# Constant current independent dimmable driver
## PUL-A Series suffix d(DALI-2)




### Features

- Support DALI-2 dimming mode
- 10-level current output can be realized by DIP-switch
- Soft dimming and flicker-free at any brightness
- Using HPC patented technology at any dimming level, the brightness between lights is same
- Dimming range 1~100%, output current accuracy 1%
- Standby power input<0.5W, meets the requirements of ErP certification
- High PF, high efficiency, low THD
- Screw-free and pressing type strain relief, supports thicker cables and is easier to install
- Independent input and output strain relief, stronger wiring
- Intelligent LED hot-plug protection function
- SELV and Class II design, suitable for use outside of the light
- Passed ENEC-TUV,CE,RCM,CCC,DALI-2 and other certifications
- IP20 protection grade, indoor use
- Nominal life-time up to 100,000 h
- 5-year guarantee

### Interfaces

- DALI-2(DALI-2 DT6)

### Functions

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

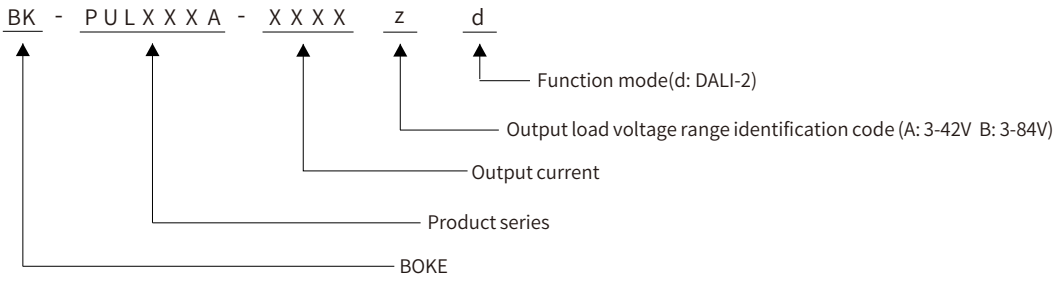
### Suitable for lights

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

### Typical applications

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

## Model coding rules of PUL-A series




## Optional dimming function selection table of PUL-A series

| Model | Suffix | Wired dimming | | |
|---|---|---|---|---|
| | | DALI-2 | PUSH | 1-10V 2in1 |
| PUL030A | D | √ | √ | √ |
| | d | √ | √ | |
| PUL042A | P | | √ | √ |
| PUL060A | M | | | √ |
| PUL010A | d | √ | | |
| PUL018A | P | | √ | |
| PUL010B | M | | | √ |
| PUL018B | | | | |

* The description in this specification is only applicable to the products with the suffix d and the model are PUL030A and PUL042A and PUL060A.

## Order selection table of PUL-A series(just suffix d, 30W/42W/60W)

| Model | Input voltage | Output power | Output voltage | Output current | Dimension | Article number |
|---|---|---|---|---|---|---|
| BK-PUL030A-0700Ad | 200-240VAC | 29.4W | 3-42VDC | 0.25-0.70A | L103*W68*H30mm | B-PUL030A-HF007 |
| BK-PUL042A-0700Bd | 200-240VAC | 42.0W | 3-84VDC | 0.25-0.70A | L103*W68*H30mm | B-PUL042A-HF020 |
| BK-PUL042A-1100Ad | 200-240VAC | 42.0W | 3-42VDC | 0.60-1.10A | L123*W79*H31mm | B-PUL042A-HF019 |
| BK-PUL060A-2000Ad | 200-240VAC | 61.2W | 3-42VDC | 0.80-2.00A | L123*W79*H31mm | B-PUL060A-HF009 |

## Technical data

| | | |
|---|---|---|
| Product model | BK-PUL030A-0700Ad | |
| Output parameters | | |
| Regulation method | Constant Current | |
| Rated output current | 0.25-0.7A | |
| Rated output voltage | 3-42V | |
| Rated output power | 29.4W Max | |
| Output current adjustment | DIP S.W(10 levels) | |
| Output current ripple LF | ±1% | |
| Output current accuracy | ±2% | |
| Linear regulation | ±1% | |
| Load regulation | ±1% | |
| No load output voltage | 50V | |
| Flicker-free(typical) | Modulation depth =0.106% (100 Hz), Pst LM ⩽ 0.000, SVM ⩽ 0.003,(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 | <380V AC, 1 h | |
| Input current | <0.2A (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 | 4.33A peak ,164us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off | <0.6s(AC start),<0.6s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off ) | |
| Switching cycles | > 50,000 switching cycles | |
| Power consumption | Full load(Pmax):29.4W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A | |
| Safety | | |
| Withstand voltage | I/P-O/P:3750V AC, I/P-DALI: 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 | Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA | |
| PUSH dimming port | N/A | |
| 1-10V 2in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 1-100% | |
| Dimming drive mode | AM(amplitude modulation) | |
| Emergency support | | |
| Central emergency system | Supported(Under DC input conditions) | |
| Self-contained emergency | Supported | |
| Environment & Life time | | |
| Operating temperature | Ta=-20-45°C | |
| Case temperature | Tc=75°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, 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.

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-PUL042A-0700Bd | BK-PUL042A-1100Ad | |
|---|---|---|---|
| Output parameters | | | |
| Regulation method | Constant Current | Constant Current | |
| Rated output current | 0.25-0.7A | 0.6-1.1A | |
| Rated output voltage | 3-84V | 3-42V | |
| Rated output power | 42W Max | 42W Max | |
| Output current adjustment | DIP S.W(10 levels) | DIP S.W(10 levels) | |
| Output current ripple LF | ±1% | ±1% | |
| Output current accuracy | ±2% | ±2% | |
| Linear regulation | ±1% | ±1% | |
| Load regulation | ±1% | ±1% | |
| No load output voltage | 100V | 50V | |
| Flicker-free(typical) | Modulation depth =0.440% (100 Hz), Pst LM ⩽ 0.003, SVM ⩽ 0.007,(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 | <380V 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 | 4.88A peak ,154us duration(50 % Ipeak), see the description below for details | | |
| Start/Switchover/Turn off | <0.6s(AC start),<0.6s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off ) | | |
| Switching cycles | > 50,000 switching cycles | | |
| Power consumption | Full load(Pmax):42W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A | | |
| Safety | | | |
| Withstand voltage | I/P-O/P:3750V AC, I/P-DALI: 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 | Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA | | |
| PUSH dimming port | N/A | | |
| 1-10V 2in1 dimming port | N/A | | |
| Auxiliary power supply | N/A | | |
| Dimming range | 1-100% | | |
| Dimming drive mode | AM(amplitude modulation) | | |
| Emergency support | | | |
| Central emergency system | Supported(Under DC input conditions) | | |
| Self-contained emergency | Supported | | |
| Environment & Life time | | | |
| Operating temperature | Ta=-20-45°C | | |
| Case temperature | Tc=75°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, 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.

