

LED Batten
DB181 Series


Introduction
This is a cyinder shape batten light with 200 degree lighting surface. It mainly adopts PC lampshade for big lighting sufface for uniform light output. $600 \mathrm{~mm} / 1200 \mathrm{~mm} / 1800 \mathrm{~mm}$ standard size optional, it also supports to cut differen sizes. What's more, to meet more application areas, it can do microwave sensor, emergency, triac, $0-10 \mathrm{~V}, \mathrm{DAU}$ dim, and available for splicing, suface mount, wall mount, pendant installation.

## Features

- Wide emilting angle with 200 degree

Easy splicing way for multiple lamps

- Interchangeable $\mathrm{CCT}(3000 \mathrm{~K}+4000 \mathrm{~K}+5700 \mathrm{~K})$ with DIP switch
- High lumen efficiency, $120 \mathrm{Im} / \mathrm{W}$ for energy saving

Flexible mounting ways: sufface mount/ wall mount/ pendant/ splicing Dimming ways: Triac, 0-10V, DAL

- Intemal flicker free driver


## Application Areas

It is widely used in office, meeting room, museum, workshop, supemarket, warehouse etc.



Technical Data Sheet

| code |  |  | DB181-600-20W | DB181-600-23W-S7 | DB181-1200-38W-S7 | DB181-1200-40W | DB181-1800-56W | 181-1800-60W |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dimension(mm) |  |  | $\varnothing 72 * 1600$ | $\varnothing 72 *$ L600 | $\varnothing 72 * 11200$ | $\varnothing 72 * 11200$ | ¢72*L1800 | $\varnothing 72 * 11800$ |
| Cutout (mm) |  |  | - |  |  |  |  |  |
| Watt(W) |  |  | 20w | 23W | 38W | 40w | 56W | 60W |
| Rated Input Voltage |  |  | AC220-240V |  |  |  |  |  |
| Input Voltage |  |  | AC198-264V |  |  |  |  |  |
| LED Module Input |  |  | - |  |  |  |  |  |
| Light Source |  |  | SMD |  |  |  |  |  |
| SDCM |  |  | <6 |  |  |  |  |  |
| $\operatorname{CCT}(\mathrm{K})$ |  |  |  |  |  |  |  |  |
| CCT Selection DIP Switch |  |  | NO |  |  |  |  |  |
| Luminous <br> Flux (Im) <br> $\pm 5 \%$ CRI80 <br> White finish |  | $\begin{array}{\|l} \text { Non- } \\ \text { DIM } \end{array}$ | 2400-2600 | 2650-2800 | 4500-4750 | 4900-5100 | 7000-7300 | 7100-7400 |
|  | CC | DIM | 2400-2600 | - | - | 4650-4850 | - | 7100-7400 |
|  |  | $\begin{aligned} & \text { Non- } \\ & \text { DIM } \end{aligned}$ | 2400-2600 | - | - | 4900-5100 | - | 7100-7400 |
|  | CCT | DIM | 2400-2600 | - | - | 4650-4850 | - | 7100-7400 |
| Remark: If lamp body with black color, the lumen will decrease around $13 \%$ |  |  |  |  |  |  |  |  |
| CRI |  |  | >80 |  |  |  |  |  |
| Beam Angle ( ${ }^{\circ}$ ) |  |  | $200^{\circ}$ |  |  |  |  |  |
| UGR |  |  | - |  |  |  |  |  |
| LED Driver |  |  | Driver built-in |  |  |  |  |  |
| Dimming Option |  |  | Triac / DALI / 0-10V |  |  |  |  |  |
| Sensor |  |  | Microwave sensor |  |  |  |  |  |
| Emergency Kits |  |  | YES |  |  |  |  |  |
| Electrical Class |  |  | Class 1 |  |  |  |  |  |
| Ingress Protection(IP Rating) |  |  | \|P40 |  |  |  |  |  |
| Impact Resistance (IK Rating) |  |  |  |  |  |  |  |  |
| Product Finishing |  |  | White RAL9016, Black RAL9005 |  |  |  |  |  |
| Optics Material |  |  | PC |  |  |  |  |  |
| Housing Material |  |  | Aluminium |  |  |  |  |  |
| Lifetime ( hr ) |  |  | 50,000h |  |  |  |  |  |
| Glow wire test ( ${ }^{\circ} \mathrm{C}$ ) |  |  | $750^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Operating Temp. ${ }^{\circ} \mathrm{C}$ ) |  |  | $-20^{\circ} \mathrm{C} \sim 45^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Storage Temp. ${ }^{\circ} \mathrm{C}$ ) |  |  | $-20^{\circ} \mathrm{C} \sim 65^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Installation |  |  | Surface mount/Pendant/wall mount |  |  |  |  |  |



