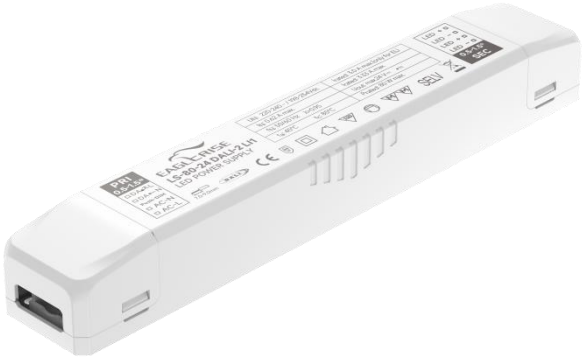
# 80W constant Voltage-LS Series



Features

- Class II，SELV，Independent
- Input Voltage 220-240VAC
- Protections: SCP/OLP/OTP/OVP
- Power Factor：≥0.95（Typ.）
- Efficiency：≥89%（Typ.）
- 5 years warranty

Applications

- LED strips

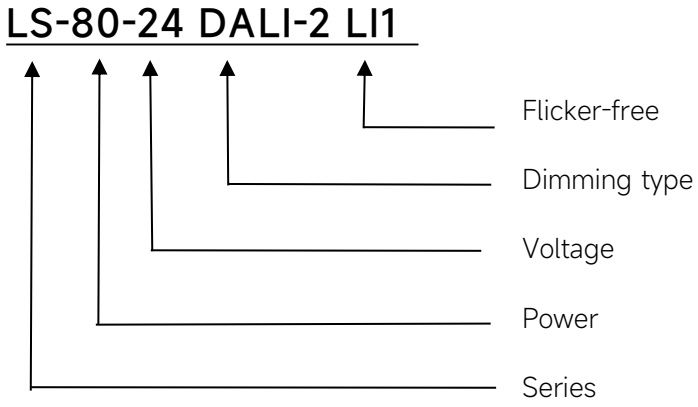
■Approve

Note:Non IC

## ◆ Description

LS-80-24 DALI-2 LI1 is a 80W constant voltage LED driver that operates from 198-264Vac input with 24V output voltage. With it's compact dimensions from 227 x 38 x 30 mm. It is easy to integrate in LED strips products. To ensure trouble-free operation, protection is provided against output short circuit and over Load.