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-PUL060A-2000Ad | |
| Output parameters | | |
| Regulation method | Constant Current | |
| Rated output current | 0.8-2.0A | |
| Rated output voltage | 3-42V | |
| Rated output power | 61.2W Max | |
| Output current adjustment | DIP S.W(10 levels) | |
| Output current ripple LF | ±1% | |
| Output current accuracy | ±2% | |
| Linear regulation | ±1% | |
| Load regulation | ±1% | |
| No load output voltage | 50V | |
| Flicker-free(typical) | Modulation depth =0.183% (100 Hz), Pst LM ⩽ 0.002, 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 | <0.4A (AC input) | |
| Input frequency | 47-63Hz | |
| Input power factor | >0.95 (230V AC & Full load) | |
| Input THD | <10% (230V AC & Full load) | |
| Efficiency(typical) | 90% (230V AC & Full load) | |
| In-rush current | 9.51A peak ,178us duration(50 % Ipeak), see the description below for details | |
| Start/Switchover/Turn off | <0.6s(AC start),<0.6s(DC start),<0.3s(AC/DC switchover),<0.5s(Turn off ) | |
| Switching cycles | > 50,000 switching cycles | |
| Power consumption | Full load(Pmax):61.2W, No load(Pno): N/A, On stand-by(Psb) : <0.5W, Network stand-by(Pnet) : N/A | |
| Safety | | |
| Withstand voltage | I/P-O/P:3750V AC, I/P-DALI: 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 | Voltage range: 9.5-22.5V, typical 16V, interface current consumption: 1.8mA | |
| PUSH dimming port | N/A | |
| 1-10V 2in1 dimming port | N/A | |
| Auxiliary power supply | N/A | |
| Dimming range | 1-100% | |
| Dimming drive mode | AM(amplitude modulation) | |
| Emergency support | | |
| Central emergency system | Supported(Under DC input conditions) | |
| 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, 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

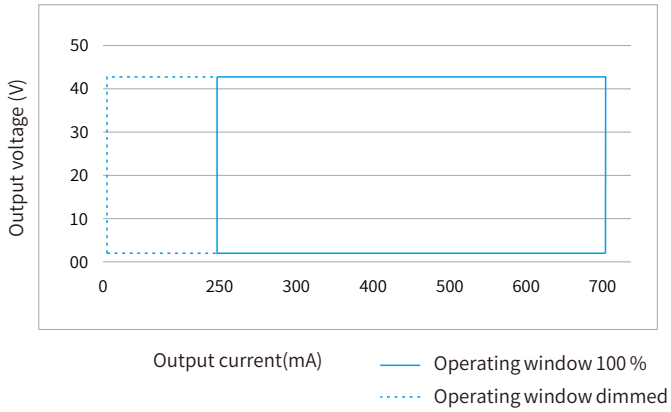
1.By default, all parameter are measured at 230VAC input, full load and 25°C of ambient temperature.

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.

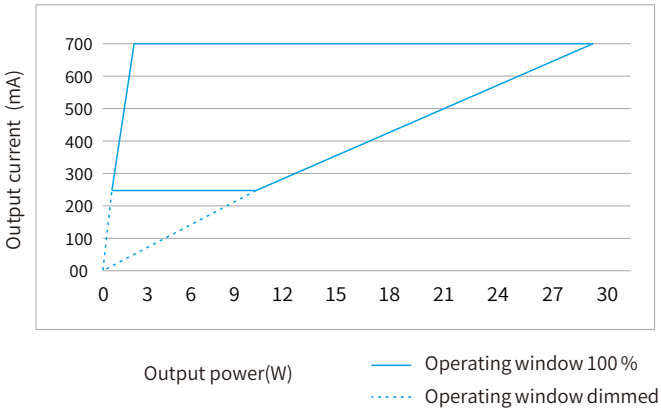
## Electrical values

**BK-PUL030A-0700Ad**

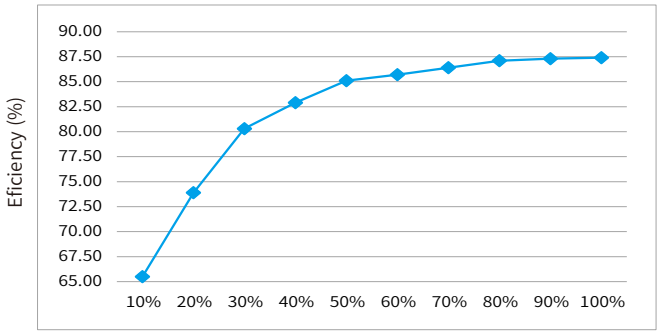
Operating window



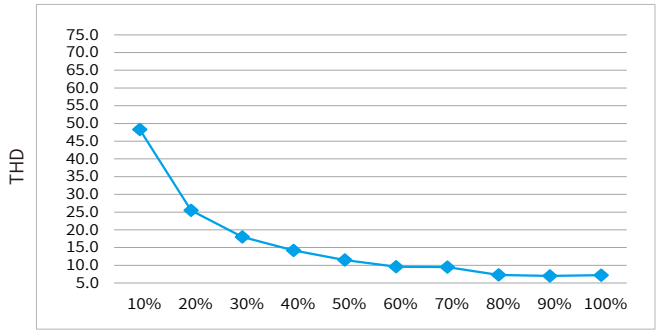

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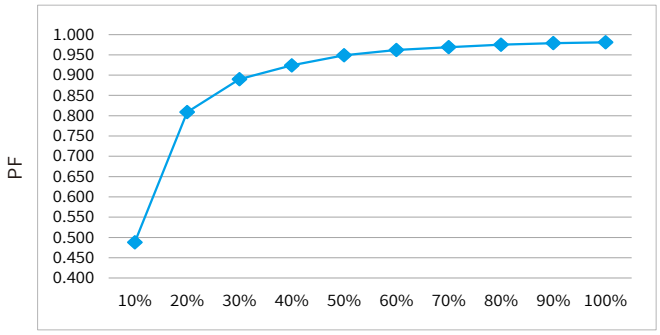

