% duty cycle and below are closed, 10% is the darkest, 100% is the brightest.

Typical applications

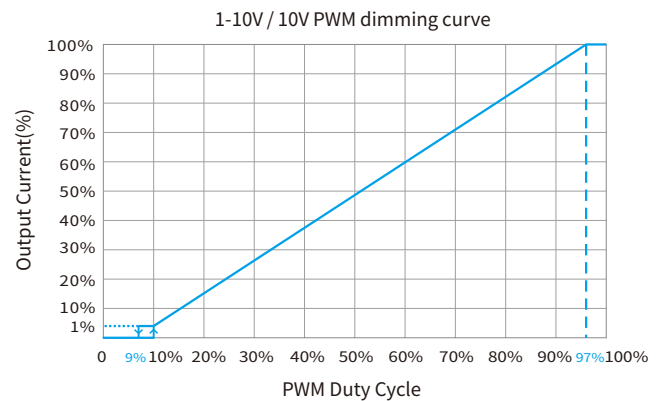
Aux supply 12V

Diming PWM

GND

Bluetooth module
Zigbee module
WiFi module
LoRa module
4G/5G module
NB-IoT module
Daylight Sensor
PIR Sensor
Microwave Sensor
IR Sensor
RF module
.....

Dimming curve



100K potentiometer dimming application

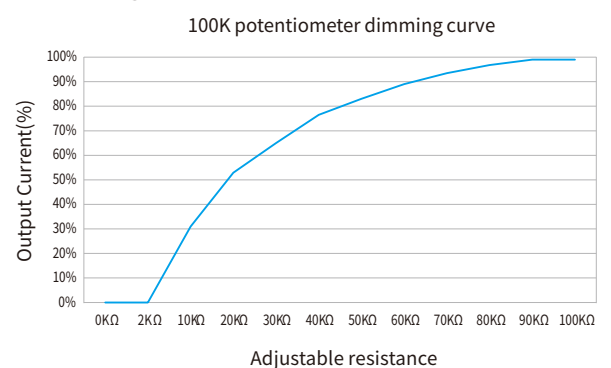
Wiring diagram



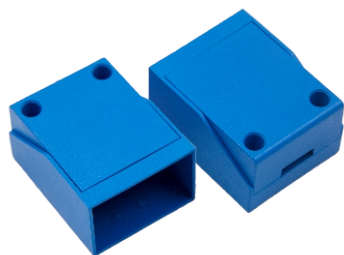
Remarks

- In the 100K potentiometer dimming mode, the potentiometer can only be connected to one driver.

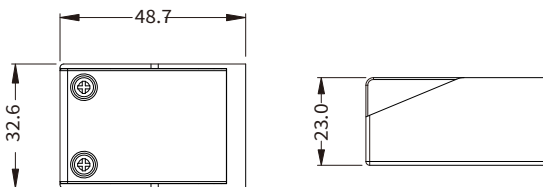
Dimming curve



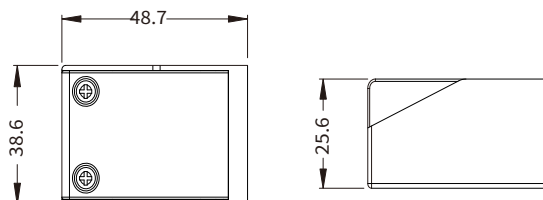
Optional accessories



(Model: BK-BAS003A)



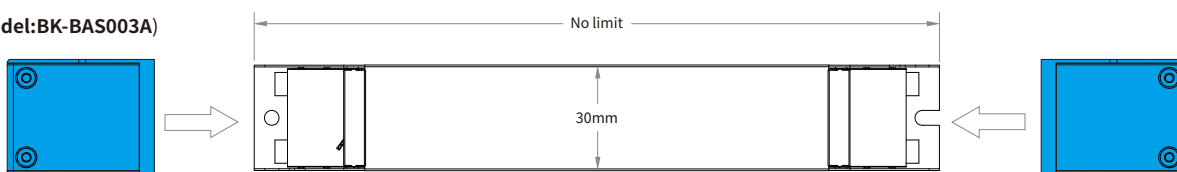
(Model: BK-BAS003B)



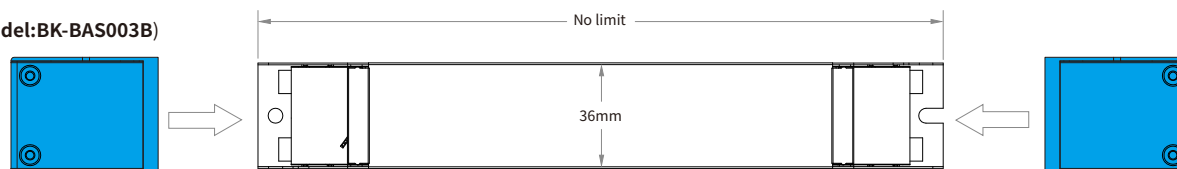
Remark: BK-BAS003A apply to CJL030, CJL040, CJL050, CJL060;
BK-BAS003B apply to CJL080.