## ◆ Model code



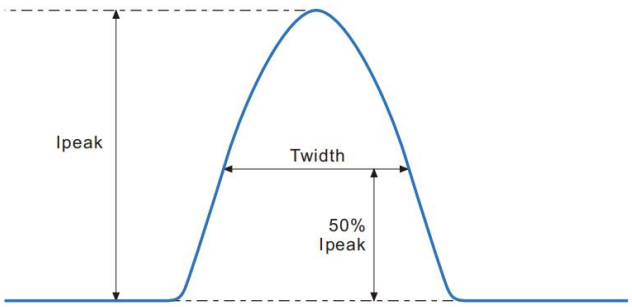
## ◆ Specification

| | | |
|---|---|---|
| Output | Constant Voltage | 24VDC |
| | Current Range | 0-3.33A |
| | Voltage Accuracy | ±5% |
| | Output HF voltage ripple(≥1KHz) | ±1% |
| | Output LF voltage ripple(≤120Hz) | ±1% |
| | SVM | ≤0.4 |
| | Pst | ≤1 |
| | Efficiency(Typ.) | ≥89%@Full load,230V |
| | EOFI | 15% |
| Input | Rated input voltage | 220-240V |
| | Range of input voltage | 198-264VAC |
| | Maximum voltage | 300VAC@1 h maximum,unit might not operate in this abnormal condition |
| | Range input voltage(VDC) | 176-280VDC |
| | Frequency(Hz) | 0/50/60 Hz |
| | Displacement factor | ≥0.9 |
| | Power Factor | ≥0.95 @full load, 230Vac |
| | Input Current max | 0.52A Max @full load, 198Vac |
| | Start-up time | ＜0.8S |
| | Switch over time(AC/DC mode) | ＜0.5S |
| | Standby Power | ≤0.5W, @DIM TO OFF, 230Vac |
| | Network Standby Power | ≤0.5W, @DIM TO OFF, 230Vac |
| | THD (Typ.) | ＜10% @230Vac,Full load |
| Dimming | Dimming | YES |
| | Dimming mode | DALI-2（IEC 62386-101,102,207,251,252,253）<br>&Push Dimming (Corridor Function) |
| | Dimming depth | 1% |
| | Dimming current range | 1-100% |
| Protection | Over Load Protection | 105-150% |
| | | YES/Auto Resume |
| | Short circuit Protection | YES/Auto Resume |
| | Over Temperature Protection | YES/Auto Resume |
| capability | Surge capability (L-N) | 1KV |
| | Surge capability (L/N-Ground) | NA |
| Environment | Operating Temperature | -20℃~+45℃ |
| | Humidity | 20%-90%RH |
| | Tc | 85℃ |
| | Storage Temperature | -30℃~+85℃ |
| | Life time | ＞50000h@Tc=85℃,full load |

| | | |
|---|---|---|
| | Ripple & Noise | ≤25dB(A)@20cm |
| Surface | Dimension | 227X38X30(LXWXH)mm |
| | material | PC |
| Standards | Safety | IEC61347- 1, IEC61347-2- 13;EN61347- 1, EN61347-2- 13;EN61347- 1, EN61347-2- 13, EN62384;GB19510. 1, GB19510. 14;AS/NZS 61347- 1, AS/NZS 61347-2- 13 |
| | EMC | EN55015, EN61000-3-2, EN61000-3-3, EN61547;GB/T17743;GB17625. 1;EN 62493 |
| | Energy Efficiency | Erp2.0 EU 2019/2020 |
| | RoHS | RoHS (2011/65/EU) (EU)2015/863 |
| DALI performance | EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2,including part251,252,253) | |
| Note | 1.All parameters NOT specially mentioned are measured at 240VAC input , full load and 25℃ of ambient temperature.<br>2.Ripple & Noise are measured at 20MHz of bandwidth by using a 300mm twisted pair-wire terminated with a 0.1uF & 47 uF parallel capacitor.<br>3.Switch and dimmer are not recommended to connect between this product output and luminaries.<br>4.The DC input for this product is only used for emergency lighting and applies to functional and safety requirements，EMC is not considered. | |

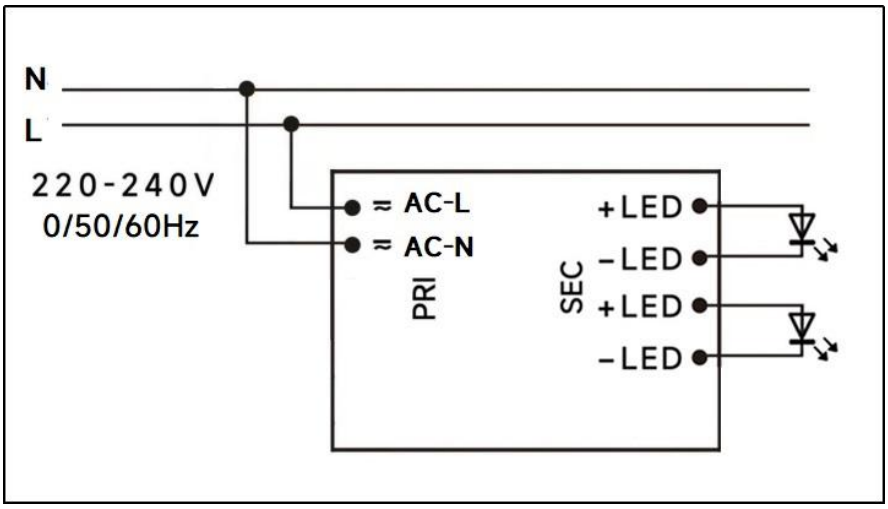
## ◆ Inrush Current

| $I_{peak}$ | $T_{width}$ | B10 | B16 | B20 | C10 | C16 | C20 |
|---|---|---|---|---|---|---|---|
| 31A | **252μs** | 10pcs | 16pcs | 20pcs | 15pcs | 24pcs | 30pcs |