Driver Datasheet (Non-dimmable)

| Total load wattage |  | 20w | 40w | 60 W |
| :---: | :---: | :---: | :---: | :---: |
| Output | Rated output current | 500 mA | 1000 mA | 1500 mA |
|  | Output Voltage range | DC28-42V |  |  |
|  | Line Regulation | $\pm 5 \%$ |  |  |
|  | Setup Rise Time | <0.5s @230V |  |  |
|  | Flickering Index | 0.25\% (NO RISK) |  |  |
| Input | Rated Input Voltage | AC220-240V |  |  |
|  | Input Voltage | AC198-264V |  |  |
|  | Frequency | 50/60Hz |  |  |
|  | Rated Input Current | 0.12 A | 0.21 A | 0.31 A |
|  | Input Current | 0.14 A | 0.23A | 0.36A |
|  | Power Factor | 0.9 |  |  |
|  | THD | <20\% @230V |  |  |
|  | Efficiency | 86\% | 87\% | 87\% |
|  | No load wattage | <0.5W @230V |  |  |
| Protection | Short circuit protection | PASS |  |  |
|  | Over voltage protection | PASS |  |  |
|  | Over temperature protection | PASS |  |  |
| Safety \& EMC | Withstand voltage | 1/P-FG:1.5kVac, $<5 \mathrm{~mA} 60 \mathrm{~S}$ |  |  |
|  | Isolation Resistance | I/P-O/P: 500VDC, $\geq 4 \mathrm{M} \Omega$ |  |  |
|  | Surge | IEC/EN61000-4-5 (L-N:1KV, L/N-PE: 2KV) |  |  |
|  | EMC Emission | EN55015, EN61000-3-2 |  |  |
|  | EMC Immunity | EN61000-4-2,3,4, , , ,6,8, 11; EN61547 |  |  |

Driver Datasheet (Triac Dimmable)

| Total load wattage |  | 20w | 40w |
| :---: | :---: | :---: | :---: |
| Output | Rated output current | 500mA | 950 mA |
|  | Output Voltage range | DC28-40V |  |
|  | Line Regulation | $\pm 5 \%$ |  |
|  | Setup, Rise Time | <500ms@230V |  |
|  | Flickering Index | 5\%(LOW RISK) |  |
| Input | Rated Input Voltage | AC220-240V |  |
|  | Input Voltage | AC198-264V |  |
|  | Frequency | 50 Hz |  |
|  | Rated Input Current | $\leq 0.11 \mathrm{~A}$ | $\leq 0.21 \mathrm{~A}$ |
|  | Input Current | $\leq 0.12 \mathrm{~A}$ | $\leq 0.23 \mathrm{~A}$ |
|  | Power Factor | 0.9 |  |
|  | THD | - | <20\% @230V |
|  | Efficiency | 281\% | 284\% |
|  | No load wattage | <1W @ 230 V |  |
| Protection | Short circuit protection | PASS |  |
|  | Over voltage protection | PASS |  |
|  | Over temperature protection | PASS |  |
| Safety \& EMC | Withstand voltage | 1/P-FG:1.5kVac, $<5 \mathrm{~mA}$ 60S |  |
|  | Isolation Resistance | $500 \mathrm{VDC}, 22 \mathrm{M} \Omega$ |  |
|  | Surge | IEC/EN61000-4-5 (L-N:1KV, L/N-PE: 2KV) |  |
|  | EMC Emission | EN55015, EN61000-3-2 |  |
|  | EMC Immunity | EN61000-4-2,3,4, , , , ,8,11; EN61547 |  |