Efficiency vs load




THD vs. Load

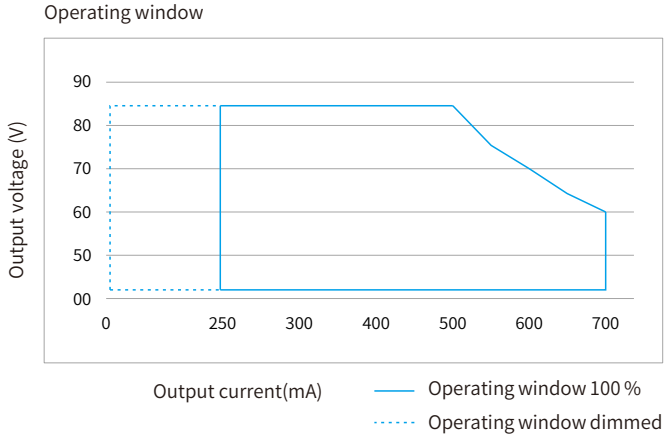



Power factor vs. Load

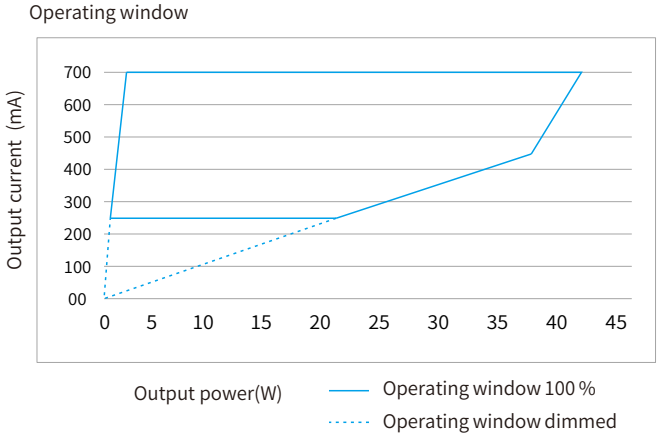



**BK-PUL042A-0700Bd**

Operating window

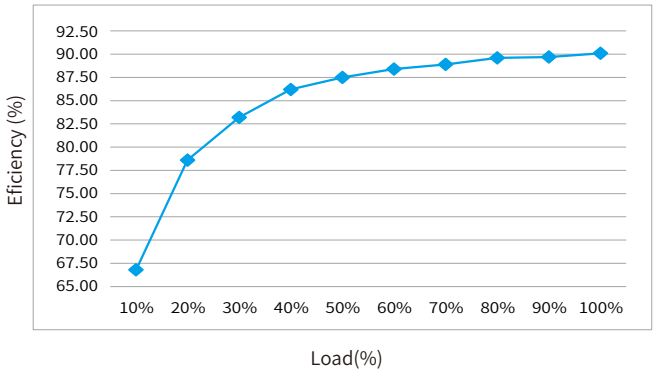



Operating window

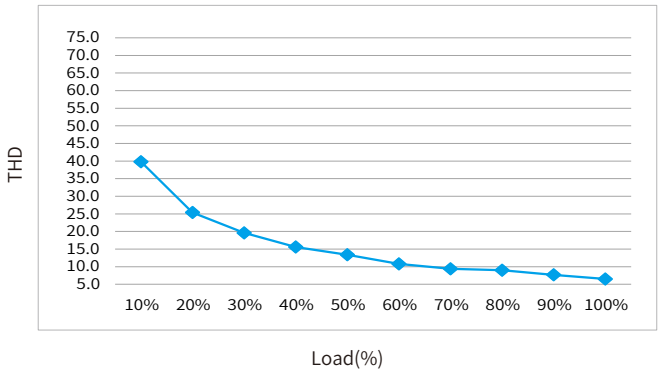


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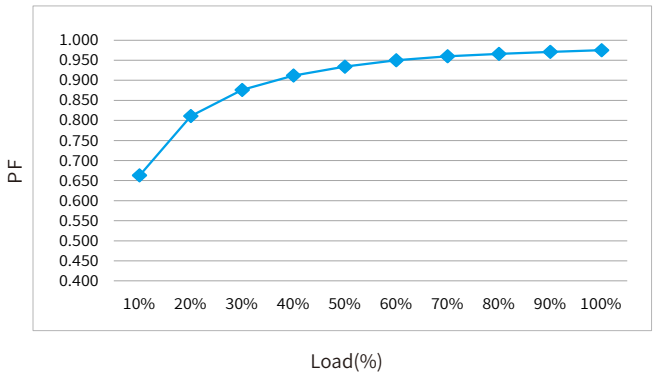
Efficiency vs load