Installation diagram of accessories

(Model: BK-BAS003A)



(Model: BK-BAS003B)

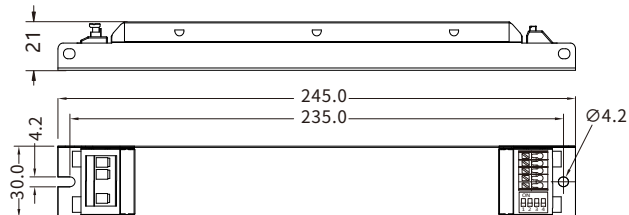


Mechanical Specification

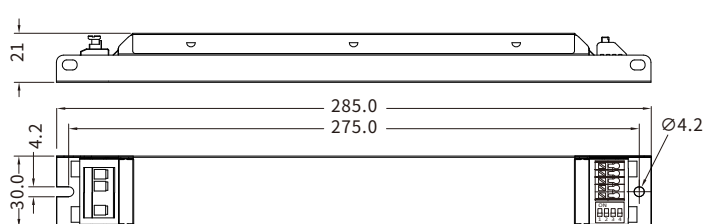
Size(Excluding accessories)

Unit:mm

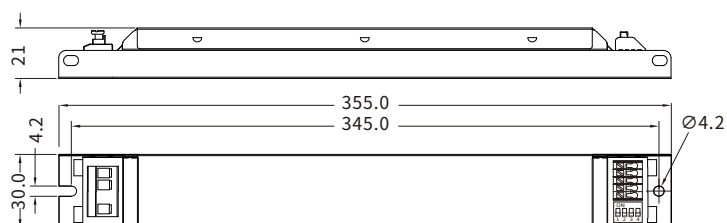
CJL030



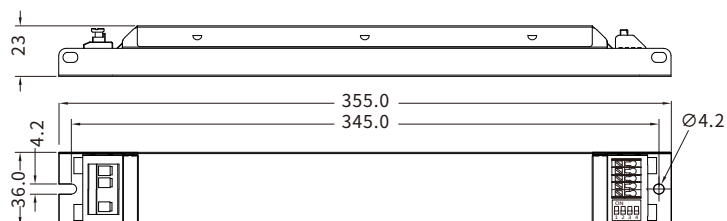
CJL040/CJL050



CJL060



CJL080

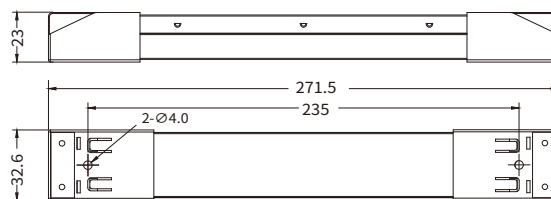


Mechanical Specification

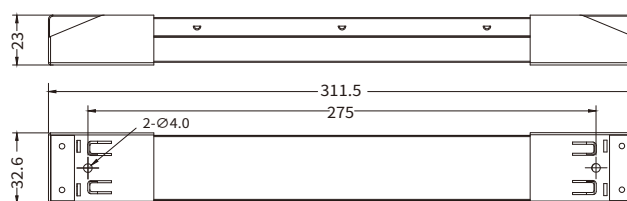
Size(Include accessories)

Unit:mm

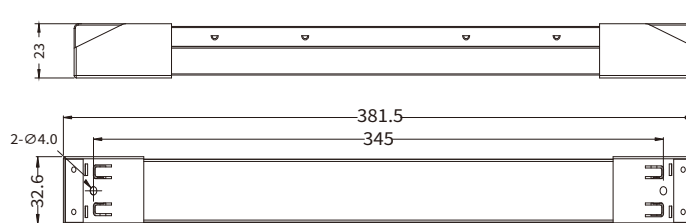
CJL030



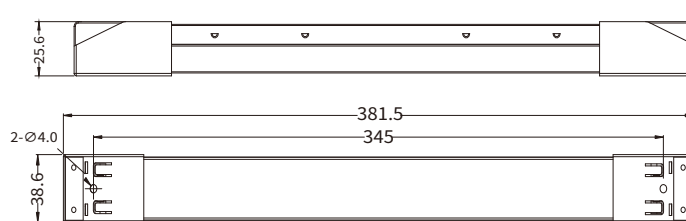
CJL040/CJL050



CJL060



CJL080

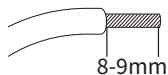


INPUT

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

Input wire

0.75-1.5mm²

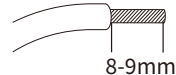


OUTPUT

Numbering	function	colour
1	LED+	red
2	LED-	black
3	GND	grey
4	DIM	green
5	VCC	red

Output wire

0.5-1.0mm²



Installation note

Hot plug-in

- Hot plug-in is not supported due to residual output voltage of > 0 V.