## Driver Datasheet (DALI Dimmable)

| Total load wattage |  | 20w | 40w | 60w |
| :---: | :---: | :---: | :---: | :---: |
| Output | Rated output current | 500 mA | 950 mA | 1500 mA |
|  | Output Voltage range | DC28-40V |  |  |
|  | Line Regulation | $\pm 5 \%$ |  |  |
|  | Setup, Rise Time | <1s @230V |  |  |
|  | Flickering Index | <1\%(NO RISK) |  |  |
| Input | Rated Input Voltage | AC220-240V |  |  |
|  | Input Voltage | AC198-264V |  |  |
|  | Frequency | 50/60Hz |  |  |
|  | Rated Input Current | $\leq 0.10 \mathrm{~A}$ | $\leq 0.20 \mathrm{~A}$ | $\leq 0.30 \mathrm{~A}$ |
|  | Input Current | $\leq 0.11 \mathrm{~A}$ | $\leq 0.22 \mathrm{~A}$ | $\leq 0.34 \mathrm{~A}$ |
|  | Power Factor | 0.9 |  |  |
|  | THD | <20\% @230V |  |  |
|  | Efficiency | 284\% | 286\% |  |
|  | No load wattage | <0.5w @230V |  |  |
| Protection | Short circuit protection | PASS |  |  |
|  | Over voltage protection | PASS |  |  |
|  | Over temperature protection | PASS |  |  |
| Safety <br> \&EMC | Withstand voltage | 1/P-FG:1.5kVac, $<5 \mathrm{~mA}$ 60S |  |  |
|  | Isolation Resistance | $500 \mathrm{VDC}, 22 \mathrm{M} \Omega$ |  |  |
|  | Surge | IEC/EN61000-4-5 (L-N:1KV, L/N-PE: 2KV) |  |  |
|  | EMC Emission | EN55015, EN61000-3-2 |  |  |
|  | EMC Immunity | EN61000-4-2,3,4, , 6, 8, 11; EN61547 |  |  |

Driver Datasheet (0-10V Dimmable)

| Total load wattage |  | 20w | 40W | 60w |
| :---: | :---: | :---: | :---: | :---: |
| Output | Rated output current | 500 mA | 950 mA | 1500 mA |
|  | Output Voltage range | DC9-40V |  |  |
|  | Line Regulation | $\pm 5 \%$ |  |  |
|  | Setup, Rise Time | <0.5s @230V |  |  |
|  | Flickering Index | <1\%(NO RISK) |  |  |
| Input | Rated Input Voltage | AC220-240V |  |  |
|  | Input Voltage | AC198-264V |  |  |
|  | Frequency | 50/60Hz |  |  |
|  | Rated Input Current | S0.10A | $\leq 0.20 \mathrm{~A}$ | $\leq 0.30 \mathrm{~A}$ |
|  | Input Current | $\leq 0.11 \mathrm{~A}$ | <0.22A | $\leq 0.34 \mathrm{~A}$ |
|  | Power Factor | 0.9 |  |  |
|  | THD | <20\% @230V |  |  |
|  | Efficiency | 286\% | 288\% |  |
|  | No load wattage | <0.5W @230V |  |  |
| Protection | Short circuit protection | PASS |  |  |
|  | Over voltage protection | PASS |  |  |
|  | Over temperature protection | PASS |  |  |
| Safety \& EMC | Withstand voltage | 1/P-FG:1.5KVac, $<5 \mathrm{~mA} 60 \mathrm{~S}$ |  |  |
|  | Isolation Resistance | $500 \mathrm{VDC}, 22 \mathrm{M} \Omega$ |  |  |
|  | Surge | IEC/EN61000-4-5 (L-N:1KV, L/N-PE: 2KV) |  |  |
|  | EMC Emission | EN55015, EN61000-3-2 |  |  |
|  | EMC Immunity | EN61000-4-2,3,4,5,6,8,11; EN61547 |  |  |

Driver Datasheet(Non-dimmable for sensor)

| Total load wattage |  | 23W | 38 W | 56W |
| :---: | :---: | :---: | :---: | :---: |
| Output | Rated output current | 150 mA | 250 mA | 390 mA |
|  | Output Voltage range | DC120-150V | DC120-150V | DC100-150V |
|  | Line Regulation | $\pm 5 \%$ |  |  |
|  | Setup, Rise Time | <500ms @230V |  |  |
|  | Flickering Index | <3\%(NO RISK) |  |  |
| Input | Rated Input Voltage | AC220-240V |  |  |
|  | Input Voltage | AC198-240V |  |  |
|  | Frequency | $50 \mathrm{~Hz} / 6 \mathrm{OHz}$ |  |  |
|  | Rated Input Current | $\leq 0.13 \mathrm{~A}$ | $\leq 0.21 \mathrm{~A}$ | $\leq 0.31 \mathrm{~A}$ |
|  | Input Current | $\leq 0.15 \mathrm{~A}$ | $\leq 0.23 \mathrm{~A}$ | $\leq 0.34 \mathrm{~A}$ |
|  | Power Factor | >0.9 |  |  |
|  | THD | - | <20\% @230V |  |
|  | Efficiency | 290\% |  |  |
|  | No load wattage | <0.5W @230V |  |  |
| Protection | Short circuit protection | PASS |  |  |
|  | Over voltage protection | PASS |  |  |
|  | Over temperature protection | PASS |  |  |
| Safety <br> \&EMC | Withstand voltage | - |  |  |
|  | Isolation Resistance | - |  |  |
|  | Surge | IEC/EN61000-4-5 (L-N:1KV, L/N-PE: 2KV) |  |  |
|  | EMC Emission | EN55015, EN61000-3-2 |  |  |
|  | EMC Immunity | EN61000-4-2,3,4,5,6,8,11; EN61547 |  |  |