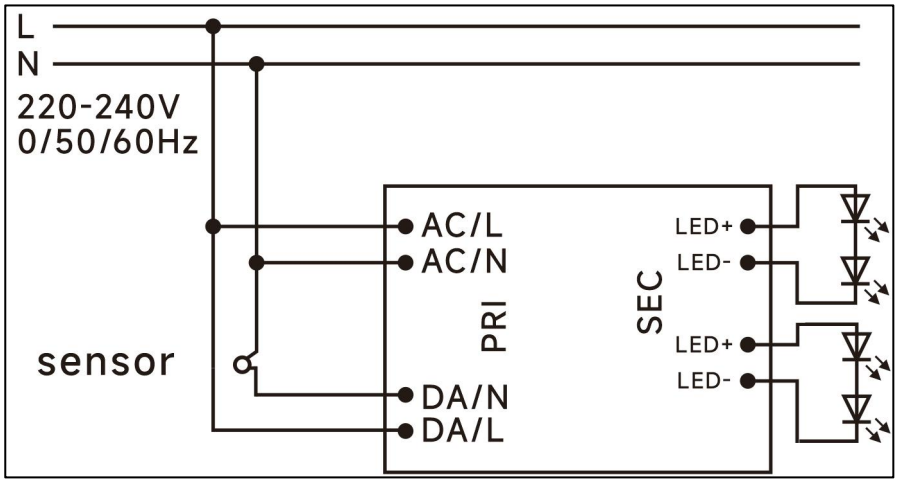



Remarks:
1.The number of drives mounted under different MCBs in the table is the maximum value. Please do not exceed this number during installation.
2.Different brands and models of miniature circuit breakers, the number of drives mounted will be slightly different.

