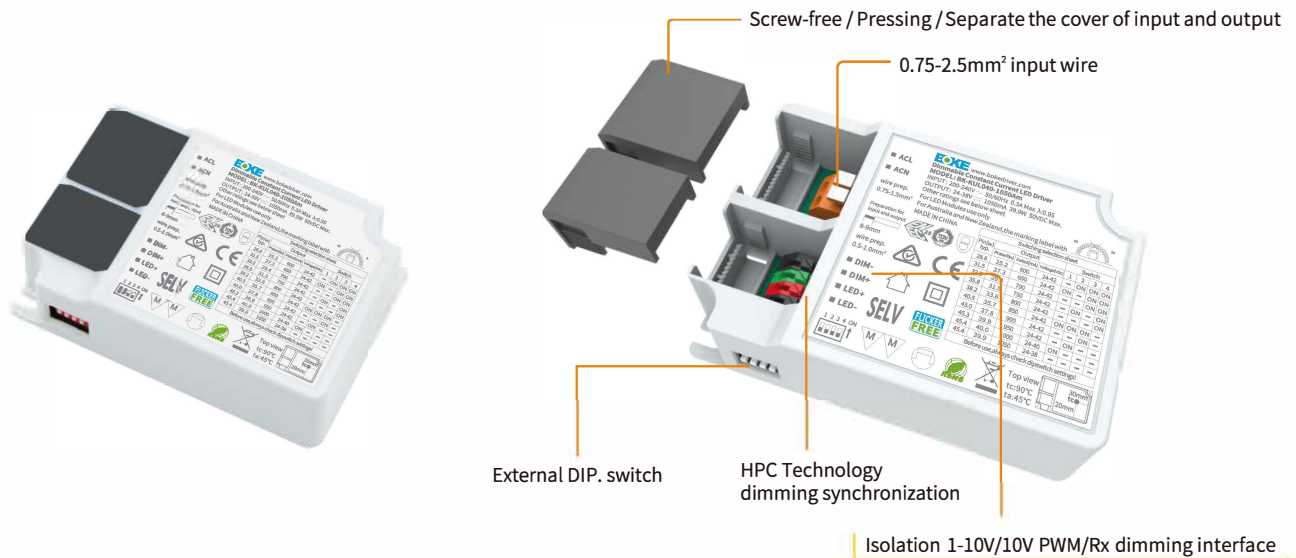


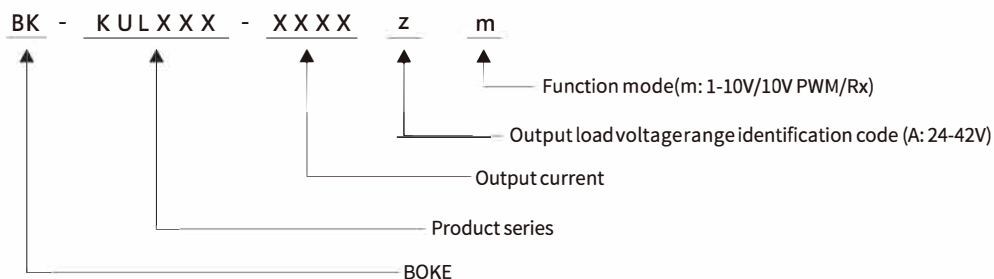
Constant current independent dimmable driver KUL Series suffix m(Isolation 1-10V/10V PWM/Rx)



Features

- Isolated 1-10V/10V PWM/Rx dimming interface
- 10-level current output can be realized through external DIP-switch, easier to adjust the luminaire power
- 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
- Standby power input<0.5W, meets the ErP requirements of new certification
- High PF, high efficiency, low THD
- Screw-free and pressing type strain relief, easier install
- Independent input and output strain relief, stronger wiring
- Supports 0.75-2.5mm² input wires, stronger wiring
- SELV and Class II design, suitable for use side of the light
- Passed ENEC-TUV, CE, RCM, CCC and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

Model coding rules of KUL series



Interfaces

- 1-10V 3in1 Isolated(1-10V / 10V PWM / Rx)

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

Typical applications

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



Technical data

Product model	BK-KUL030-0800Am	
Output parameters		
Regulation method	Constant Current	
Rated output current	0.35-0.8A	
Rated output voltage	24-42V	
Rated output power	30.4W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	± 2%	
Output current accuracy	± 5%	
Linear regulation	± 5%	
Load regulation	± 5%	
No load output voltage	50V	
Flicker-free(typical)	Modulation depth =0.254% (100Hz), Pst LM = 0.018, SVM = 0.006,(The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage	200-240VAC 200-240VDC	
Rated input voltage	180-264VAC 180-264VDC	
Input votage shock	<380 V AC, 1 h	
Input current	<0.25A (AC input)	
Input frequency	47-63Hz	
Input power factor	>0.95 (230V AC & Full load)	
Input THD	<10% (230V AC & Full load)	
Efficiency(typical)	87% (230V AC & Full load)	
In-rush current	15A peak ,248us 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(Pmax):30.4W, 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,O/P(LED)-O/P(DIM):500V AC,I/P-O/P(DIM):500V AC	
Mains surge capability	L-N:2KV	
Leakage current	<0.7mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
PUSH dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-10V, interface current consumption: 0.3mA	
Auxiliary power supply	N/A	
Dimming range	5%-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=-20-45°C	
Case temperature	Tc=80°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, Full load)	
Environmental protection	RoHS	
Certifications and standards		
Certified	ENEC-TUV,RCM, EMC, CE, CCC	
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.
- 2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