| Driver Datasheet (Emergency) |  |
| :---: | :---: |
| Input power | 3W |
| Discharge power | 2 W |
| Rated Input Voltage(V) | AC230V |
| Frequency | 50/60Hz |
| Input Voltage | AC200-240V |
| Rated Input Current | $\leq 0.03 \mathrm{~A}$ |
| Battery | 6.4V 1500mAh (Lifep O4) |
| Lifetime | Over 2000 cycles |
| Battery duration | $\geq 3 h r s$ |
| Charge Period | <24hrs |
| Emergency switching time | $\leq 15$ |
| Emergency Operating Temp. ( ${ }^{\circ} \mathrm{C}$ ) | $0^{\circ} \mathrm{C}-25^{\circ} \mathrm{C}$ |

## Driver Datasheet (Sensor)

| Operating Voltage | DC7-12V |
| :---: | :---: |
| Microwave frequency | 5.8GHz+75MHz, ISM wave band |
| Detection angle | $140^{\circ}$ |
| Detection Area | DIP switch 4-6M (50\%/100\%) Remote 4-6m ( $25 \% / 50 \% / 75 \% / 100 \%$ )adjustable |
| Hold time | DIP switch $5 \mathrm{~S} / 60 \mathrm{~S} / 3 \mathrm{~min} / 10 \mathrm{~min}$ Remote $5 \mathrm{~S} / 1 \mathrm{~min} / 5 \mathrm{~min} / 10 \mathrm{~min} /$ adjustable |
| Daylight threshold | DIP switch 30\|ux/disable Remote 15 lux 4501 ux disable/adjustable |
| Stand-by DIM Level | $\begin{aligned} & \text { DIP switch 0\% / } 20 \% \\ & \text { Remote } \\ & 10 \% / 30 \% / \text { adjustable } \end{aligned}$ |
| Stand-by Period | DIP switch $15 \mathrm{~min} / 8$ Remote $\mathrm{OS} / 1 \mathrm{~min} / 10 \mathrm{~min} /+/$ adjustable |
| Dimming Range | Pressing this button continuously, the brightness will increase or reduce $5 \%$ for each adjustment ON mode is still available. Dimming range: $30 \%-100 \%$ |
| Microwave ON/OfF function | Pressing this button, the sensor function will be turned off,the lamp will remain ON/OFF and keep same brightness as last setting. The sensor mode can be restored and workable by pressing the 'Detection Area' button. (Other paramerers stay the latest setting) |
| Installation Height | Recommended Installation Height: Wall mounted height 1.8 m . Ceiling mounted height 3 m . |
| Minimum mounting distance | recommended install height should be more than 3 m |
| Operating temperature( ${ }^{\circ} \mathrm{C}$ ) | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ |

## Sensor Setting

|  |  |  |  |  |  | Factory settings |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | No |  | Detection Area | Hold Time | Daylight Sensor | Stand-by DIM Level | Stand-by Period |
|  |  | 3 | 4 | 5 | 6 | 100\% | 55 | Disable | 0\% | $\infty$ |

## Sensor Setting

## Detedion area

Sensor test condition the he detect distance can be adjusted thro ugh the slide switch


Sensor test environment and reference:The detective range is measured by human body whose stature around $1.6-1.7 \mathrm{M}$ with medium size and traveling speed is aro und $1.0-1.5 \mathrm{M}$ per second. If the stature,
 lamp's readion under open/narrow environment:Test re sult will be highly influenced by test environment, the more open environment, the clo ser detect distance; the narro wer environment, the longer detect distance. The detector may do self-excitation in a narro w environment.
ensor Setting based on environmental disturbal disturbances will cause
abnormal induction, such as the lamp can not auto matically turn off for a long time or the sensor function sensing distance to $50 \%$ for the enviro nment where near the heavy equip ment, metal sheets and metal pipes, concrete wall ( $<30 \mathrm{~cm}$ thickness) etc. Recommend to keep $100 \%$ sensor distance in open environment. renvironment where near the routers, telecommunications base stations, electrical machinery etc, it is recommended to keep the installation distance of more than 5 meters and adjust to $50 \%$ sensordistance.

## Hold time:

eefers to the time period the lamp remains at $100 \%$ illumination after no motion detected.
Notice 1 . The hold time can be selected by the slide switch.
The hold time counting should be started after the sensor is powered on and initialized.