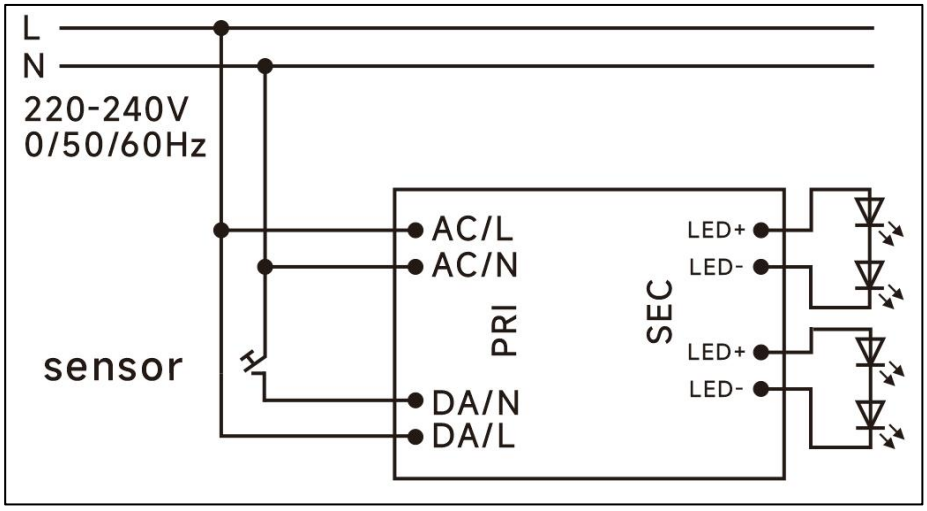
## ◆ Wiring diagram




DALI dimming application

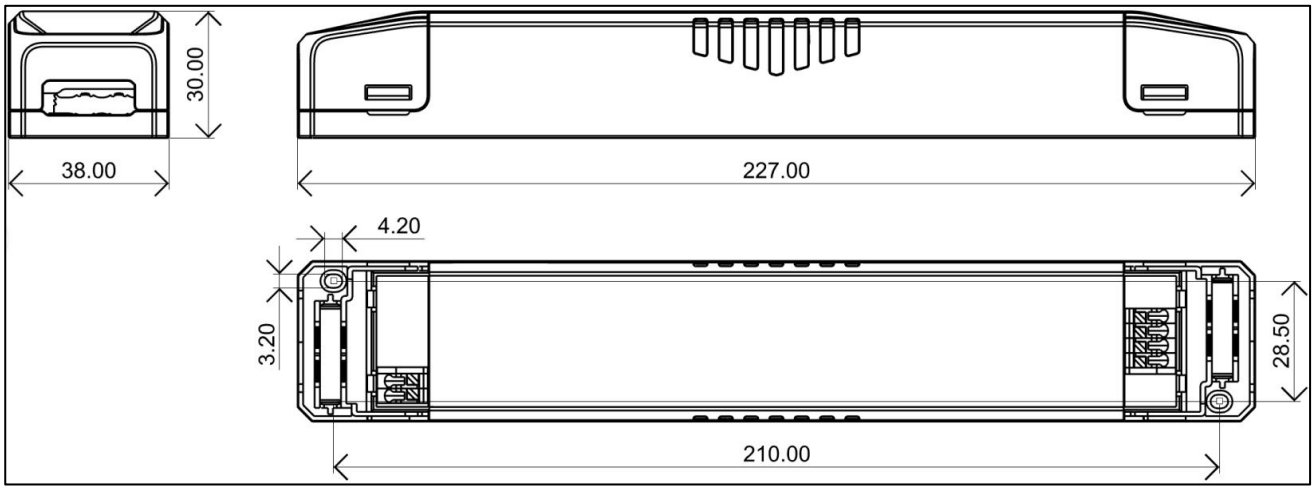



PushDIM dimming application

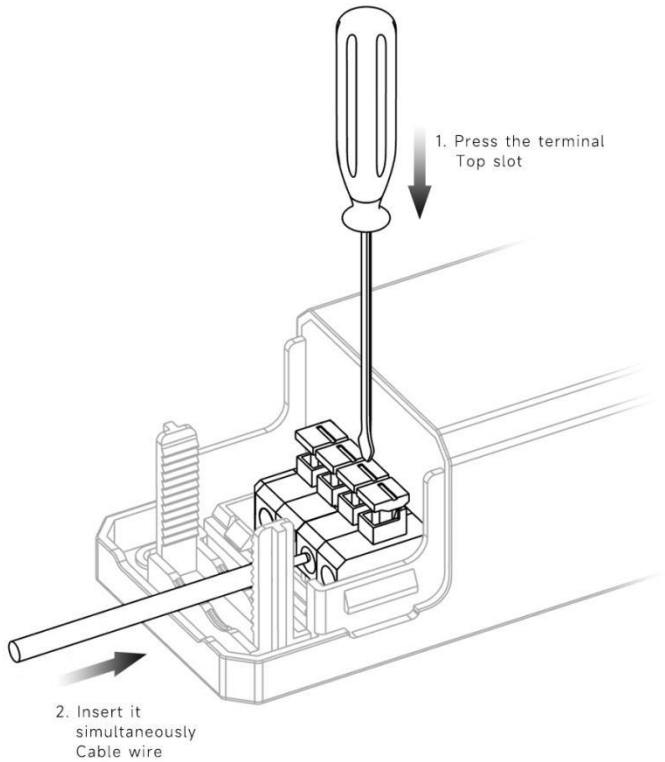



Corridor DIM dimming application

## ◆ 2D diagram




### Terminal

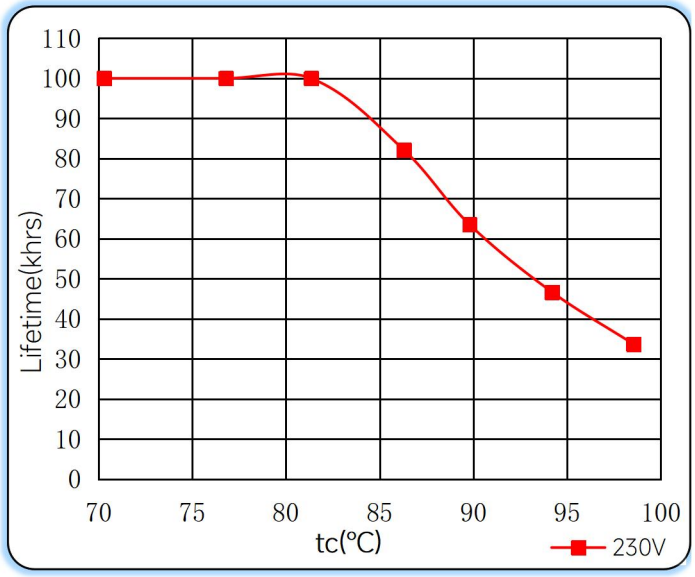


## ◆ Wiring & Connections

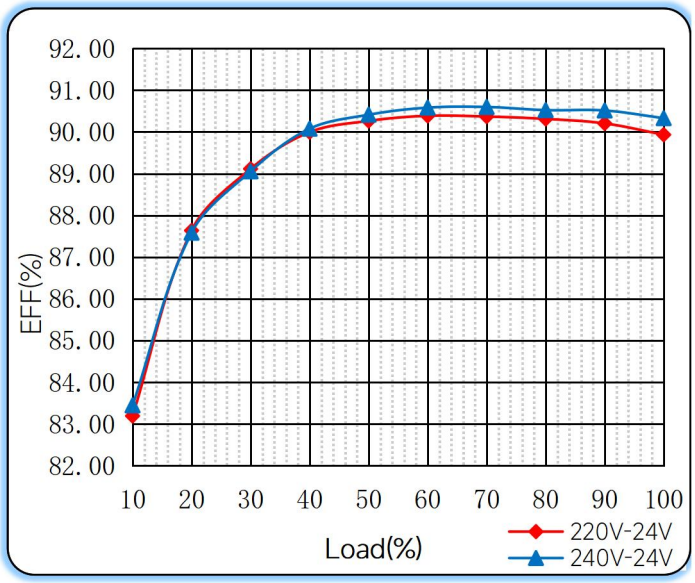
| Specification item | | Value （Unit ） |
|---|---|---|
| Input | Input wire cross-section | 1.0...1.5 $mm^2$ |
| | Input wire gauge. | 16...18 AWG |
| | Input wire strip length | 7...9mm |
| Output | Output wire cross-section | 1.0...1.5 $mm^2$ |
| | Output wire gauge. | 16...18 AWG |
| | Output wire strip length | 7...9mm |