Technical data

Product model	BK-KUL040-1050Am	
Output parameters		
Regulation method	Constant Current	
Rated output current	0.6-1.05A	
Rated output voltage	24-42V	
Rated output power	40W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	±2%	
Output current accuracy	±5%	
Linear regulation	±5%	
Load regulation	±5%	
No load output voltage	50V	
Flicker-free(typical)	Modulation depth =0.220% (100Hz), Pst LM = 0.016, SVM = 0.004,(The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage	200-240VAC 200-240VDC	
Rated input voltage	180-264VAC 180-264VDC	
Input votage shock	<380 V AC, 1 h	
Input current	<0.3A (AC input)	
Input frequency	47-63Hz	
Input power factor	>0.95 (230V AC & Full load)	
Input THD	<10% (230V AC & Full load)	
Efficiency(typical)	88% (230V AC & Full load)	
In-rush current	15.2A peak ,246us 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(Pmax):40W, 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,O/P(LED)-O/P(DIM):500V AC,I/P-O/P(DIM):500V AC	
Mains surge capability	L-N:2KV	
Leakage current	<0.7mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
PUSH dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-10V, interface current consumption: 0.3mA	
Auxiliary power supply	N/A	
Dimming range	5%-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=-20-45°C	
Case temperature	Tc=90°C	
Operating humidity	5-85% RH, not condensed	
Storage temp./humidity	-40-80°C, 5-85% RH, not condensed	
IP grade	IP20	
MTBF	500,000H,MIL-HDBK-217F(25°C)	
Life-time	Nominal life-time up to 100,000 h, see the description below for details	
Vibration resistant	10~500Hz,5G 12min./1cycle,period for 72min. each along X,Y,Z axes	
Acoustic Noise	<25dB(30cm, Full load)	
Environmental protection	RoHS	
Certifications and standards		
Certified	ENEC-TUV, RCM, EMC, CE, CCC	
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.
- 2.The driver can not be installed inside the light. when the driver is used with the light, the EMC of the whole light needs to be tested.

Technical data

Product model	BK-KUL050-1300Am	
Output parameters		
Regulation method	Constant Current	
Rated output current	0.85-1.3A	
Rated output voltage	24-42V	
Rated output power	49.4W Max	
Output current adjustment	DIP S.W(10 levels)	
Output current ripple LF	± 2%	
Output current accuracy	± 5%	
Linear regulation	± 5%	
Load regulation	± 5%	
No load output voltage	50V	
Flicker-free(typical)	Modulation depth =0.257% (100Hz), Pst LM = 0.012, SVM = 0.009,(The above parameters are obtained from testing the panel lights)	
Input parameters		
Rated input voltage	200-240VAC 200-240VDC	
Rated input voltage	180-264VAC 180-264VDC	
Input votage shock	<380 V AC, 1 h	
Input current	<0.4A (AC input)	
Input frequency	47-63Hz	
Input power factor	>0.95 (230V AC & Full load)	
Input THD	<10% (230V AC & Full load)	
Efficiency(typical)	88% (230V AC & Full load)	
In-rush current	13A peak ,278us 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(Pmax):49.4W, 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,O/P(LED)-O/P(DIM):500V AC,I/P-O/P(DIM):500V AC	
Mains surge capability	L-N:2KV	
Leakage current	<0.7mA (230V AC & Full load)	
Isolation resistance	I/P-O/P:100MΩ/500Vdc/25°C/70% RH	
Control interface		
DALI dimming port	N/A	
PUSH dimming port	N/A	
1-10V 3in1 dimming port	Voltage range: 0-10V, interface current consumption: 0.3mA	
Auxiliary power supply	N/A	
Dimming range	5%-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=-20-45°C	
Case temperature	Tc=80°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, Full load)	
Environmental protection	RoHS	
Certifications and standards		
Certified	ENEC-TUV, RCM, EMC, CE, CCC	
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	