THD vs. Load

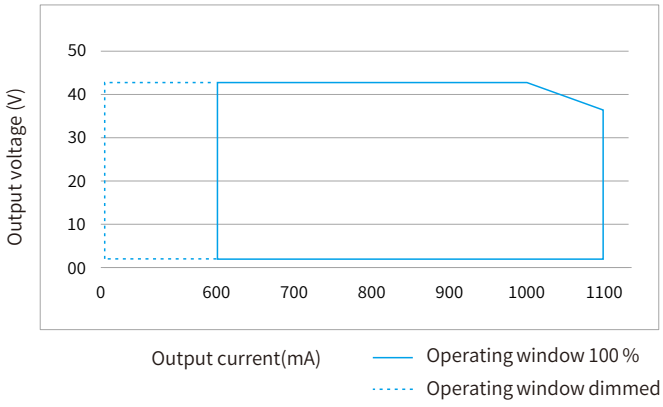



Power factor vs. Load

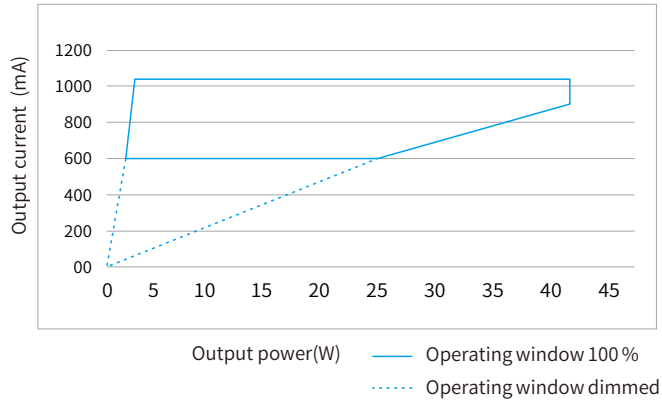



**BK-PUL042A-1100Ad**

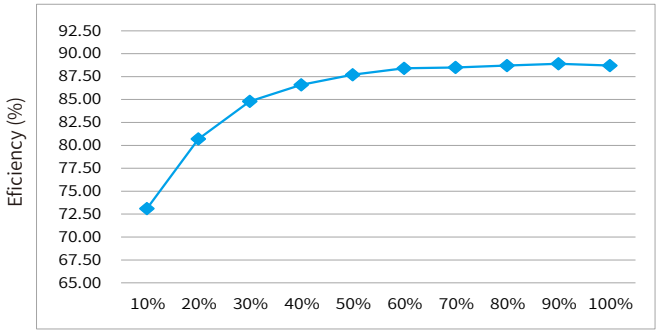
Operating window



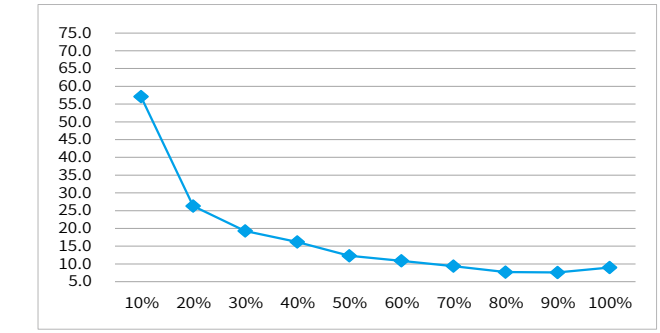

Operating window




Efficiency vs load

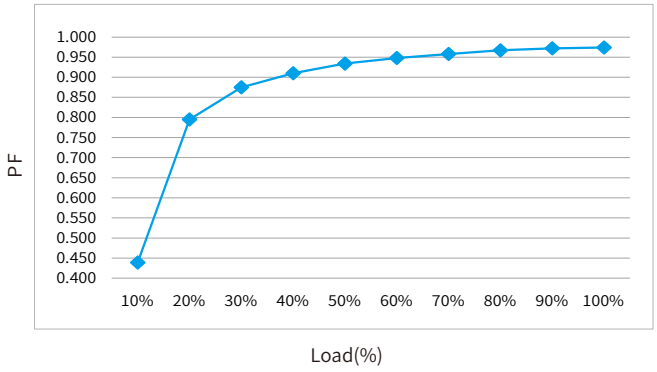



THD vs. Load



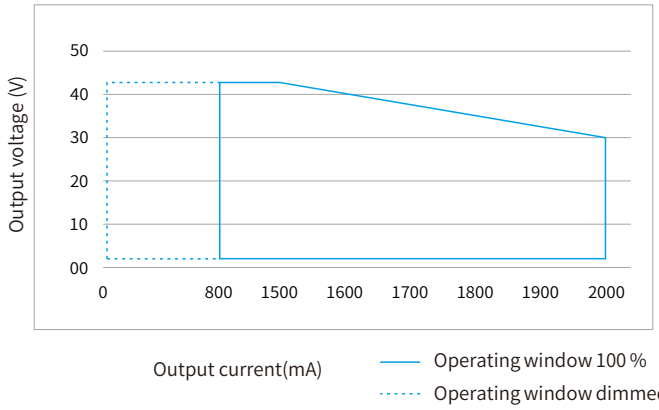
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Power factor vs. Load