## Daylight sensor:

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold.
When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless
of ambient light level.
Notice 1: The light threshold can be selected through the slide switch, it may cause a large deviation in different lamps.

| Stand- <br> by DIMLevel |  |
| :---: | :---: |
| 5 |  |
| - | $0 \%$ |
| ON | $20 \%$ |

Stand-by dimming level:
This is the dimmed low light output level you would like to have after the hold-time in the absence of eople

| Stand-by <br> Period |  |
| :---: | :---: |
| 6 | $\infty$ |
| - |  |
| ON | 15 min |

Stand-by period:
This is the time period you would like to keep at the low light output level before it is completely switched off in the long absence of people.

## - Sensor Setting

|  | Button | Function | Description |
| :---: | :---: | :---: | :---: |
|  | ON/OFF | Normal ON/OFF | Pressing ON/OFF button, the sensor function will be turned off, the lamp will remain ON/OFF and keep same brightness as last setting. The sensor mode can be restored and workable by pressing the 'Detection Area' button. (Other paramerers stay the latest setting) |
|  | $\because$ | Night light function | Short press , the lamp will keep $10 \%$ brightness as a night lamp. Long press 3 seconds to reset sensor mode, the lamp will recover to $100 \%$ brightness, all parameters will keep same as DIP setting. In night lamp mode, press Dim+/Dim- can restore to last setting status and do relevant dim+/dim-adjustment. The sensor mode can be restored and workable by pressing the 'Detection Area' button.(Other paramerers stay the latest setting) |
|  | Dim+ | ncreasing Brightness | Pressing this button continuously, the brightness will increase 5\% for each adjustment. ON mode is still available. Dimming range: 30\%-100\% |
|  | Dim- | Reducing Brightness | Pressing this button continuously, the brightness will reduce $5 \%$ for each adjustment. ON mode is still available. Dimming range: $30 \%-100 \%$ |
|  | Stand-by Dim Leve | -ow Brightness | 10\%, 30\% |
| (os) Imin [1amin 4 + | Hold Time | 100\% Brightness | $5 \mathrm{~s}, 1 \mathrm{~min}, 5 \mathrm{~min}, 10 \mathrm{~min}$ |
| N | Detection Area | Detection Area | 100\%〈 $\cdots>, 75 \%\langle\cdots\rangle, 50 \%\langle\cdots, 25 \%$ く>> |
|  | Stand-by Period | Stand-by Time | $0 \mathrm{~s}, 1 \mathrm{~min}, 10 \mathrm{~min},+\infty$ |
|  | Test | TEST Bution | Pressing this button, the light will turn off after 2 seconds. Restore to last sensing setting after power off. |
|  | Daylight Threshold | Threshold | 15Lux C. 50Lux ${ }_{\text {in }}$, Disable |

1.The infrared remote control is a point-to-point controller, which can be operated one-to-one orone-to-many witho ut co de pairing. The lamp will light up and fl ash once when it receives a signal
2. Separate controlon each luminaire requires an installation distance of 3 meterbetween two adjacent lamps. 3. If lo se control, please o perate with a closerdistance, reco mmend remote controldistance is 3 to 5 meters.

## Induction Range

Ceiling Mounting pattern(Unit: m )

$\square$ High detection area $\square$ Low detection area

Wall Mounting pattern(Unit: m )


High detection area $\quad$ Low detection area

## Installation Procedure

## WARNING $/$

1.Switch off before instdlation.
2. Switch on only after complete instdlation and examination of the cirait.
3.Professiond electriaion for instdlation and maintenance only.


Sufface mount installation


## Wall mount installation

| Code | $A-01$ 啡 | $A-02!$ | $A-03 F$ | $A-04$ | $A-05$ | $A-06$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $A C C$ | $x 2$ | $x 2$ | $x 2$ | $x 2$ | $x 2$ | $x 2$ |



## Pendant installation(Without round ceiling plate)

| Code | A O O | A-02 翡 | A-03 | A-04 監 | $\mathrm{A}-05 \sim$ | $\mathrm{A}-06 \Leftrightarrow$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ACC | $\times 2$ | $\times 2$ | $\times 2$ | $\times 2$ | $\times 2$ | $\times 2$ |




11


## Pendant installation(With round ceiling plate)

| Code | A-01 | A-02 篚 | A-03 | A-04 | A-05 㦯 | A-06 | A-07 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ACC | x 1 | $\times 4$ | x2 | x4 | x2 | $\times 2$ | x2 |



13




## Pendant splicing installation(Without round ceiling plate)



Wall mount splicing installation


Pendant splicing installation(With round celling plate)


N:

## RL Europe

Your partner in LED

