

## Product introduction

JISIM JD4215 is a 15W constant current LED intelligent Tunable White dimmable driver specifically designed for built in driver luminaires. it supports Zigbee dimming functions. The customized dimming curve provides a more comfortable viewing experience for the human eye. When not connected to an external signal, it can be used as a non-dimmable driver and supports a gradual start-up effect. It is suitable for LED Track light, LED surface-mounted downlights, LED wall lamps. Paired with various intelligent control systems, it is widely used in smart homes, smart hotels, intelligent commercial spaces, smart offices, smart buildings, and other facilities.

## Product Features

- Compact SELV built in Dimmable Driver
- Support Zigbee dimming
- Ipex external antenna, Glue filling process, Global Certification
- Suitable for Class I / II / III indoor light fixtures
- Smooth dimming, flicker-free, dimming range: 1-100%
- DIP switch for multi-current setting, Max. output power 15W
- Up to 30000 hours life time, 5-Year Warranty (Long-lasting Capacitor)
- Small size and light weight, High power factor, High Efficiency, Low THD
- The housing is made from V0 flame retardant PC materials from CHIMEI
- Standby power consumption <0.5 W, meets ErP energy efficiency certification



## Technical Specifications (All parameters not specially mentioned are measured at 230VAC input, full load and 25°C of ambient temperature)