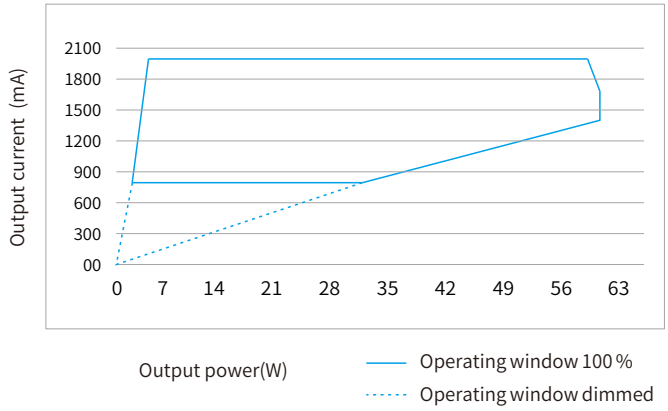



**BK-PUL060A-2000Ad**

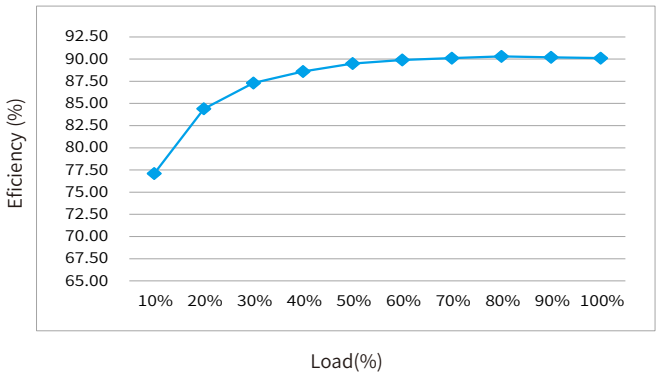
Operating window



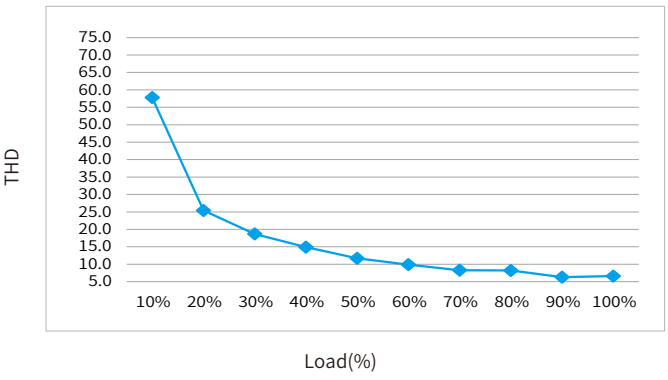

Operating window



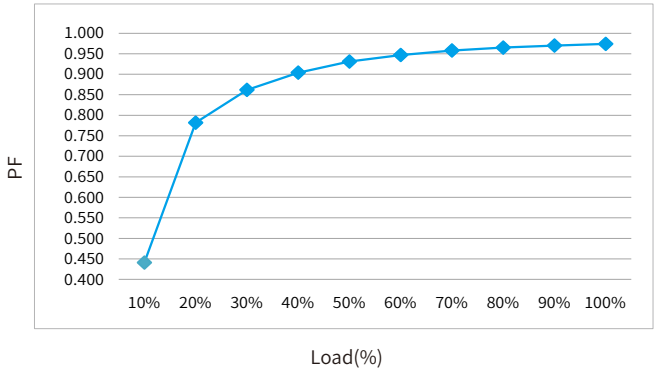

Efficiency vs load




THD vs. Load



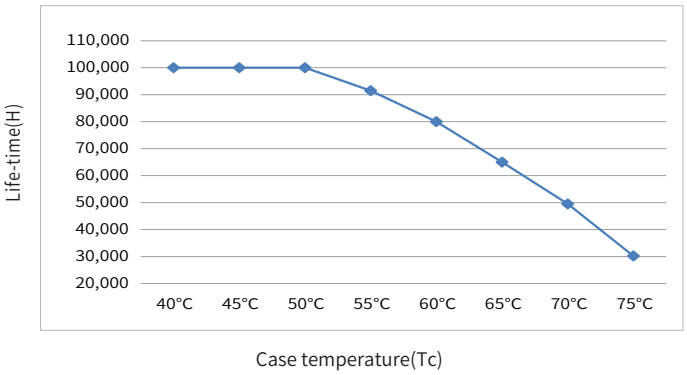

Power factor vs. Load



## Expected life-time

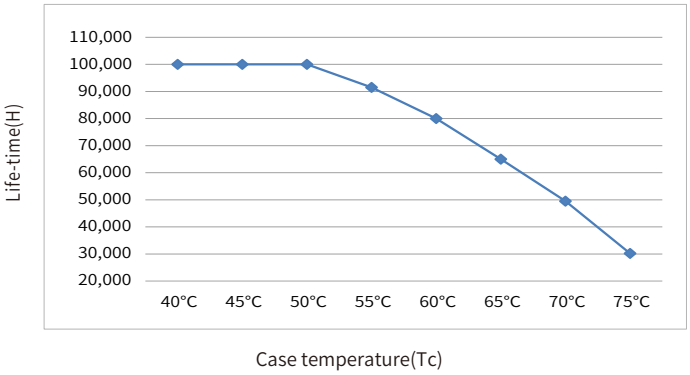
### BK-PUL030A-0700Ad

Life-time vs. case temperature



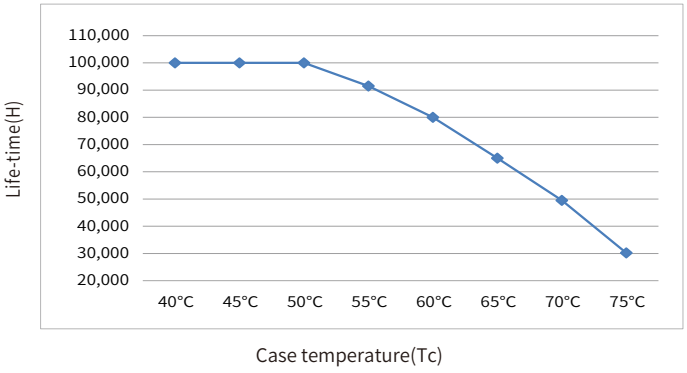

### BK-PUL042A-0700Bd

Life-time vs. case temperature



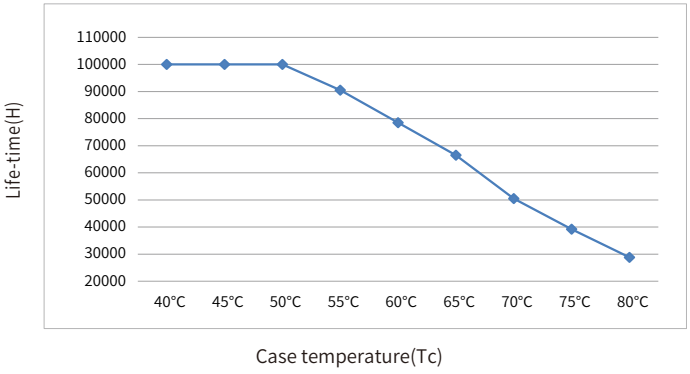

### BK-PUL042A-1100Ad

Life-time vs. case temperature




### BK-PUL060A-2000Ad

Life-time vs. case temperature



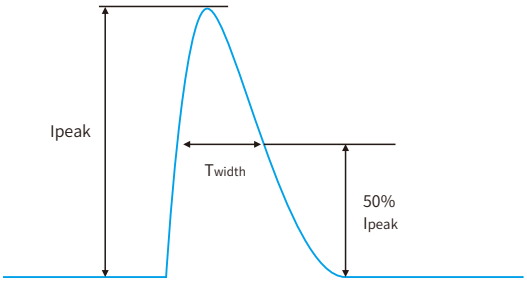

-The life-time of the LED driver is shown in the figure above (calculated based on the 90% survival rate).
- The relation of tc to ta temperature depends also on the luminaire design.