## ◆ Curve for LS-80-24 DALI-2 LI1

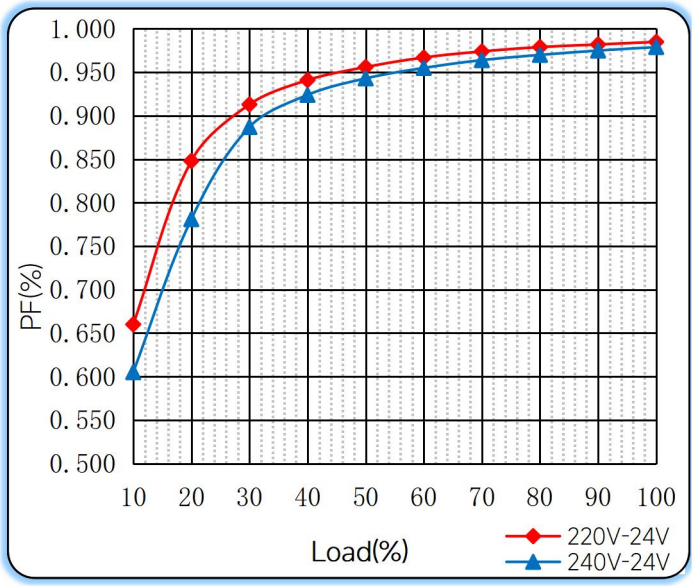
### Lifetime vs. Temperature Curve



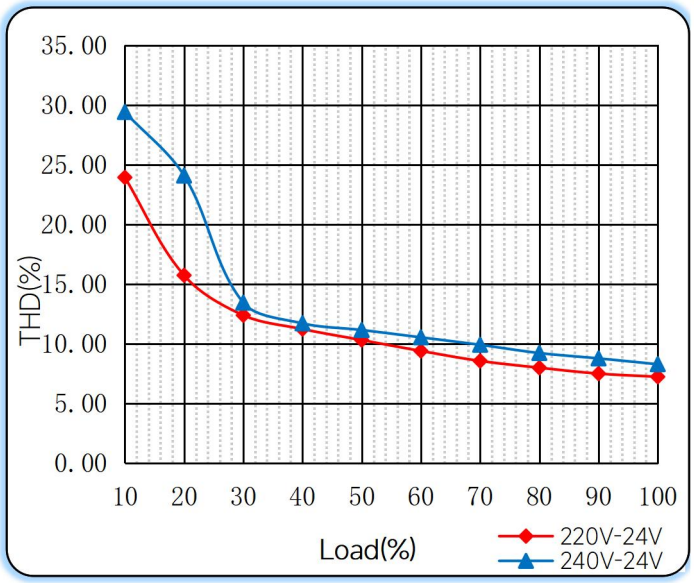

### Efficiency vs. Load




### Power Factor Characteristics




### THD vs. Load



## ◆ Push dimming operation

| Action | Action duration | Function |
|---|---|---|
| Short push | <0.5s | Turn on/off |
| Short push twice | <0.5s | LED on: Save current brightness level<br>LED off: Delete saved level and turn on at 100% brightness |
| Short push five times | <3s | Quit Corridor mode |
| Long push | 0.5-14s | Dimming up or down |
| Long push | 15s-2mins | Sync all LEDs to be 100% brightness |
| Long push | >2mins | Enter Corridor mode - LED keep 100% brightness for 2mins.<br>Then brightness will turn to be 10% within 32s if no action during 2mins<br>100% brightness. |

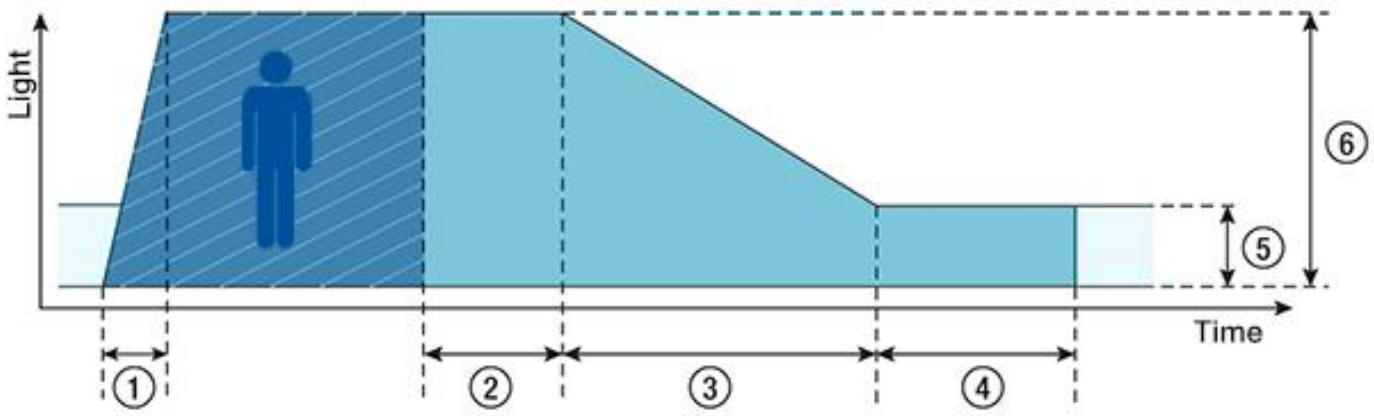
Note:

1.The factory default brightness is at 100%.

2.Up to 30 drivers can perform the PUSH dimming at the same time when utilizing one common push button

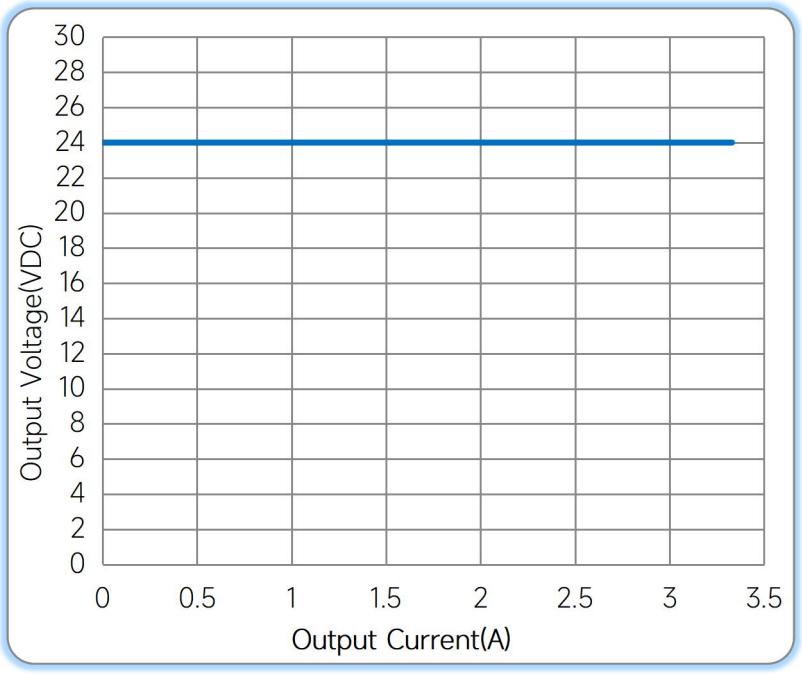
3.The maximum length of the cable from the push button to the last driver is 200 meters.

## ◆ Corridor mode




- ①Fade-in time(0.5s): the time that starts as soon as the presence of a person is detected. During the fade-in time the luminous intensity is faded up to the presence value.
- ②Run-on time(120s): the time that starts as soon as the presence of a person is no longer detected. If the presence of a person is detected again during the run-on time the run-on time is restarted from zero. If no presence is detected during the run-on time the fade time is started as soon as the run-on time expires.
- ③Fade time(32s): the time during which the luminous intensity is faded from the presence value to the absence value.
- ④Switch-off delay (Never Off): the time during which the absence value is held before the lighting is switched off. Depending on the profile selected the switch-off delay may have different values or may not be defined.
- ⑤Absence value(default: 10 %): the luminous intensity when there is no person present.
- ⑥Presence value (default: 100 %): the luminous intensity when persons are present.

## ◆ Operating window




## ◆ Revision Updates

| ITEM | BEFORE | AFTER | VERSION | DATE |
|---|---|---|---|---|
| Initial | | | A | 2023/07/12 |
| update | | | B | 2024/06/19 |

Remark:The final interpretation of the contents of the specification belongs to Eaglerise Electric & Electronic (China) Co., Ltd.

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