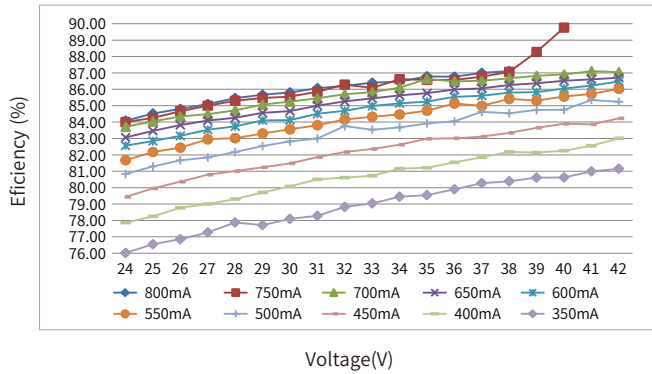
Remarks

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

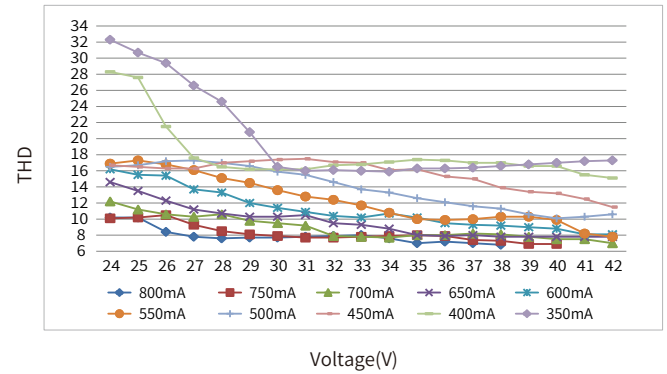
Electrical values

BK-KUL030-0800Am

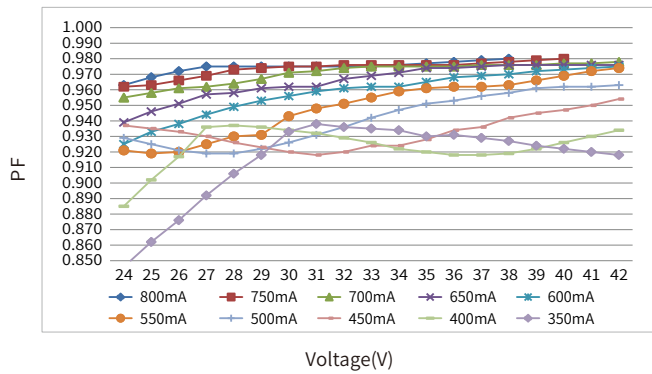
Efficiency vs Voltage



THD vs. Voltage

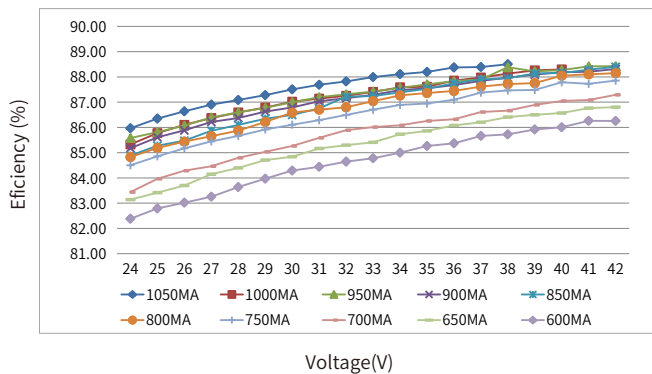


Power factor vs. Voltage

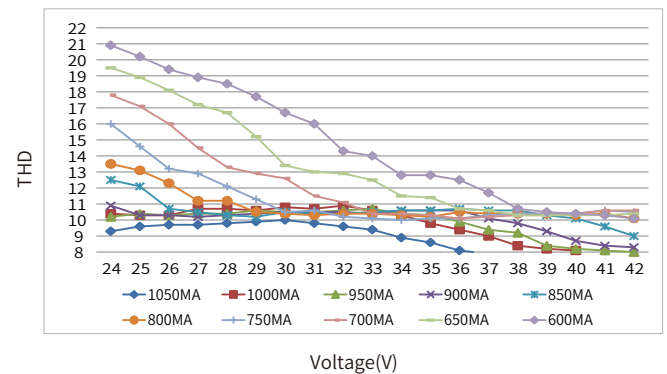


BK-KUL040-1050Am

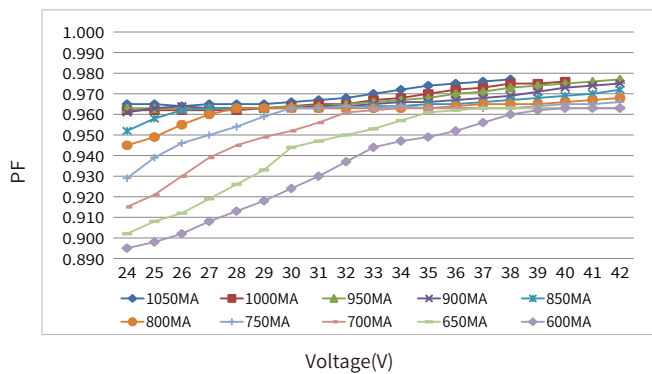
Efficiency vs Voltage



THD vs. Voltage



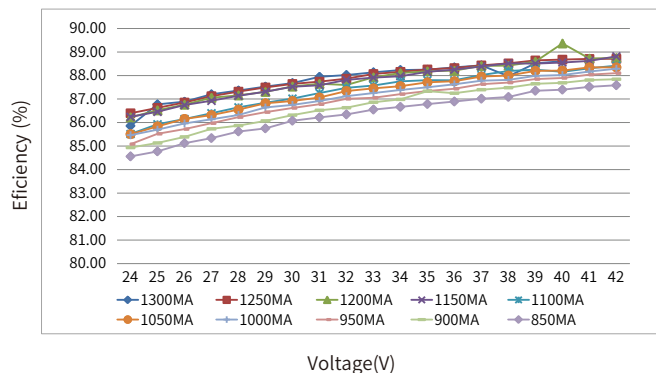
Power factor vs. Voltage



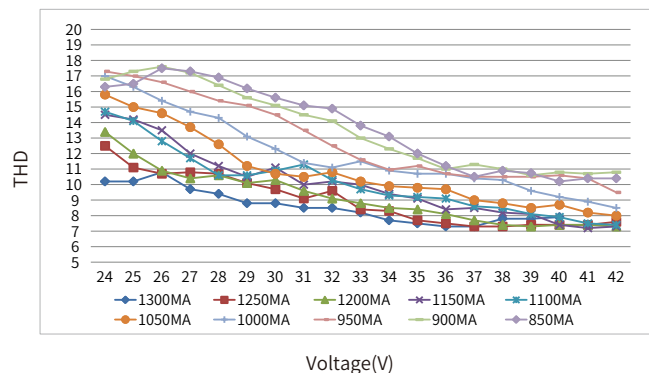
Electrical values

BK-KUL050-1300Am

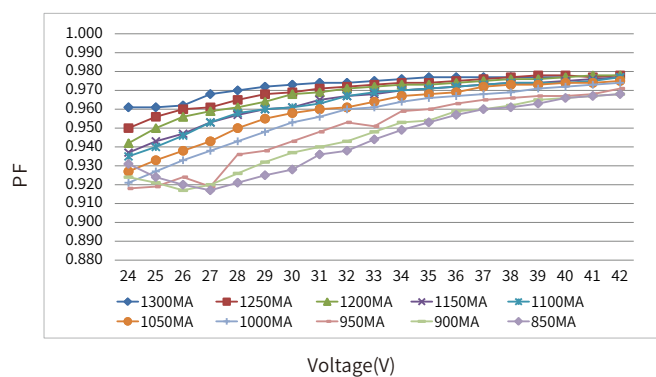
Efficiency vs Voltage



THD vs. Voltage



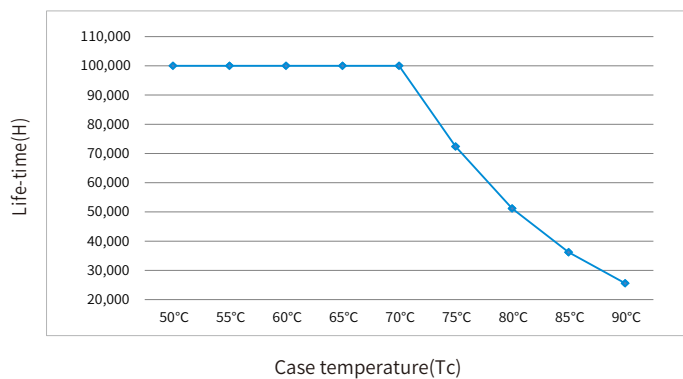
Power factor vs. Voltage



Expected life-time

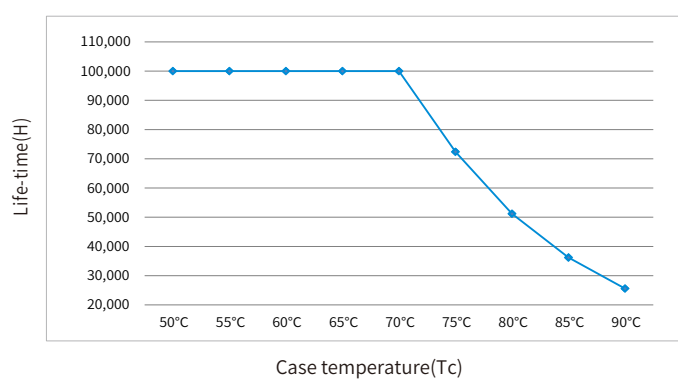
BK-KUL030-0800Am

Life-time vs. case temperature



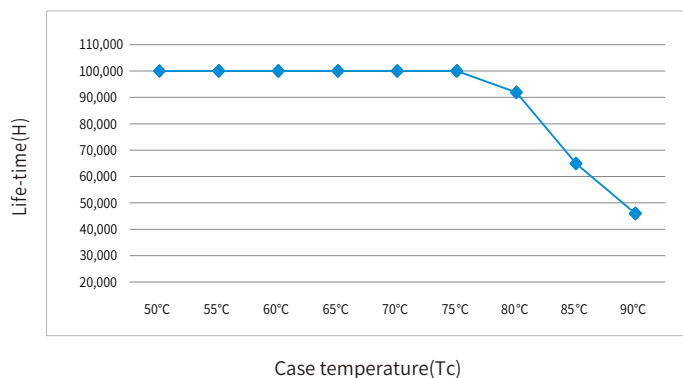