## 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-PUL030A-0700Ad | 4.33A | 164us | AC 230V,Full load, Cold start,Ta≤30°C, MCB is not installed side by side | 46 | 60 | 74 | 92 | 116 | 46 | 60 | 74 | 92 | 116 | 46 | 60 | 74 | 92 | 116 |
| BK-PUL042A-1100Ad | 4.88A | 154us | | 33 | 43 | 52 | 65 | 82 | 33 | 43 | 52 | 65 | 82 | 33 | 43 | 52 | 65 | 82 |
| BK-PUL060A-2000Ad | 9.51A | 178us | | 23 | 30 | 37 | 46 | 57 | 23 | 30 | 37 | 46 | 57 | 23 | 30 | 37 | 46 | 57 |

### 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**

- In case of a short-circuit at the LED output ,the LED output is switched off.
- After restart of the LED driver ,the output will be activated again.
- The restart can either be done via mains reset or via interface (DALI).

**Output no-load operation**

- The LED driver will not be damaged in no-load operation.
- The output will be deactivated and is therefore free of voltage.
- If a LED load is connected the device has to be restarted before the output will be activated again.
- The restart can either be done via mains reset or via interface (DALI).

**Output hot plug-in**

- Plug the LED into the output of the powered driver. For protection LED, the LED will not on, The device has to be restarted.
- The restart can either be done via mains reset or via interface (DALI).

## DIP-switch & output current

BK-PUL030A-0700Ad

| Pin | Irated | Voltage | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 12.7W | 250mA | 42VDC | -- | ON | ON | ON |
| 14.9W | 300mA | 42VDC | ON | -- | ON | ON |
| 17.4W | 350mA | 42VDC | -- | -- | ON | ON |
| 19.5W | 400mA | 42VDC | -- | ON | -- | ON |
| 21.9W | 450mA | 42VDC | -- | -- | -- | ON |
| 24.3W | 500mA | 42VDC | ON | ON | ON | -- |
| 26.5W | 550mA | 42VDC | -- | -- | ON | -- |
| 28.9W | 600mA | 42VDC | -- | ON | -- | -- |
| 31.3W | 650mA | 42VDC | ON | -- | -- | -- |
| 33.7W | 700mA ★ | 42VDC | -- | -- | -- | -- |

BK-PUL042A-0700Bd

| Pin | Irated | Voltage | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 23W | 250mA | 84VDC | -- | ON | ON | ON |
| 28W | 300mA | 84VDC | ON | -- | ON | ON |
| 32W | 350mA | 84VDC | -- | -- | ON | ON |
| 37W | 400mA | 84VDC | -- | ON | -- | ON |
| 41W | 450mA | 84VDC | -- | -- | -- | ON |
| 46W | 500mA | 84VDC | ON | ON | ON | -- |
| 46W | 550mA | 76VDC | -- | -- | ON | -- |
| 46W | 600mA | 70VDC | -- | ON | -- | -- |
| 46W | 650mA | 64VDC | ON | -- | -- | -- |
| 47W | 700mA ★ | 60VDC | -- | -- | -- | -- |

BK-PUL042A-1100Ad

| Pin | Irated | Voltage | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|
| 29W | 600mA | 42VDC | -- | ON | ON | ON |
| 34W | 700mA | 42VDC | ON | -- | ON | ON |
| 36W | 750mA | 42VDC | -- | -- | ON | ON |
| 39W | 800mA | 42VDC | -- | ON | -- | ON |
| 41W | 850mA | 42VDC | -- | -- | -- | ON |
| 43W | 900mA | 42VDC | ON | ON | ON | -- |
| 46W | 950mA | 42VDC | -- | -- | ON | -- |
| 48W | 1000mA | 42VDC | -- | ON | -- | -- |
| 48W | 1050mA | 40VDC | ON | -- | -- | -- |
| 48W | 1100mA ★ | 38VDC | -- | -- | -- | -- |

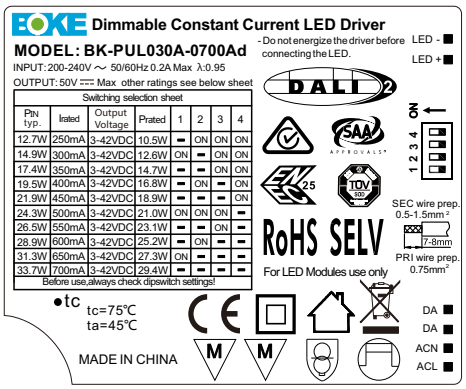
BK-PUL060A-2000Ad

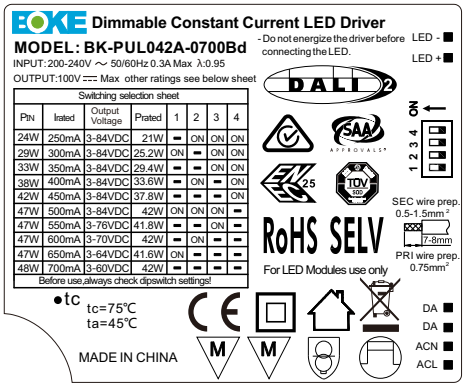
| Pin | Irated | Voltage | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 38W | 800mA | 42VDC | ON | -- | ON | -- | ON | ON |
| 43W | 900mA | 42VDC | -- | -- | -- | -- | -- | ON |
| 47W | 1000mA | 42VDC | ON | ON | ON | -- | ON | -- |
| 52W | 1100mA | 42VDC | -- | ON | ON | -- | ON | -- |
| 54W | 1150mA | 42VDC | -- | -- | -- | -- | ON | -- |
| 56W | 1200mA | 42VDC | -- | ON | ON | ON | -- | -- |
| 59W | 1250mA | 42VDC | ON | -- | ON | ON | -- | -- |
| 61W | 1300mA | 42VDC | -- | -- | ON | ON | -- | -- |
| 65W | 1400mA | 42VDC | -- | ON | -- | ON | -- | -- |
| 68W | 1500mA | 40VDC | -- | -- | -- | ON | -- | -- |
| 69W | 1600mA | 38VDC | ON | ON | ON | -- | -- | -- |
| 69W | 1700mA | 36VDC | -- | -- | ON | -- | -- | -- |
| 69W | 1800mA | 34VDC | -- | ON | -- | -- | -- | -- |
| 69W | 1900mA | 32VDC | ON | -- | -- | -- | -- | -- |
| 69W | 2000mA ★ | 30VDC | -- | -- | -- | -- | -- | -- |