Wiring guidelines

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

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 5 seconds
4. Connect LED module again

Installation requirements

- The driver should be installed in a dry, acid-free, oil-free, fat-free environment.
- The installation ambient temperature of the drive shall not exceed the value of Ta at any time.
- The temperature of the mounting surface of the driver should be lower than 40°C
- The driver should keep a certain distance from the heating stuff (such as the luminaire radiator).
- If the driver is used externally (it needs to be used with the accessories), the installation of the driver should also meet the following conditions:
 - 1.The driver should be a certain distance between the drivers, as shown in Figure 1.
 - 2.The driver keeps a certain distance from surrounding objects, as shown in Figure 2.

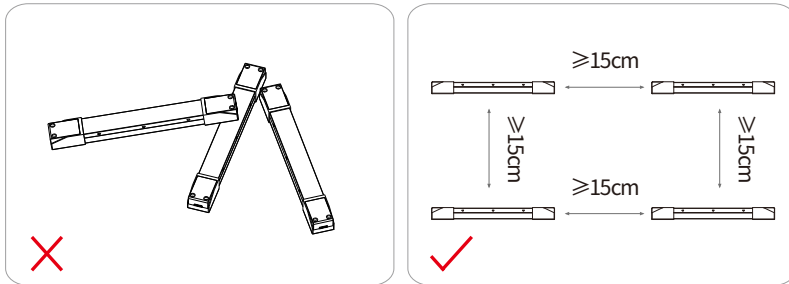


Figure 1

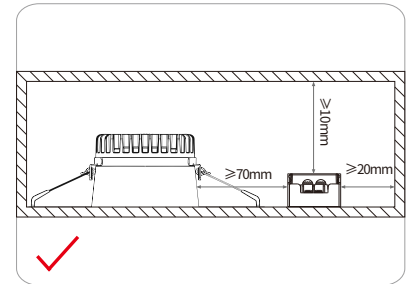
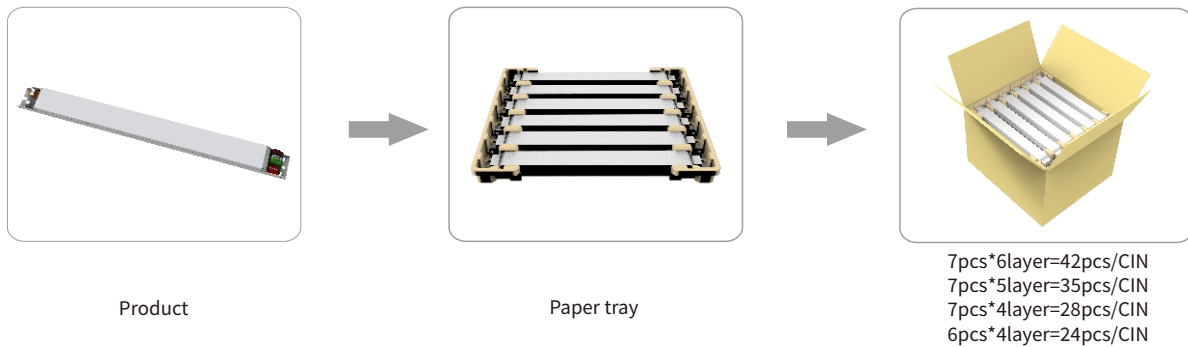


Figure 2

Packaging



Model	Product size	Weight	Paper tray	Carton size	Qty/carton	N.W	G.W
CJL030	L245*W30*H21mm	171g	L345*W75*H29mm	L355*W285*H205mm	42pcs	7.18KG	8.48KG
CJL040	L285*W30*H21mm	209g	L345*W75*H29mm	L355*W325*H170mm	35pcs	7.32KG	8.62KG
CJL050	L285*W30*H21mm	223g	L345*W75*H29mm	L355*W325*H170mm	35pcs	7.81KG	9.11KG
CJL060	L355*W30*H21mm	279g	L345*W75*H29mm	L395*W355*H140mm	28pcs	7.81KG	9.11KG
CJL080	L355*W36*H23mm	375g	L345*W75*H33mm	L395*W355*H160mm	24pcs	9.00KG	10.2KG

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.