BK-KUL040-1050Am

Life-time vs. case temperature



BK-KUL050-1300Am

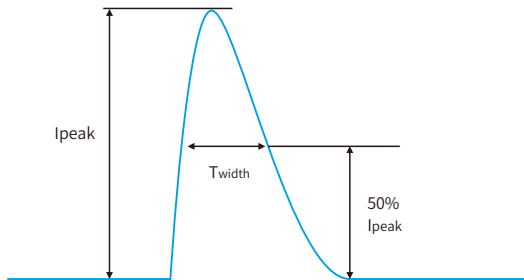
Life-time vs. case temperature



- 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															
				B10	B13	B16	B20	B25	C10	C13	C16	C20	C25	D10	D13	D16	D20	D25	
BK-KUL030-0800Am	15A	248us	AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side	17pcs	22pcs	27pcs	33pcs	42pcs	28pcs	36pcs	44pcs	56pcs	69pcs	45pcs	58pcs	72pcs	89pcs	112pcs	
BK-KUL040-1050Am	15.2A	246us		17pcs	22pcs	27pcs	33pcs	41pcs	28pcs	36pcs	44pcs	55pcs	69pcs	34pcs	45pcs	55pcs	69pcs	86pcs	
BK-KUL050-1300Am	13A	278us		16pcs	21pcs	26pcs	32pcs	40pcs	27pcs	35pcs	43pcs	54pcs	67pcs	28pcs	36pcs	45pcs	56pcs	70pcs	



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 protection

- Output short-circuit will not damage the driver.
- After removing the short-circuit fault point, the driver will automatically restore output.