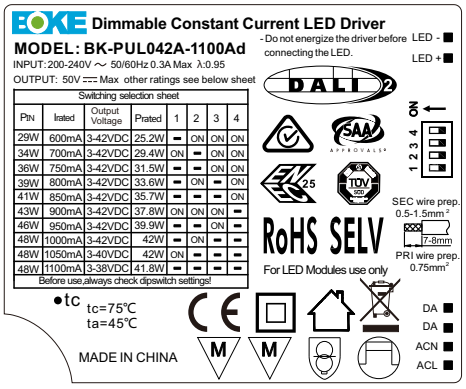
**Remarks:**

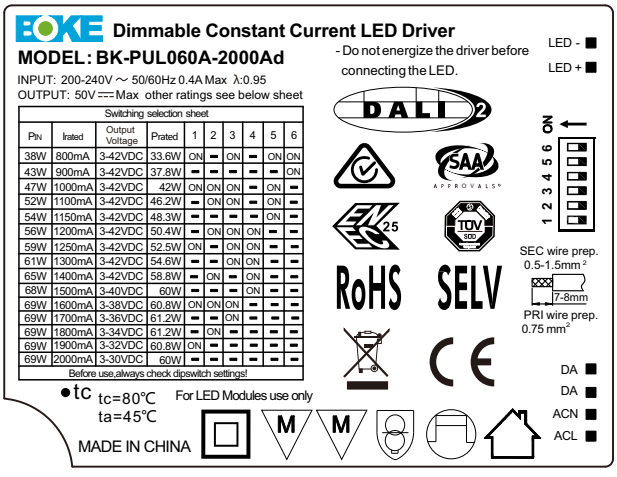
1. ★ It means that this item is the factory default current.
2. -- It means that this channel is OFF.

## Label



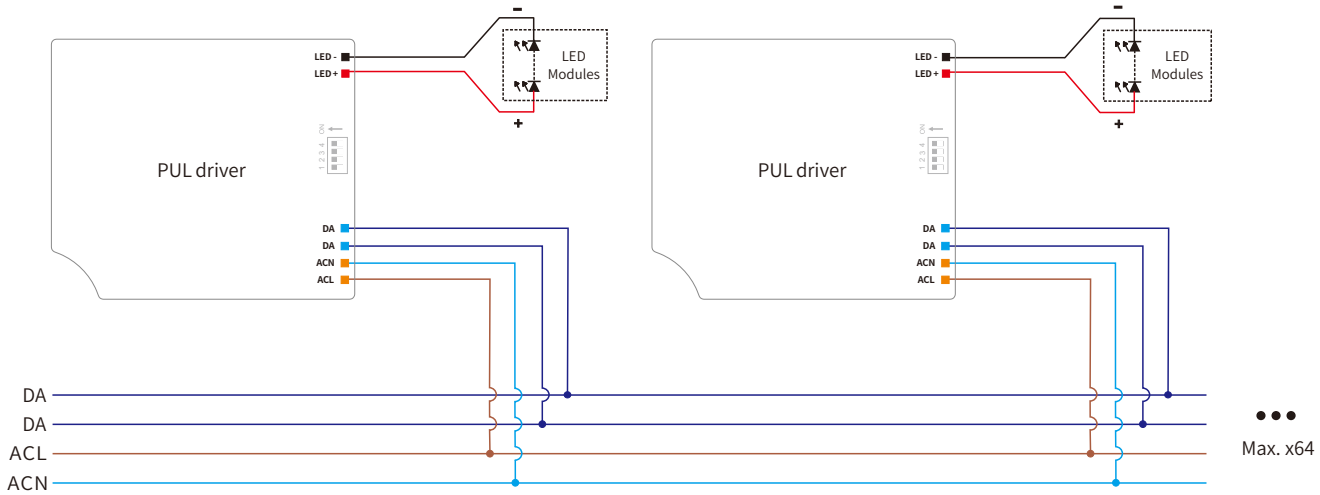



## DALI dimming application

Wiring diagram



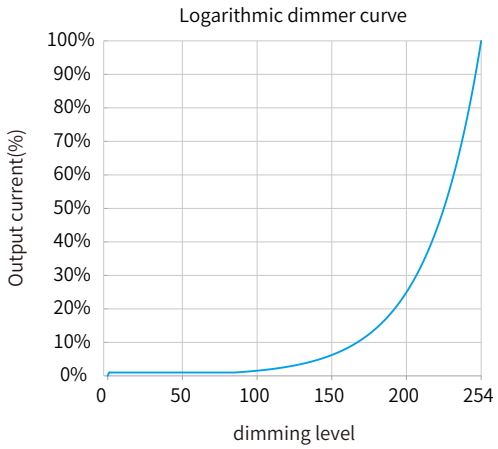

**Remarks:**

- Standard DALI control line voltage range:9.5V to 22.5V ,type 16V.
- The two DALI control lines polarity-reversible.
- Max. 64 DALI drivers per DALI control line.
- The maximum distance length of the DALI control line is 300m at 2×1.5mm$^2$.
- DALI bus can be wired together with any mains voltage cables, but separate wiring is recommended.

Please refer to the table below

| Cable size | Distance |
|---|---|
| 2×0.50mm$^2$ | max.100m |
| 2×0.75mm$^2$ | max.150m |
| 2×1.00mm$^2$ | max.200m |
| ⩾2×1.50mm$^2$ | max.300m |

### Dimming curve




**Remarks:**

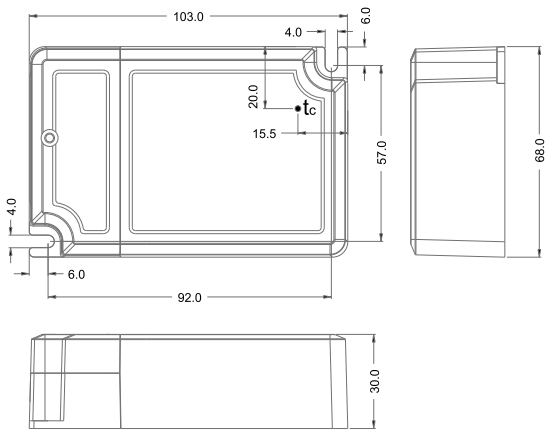
The dimming curve can be selected by DALI configuration. The default is logarithmic dimming curve.