Output no-load protection

- Output no-load will not damage the driver.
- Please turn off the mains first if you need to connect the LED load.

DIP-switch & output current

BK-KUL030-0800Am

Pin	Irated	Voltage	1	2	3	4
18.1W	350mA	42VDC	--	ON	ON	ON
19.5W	400mA	42VDC	ON	--	ON	ON
22.1W	450mA	42VDC	--	--	ON	ON
24.6W	500mA	42VDC	--	ON	--	ON
26.8W	550mA	42VDC	--	--	--	ON
29.1W	600mA	42VDC	ON	ON	ON	--
31.4W	650mA	42VDC	--	--	ON	--
33.8W	700mA	42VDC	--	ON	--	--
34.4W	750mA	40VDC	ON	--	--	--
34.9W	800mA	★ 38VDC	--	ON	--	--

Label

BOKE www.bokedriver.com
Dimmable Constant Current LED Driver
MODEL: BK-KUL030-0800Am
 INPUT: 200-240V ~ 50/60Hz 0.25A Max λ:0.95
 OUTPUT: 24-38V = 800mA 30.4W 50VDC Max.
 Other ratings see below sheet

wire prep. 0.75-1.5mm²
 For LED Modules use only
 For Australia and New Zealand, the marking label with "M" is required
 MADE IN CHINA

Preparation for input and output
 8-9mm

wire prep. 0.5-1.0mm²

■ DIM-
 ■ DIM+
 ■ LED+
 ■ LED-

SELV **FLICKER FREE**

1 2 3 4 ON
 ↑

Top view
 tc:80°C
 ta:45°C

30mm
 tc
 20mm

Pin(w) typ.	Prated(W)	Irated(mA)	Voltage(Vdc)	Switch			
				1	2	3	4
18.1	14.7	350	24-42	—	ON	ON	ON
19.5	16.8	400	24-42	ON	—	ON	ON
22.1	18.9	450	24-42	—	—	ON	ON
24.6	21.0	500	24-42	—	ON	—	ON
26.8	23.1	550	24-42	—	—	—	ON
29.1	25.2	600	24-42	ON	ON	ON	—
31.4	27.3	650	24-42	—	—	ON	—
33.8	29.4	700	24-42	—	ON	—	—
34.4	30.0	750	24-40	ON	—	—	—
34.9	30.4	800	24-38	—	—	—	—

Before use, always check dipswitch settings!

BK-KUL040-1050Am

Pin	Irated	Voltage	1	2	3	4
28.8W	600mA	42VDC	--	ON	ON	ON
31.5W	650mA	42VDC	ON	--	ON	ON
33.5W	700mA	42VDC	--	--	ON	ON
35.8W	750mA	42VDC	--	ON	--	ON
38.2W	800mA	42VDC	--	--	--	ON
40.5W	850mA	42VDC	ON	ON	ON	--
43.0W	900mA	42VDC	--	--	ON	--
45.3W	950mA	42VDC	--	ON	--	--
45.4W	1000mA	40VDC	ON	--	--	--
45.4W	1050mA	★ 38VDC	--	ON	--	--

BOKE www.bokedriver.com
Dimmable Constant Current LED Driver
MODEL: BK-KUL040-1050Am
 INPUT: 200-240V ~ 50/60Hz 0.3A Max λ:0.95
 OUTPUT: 24-38V = 1050mA 39.9W 50VDC Max.
 Other ratings see below sheet

wire prep. 0.75-1.5mm²
 For LED Modules use only
 For Australia and New Zealand, the marking label with "M" is required
 MADE IN CHINA

Preparation for input and output
 8-9mm

wire prep. 0.5-1.0mm²

■ DIM-
 ■ DIM+
 ■ LED+
 ■ LED-

SELV **FLICKER FREE**

1 2 3 4 ON
 ↑

Top view
 tc:90°C
 ta:45°C

30mm
 tc
 20mm

Pin(w) typ.	Prated(W)	Irated(mA)	Voltage(Vdc)	Switch			
				1	2	3	4
28.8	25.2	600	24-42	—	ON	ON	ON
31.5	27.3	650	24-42	ON	—	ON	ON
33.5	29.4	700	24-42	—	—	ON	ON
35.8	31.5	750	24-42	—	ON	—	ON
38.2	33.6	800	24-42	—	—	—	ON
40.5	35.7	850	24-42	ON	ON	ON	—
43.0	37.8	900	24-42	—	—	ON	—
45.3	39.9	950	24-42	—	ON	—	—
45.4	40.0	1000	24-40	ON	—	—	—
45.4	39.9	1050	24-38	—	—	—	—

Before use, always check dipswitch settings!

BK-KUL050-1300Am

Pin	Irated	Voltage	1	2	3	4
40.4W	850mA	42VDC	--	ON	ON	ON
42.8W	900mA	42VDC	ON	--	ON	ON
45.0W	950mA	42VDC	--	--	ON	ON
47.4W	1000mA	42VDC	--	ON	--	ON
49.4W	1050mA	42VDC	--	--	--	ON
52.1W	1100mA	42VDC	ON	ON	ON	--
54.1W	1150mA	42VDC	--	--	ON	--
56.6W	1200mA	42VDC	--	ON	--	--
56.2W	1250mA	40VDC	ON	--	--	--
56.4W	1300mA	★ 38VDC	--	ON	--	--

BOKE www.bokedriver.com
Dimmable Constant Current LED Driver
MODEL: BK-KUL050-1300Am
 INPUT: 200-240V ~ 50/60Hz 0.4A Max λ:0.95
 OUTPUT: 24-38V = 1300mA 49.4W 50VDC Max.
 Other ratings see below sheet

wire prep. 0.75-1.5mm²
 For LED Modules use only
 For Australia and New Zealand, the marking label with "M" is required
 MADE IN CHINA

Preparation for input and output
 8-9mm

wire prep. 0.5-1.0mm²

■ DIM-
 ■ DIM+
 ■ LED+
 ■ LED-

SELV **FLICKER FREE**

1 2 3 4 ON
 ↑

Top view
 tc:80°C
 ta:45°C

45mm
 tc
 20mm

Pin(w) typ.	Prated(W)	Irated(mA)	Voltage(Vdc)	Switch			
				1	2	3	4
40.4	35.7	850	24-42	—	ON	ON	ON
42.8	37.8	900	24-42	ON	—	ON	ON
45.0	39.9	950	24-42	—	—	ON	ON
47.4	42.0	1000	24-42	—	ON	—	ON
49.7	44.1	1050	24-42	—	—	—	ON
52.1	46.2	1100	24-42	ON	ON	ON	—
54.1	48.3	1150	24-42	—	—	ON	—
56.6	50.4	1200	24-42	—	ON	—	—
56.2	50.0	1250	24-40	ON	—	—	—
56.4	49.4	1300	24-38	—	—	—	—

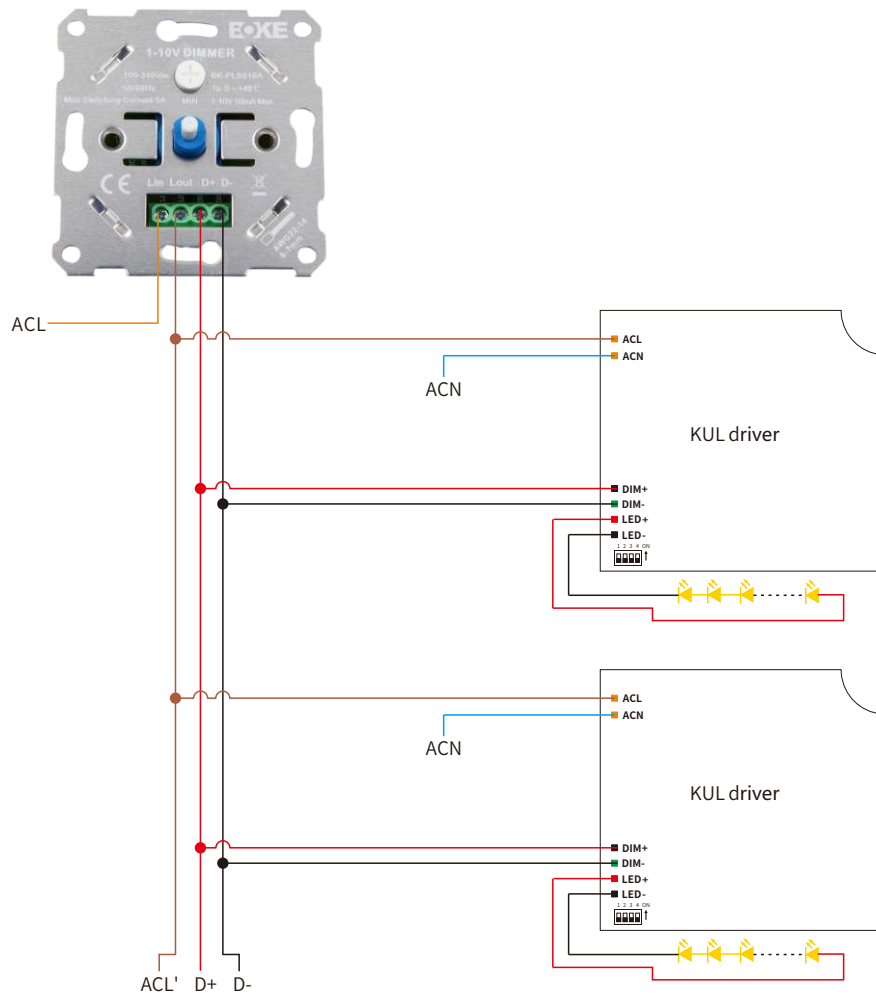
Before use, always check dipswitch settings!