## Installation

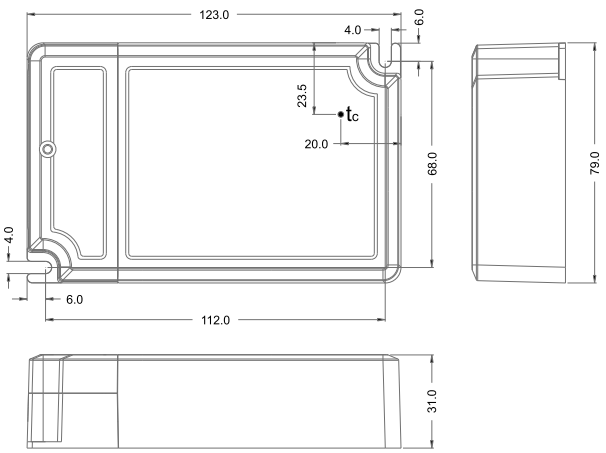
### Mechanical dimensions

Unit:mm

PUL030A/PUL042A



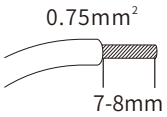

PUL060A




INPUT

| Pin Numbering | function | colour |
|---|---|---|
| 1 | ACL | orange |
| 2 | ACN | orange |
| 3 | DA | blue |
| 4 | DA | blue |

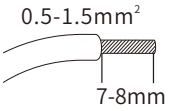
Input wire




OUTPUT

| Pin Numbering | function | colour |
|---|---|---|
| 1 | LED- | black |
| 2 | LED+ | red |

Output wire




### Installation note

**Hot plug-in**

- Hot plug-in is not supported due to residual output voltage of > 0 V.
- If a LED load is connected the device has to be restarted.
- This can be done via mains reset or via interface (DALI).

**Wiring guidelines**

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

**Mounting screw specifications and torque**

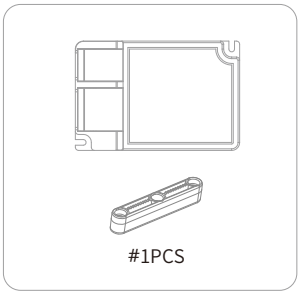
- Max. torque at the clamping screw: 0.5 Nm / M4

**Replace LED module**

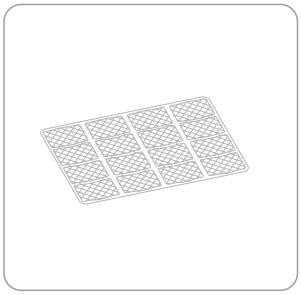
1. Mains off
2. Remove LED module
3. Wait for 5 seconds
4. Connect LED module again

## Packaging

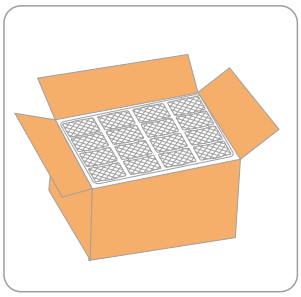
### Optional 1: factory default




Product



Blister



16pcs×4layer=64pcs/CIN
9pcs×4layer=36pcs/CIN

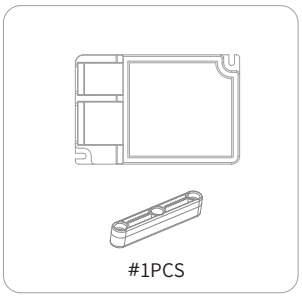
| Model | Product size | Weight | Blister size | Carton size | Qty/carton | N.W | G.W |
|---|---|---|---|---|---|---|---|
| PUL030A | L103*W68*H30mm | 140g | L480*W330*H40mm | L490*W340*H165mm | 64 pcs | 8.96kg | 10.8kg |
| PUL042A | L103*W68*H30mm | 168g | L480*W330*H40mm | L490*W340*H165mm | 64 pcs | 10.8kg | 12.1kg |
| PUL060A | L123*W79*H31mm | 248g | L435*W345*H40mm | L450*W350*H180mm | 36 pcs | 9.00kg | 11.0kg |



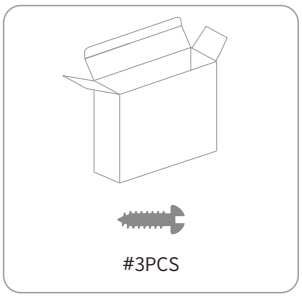
Screw

Remarks: accessories will be packed in PE bags separately

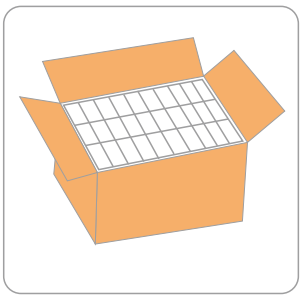
### Optional 2:




Product




Packaging



24pcs×2layer=48pcs/CIN

| Model | Product size | Weight | Packaging size | Carton size | Qty/carton | N.W | G.W |
|---|---|---|---|---|---|---|---|
| PUL030A | L103*W68*H30mm | 140g | L130*W38*H85mm | L415*W330*H190mm | 48 pcs | 6.8kg | 9.8kg |
| PUL042A | L103*W68*H30mm | 168g | L130*W38*H85mm | L415*W330*H190mm | 48 pcs | 8.1kg | 11.2kg |
| PUL060A | L123*W79*H31mm | 248g | L130*W38*H85mm | L415*W330*H190mm | 48 pcs | 11.9kg | 14.5kg |

### Additional information

1. This product can only be used outside the light body, Can not be used inside of the light, and it must be used within the specified working environment.
2. The life and MTBF of the product are for reference only, and do not represent a warranty statement. If the drive has been turned on, there is no warranty.
3. For more information, please send an email to info@bokedriver.com.