Remarks:

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

1-10V/10V PWM dimming application

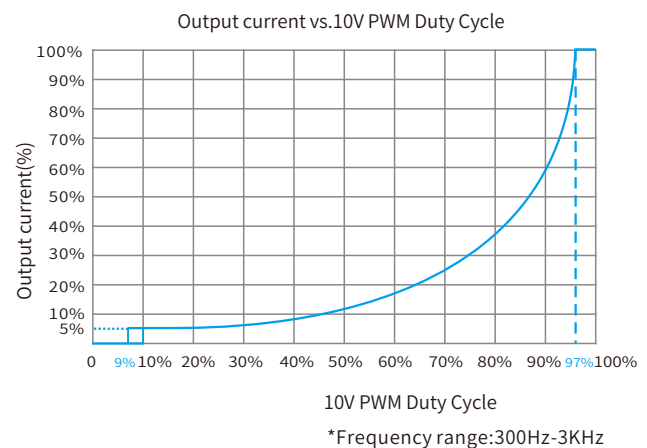
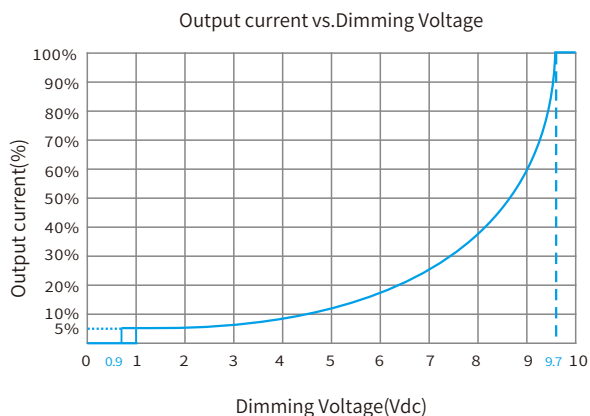
Wiring diagram



Remarks

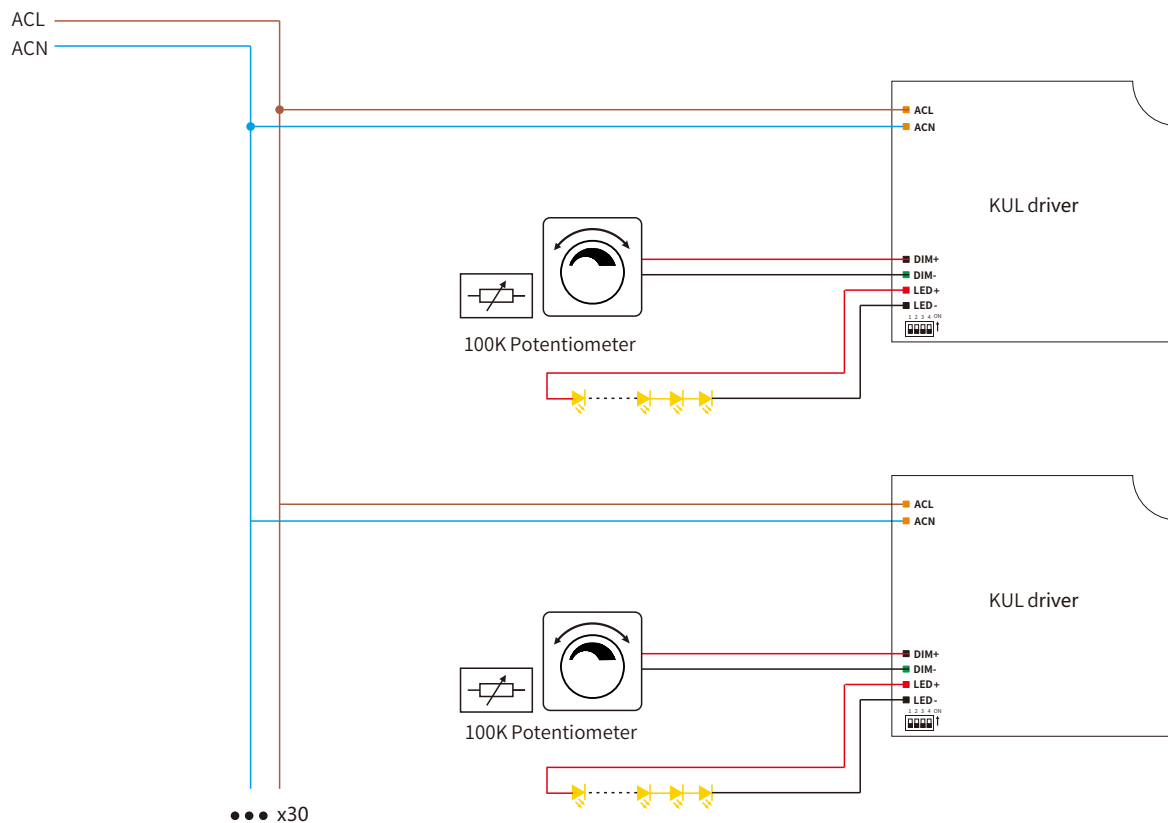
- Dimming interface characteristics: 0.9V and below are closed, 1V is the darkest, 10V is the brightest, 1-10V is the dimming range.
- The dimming interface distinguishes between positive and negative, DIM+ is positive, DIM- is negative, please do not reverse.
- Dimming interface does not support voltage access higher than 20V, 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



100K potentiometer dimming application

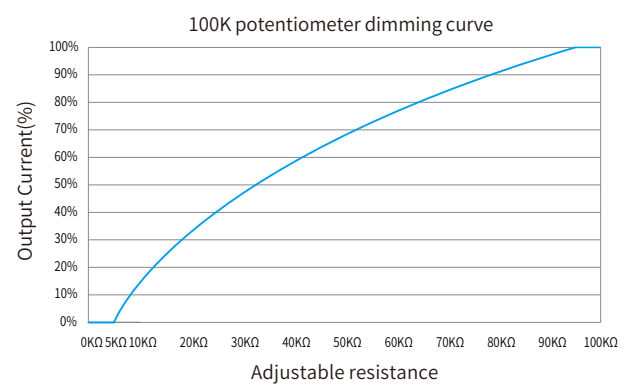
Wiring diagram



Remarks

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

Dimming curve

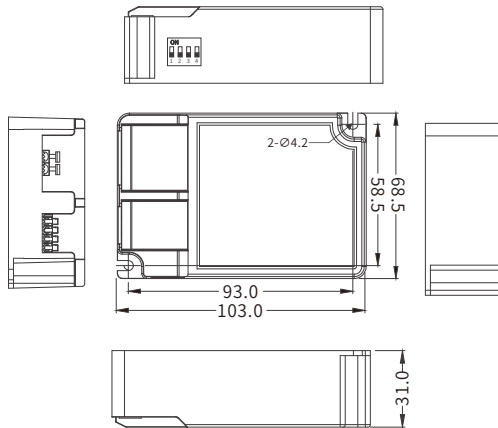


Installation

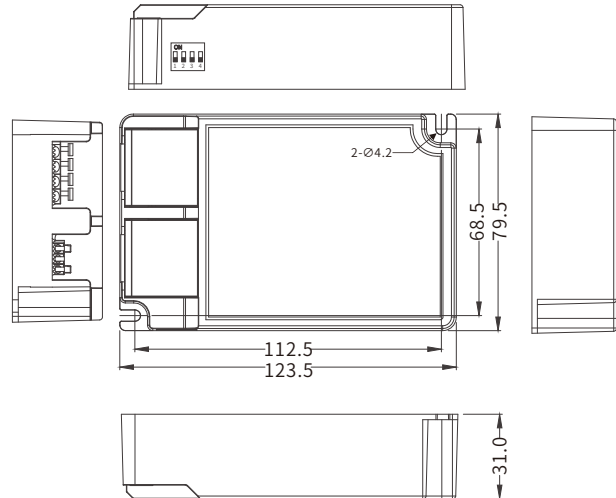
Mechanical dimensions

Unit:mm

KUL030/KUL040



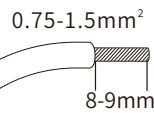
KUL050



INPUT

Pin Numbering	function	colour
1	ACL	orange
2	ACN	orange

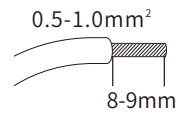
Input wire



OUTPUT

Pin Numbering	function	colour
1	DIM-	black
2	DIM+	green
3	LED+	red
4	LED-	black

Output wire



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

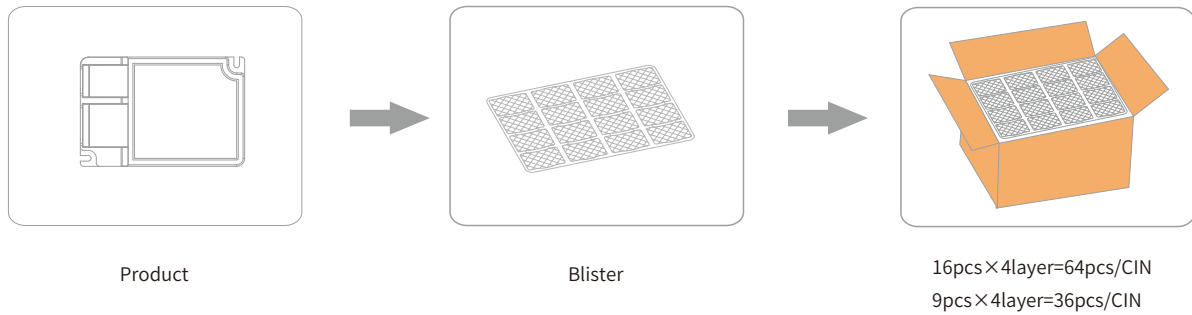
- Max. torque at the clamping screw: 0.5 Nm / M4

Replace LED module

1. Mains off
2. Remove LED module
3. Wait for 5 seconds
4. Connect LED module again

Packaging

Optional 1: factory default



Model	Product size	Weight	Blister size	Carton size	Qty/carton	N.W	G.W
KUL030	L103*W68.5*H31mm	140g	L480*W330*H40mm	L490*W340*H165mm	64pcs	8.96kg	10.5kg
KUL040	L103*W68.5*H31mm	140g	L480*W330*H40mm	L490*W340*H165mm	64pcs	8.96kg	10.5kg
KUL050	L123*W78.5*H31mm	195g	L435*W345*H40mm	L450*W350*H180mm	36pcs	7.02kg	8.62kg

Optional 2:



Model	Product size	Weight	Packaging size	Carton size	Qty/carton	N.W	G.W
KUL030	L103*W68.5*H31mm	140g	L130*W38*H85mm	L415*W330*H190mm	48pcs	6.72kg	8.5kg
KUL040	L103*W68.5*H31mm	140g	L130*W38*H85mm	L415*W330*H190mm	48pcs	6.72kg	8.5kg
KUL050	L103*W68.5*H31mm	195g	L130*W38*H85mm	L415*W330*H190mm	48pcs	9.36kg	11.1kg