| Model          | JD4215                       |                                                          |                                               | Features                                              | Output Type                           |                              | Constant Current                                      |                           |          |
|----------------|------------------------------|----------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------|---------------------------------------|------------------------------|-------------------------------------------------------|---------------------------|----------|
| Input          | DC Voltage Range             | 198-264V                                                 |                                               |                                                       | Communication mode                    |                              | Zigbee                                                |                           |          |
|                | AC Voltage Range             | 198-264V                                                 |                                               |                                                       | Output Feature                        |                              | Isolation                                             |                           |          |
|                | Rated Voltage                | 220Vac/230Vac/240Vac                                     |                                               |                                                       | IP Rating                             |                              | IP20                                                  |                           |          |
|                | Input Frequency              | 0/50/60Hz                                                |                                               |                                                       | Insulation Rating                     |                              | Class II (Suitable for class I II III light fixtures) |                           |          |
|                | Input Current                | ≤0.1A/230Vac(at full load)                               |                                               |                                                       | No Load Output Voltage                |                              | ≤59Vdc                                                |                           |          |
|                | Input Power                  | Max.20W                                                  |                                               |                                                       | Output Voltage Range                  |                              | 15-40Vdc                                              |                           |          |
|                | Power Factor                 | PF>0.9C/230Vac(at full load)                             |                                               |                                                       | Output Current Range                  |                              | 150-500mA                                             |                           |          |
|                | THD                          | THD<9%/230Vac(at full load)                              |                                               |                                                       | Output Power Range                    |                              | 2-15W                                                 |                           |          |
|                | Efficiency                   | ≥81%(at full load)                                       |                                               |                                                       | Dimming Range                         |                              | 1~100%                                                |                           |          |
|                | Inrush Current               | Cold start 15A(Test twidth=102us under 50% Ipeak@230Vac) |                                               |                                                       | Ripple Current                        |                              | <5%                                                   |                           |          |
|                | Anti-Surge                   | L-N:1KV                                                  |                                               |                                                       | Current Accuracy                      |                              | ± 5%                                                  |                           |          |
|                | Leakage Current              | <0.5mA/230Vac                                            |                                               |                                                       | PWM Frequency                         |                              | 4000Hz                                                |                           |          |
| Protection     | Overload Protection          | Hiccup Mode (Auto-Recovery after Elimination)            |                                               |                                                       | Environment                           | Working Temperature          |                                                       | ta:-20°C~60°C             |          |
|                | Open Circuit Protection      | ≤59Vdc                                                   |                                               |                                                       |                                       | Working Humidity             |                                                       | 20~95%RH(No Condensation) |          |
|                | Stort Circuit Protection     | Hiccup Mode (Auto-Recovery after Elimination)            |                                               |                                                       |                                       | Storage Temperature/Humidity |                                                       | -20~85°C/10~95%RH         |          |
|                |                              |                                                          |                                               |                                                       |                                       | Case Temperature             |                                                       | tc:90°C                   |          |
| Safety & EMC   | Withstand Voltage            | I/P-O/P: 3750Vac, 5mA,60s                                |                                               |                                                       |                                       |                              |                                                       |                           |          |
|                | Insulation Resistance        | I/P-O/P:100MΩ/500VDC/25°C/70%RH                          |                                               |                                                       |                                       |                              |                                                       |                           |          |
|                | Safety Standards             | CCC                                                      | China                                         | GB19510.1, GB19510.14                                 |                                       |                              |                                                       |                           |          |
|                |                              | CE                                                       | European Union                                | EN61347-1, EN61347-2-13, EN62493                      |                                       |                              |                                                       |                           |          |
|                |                              | KC                                                       | Korea                                         | KC61347-1, KC61347-2-13                               |                                       |                              |                                                       |                           |          |
|                |                              | TUV                                                      | Germany                                       | EN61347-1, EN61347-2-13, EN62493                      |                                       |                              |                                                       |                           |          |
|                |                              | ENEC                                                     | Europe                                        | EN61347-1, EN61347-2-13, EN IEC62384                  |                                       |                              |                                                       |                           |          |
|                |                              | CB                                                       | CB Member States                              | IEC61347-1, IEC61347-2-13                             |                                       |                              |                                                       |                           |          |
|                |                              | RCM                                                      | Australia                                     | AS/NZS61347.1, AS61347.2.13                           |                                       |                              |                                                       |                           |          |
|                |                              | BIS                                                      | India                                         | IS15885(PART2/SEC13)                                  |                                       |                              |                                                       |                           |          |
|                |                              | EAC                                                      | Russia                                        | IEC61347-1, IEC61347-2-13                             |                                       |                              |                                                       |                           |          |
|                | UKCA                         | United Kingdom                                           | BS EN61347-1, BS EN IEC61347-2-13, BS EN62493 |                                                       |                                       |                              |                                                       |                           |          |
|                | EMC Emission                 | CCC                                                      | China                                         | GB/T17743, GB17625.1                                  |                                       |                              |                                                       |                           |          |
|                |                              | CE                                                       | European Union                                | EN IEC55015, EN IEC61000-3-2, EN61000-3-3             |                                       |                              |                                                       |                           |          |
|                |                              | KC                                                       | Korea                                         | KSC9815, KSC9547                                      |                                       |                              |                                                       |                           |          |
|                |                              | RCM                                                      | Australia                                     | EN IEC55015, EN IEC61000-3-2, EN61000-3-3             |                                       |                              |                                                       |                           |          |
|                |                              | UKCA                                                     | United Kingdom                                | BS EN IEC55015, BS EN IEC6100-3-2, BS EN61000-3-3     |                                       |                              |                                                       |                           |          |
|                |                              | EAC                                                      | Russia                                        | IEC62493.IEC61547, EN55015.IEC61000-3-2, IEC61000-3-3 |                                       |                              |                                                       |                           |          |
|                | BIS                          | India                                                    | IS15885(PART2/SEC13)                          |                                                       |                                       |                              |                                                       |                           |          |
|                | EMC Immunity                 | EN61000-4-2,3,4,5,6,8,11,EN61547                         |                                               |                                                       |                                       |                              |                                                       |                           |          |
| ErP            | Power Consumption            | Stanby Power Consumption                                 |                                               | <0.5W (PWM Off)                                       |                                       |                              |                                                       |                           |          |
|                | Flicker/ Stroboscopic Effect | IEEE1789                                                 |                                               | Meet IEEE Std1789-2015                                |                                       |                              |                                                       |                           |          |
|                |                              | CIESVM                                                   |                                               | Pst≤1, SVM≤0.4                                        |                                       |                              |                                                       |                           |          |
|                | DF                           | Phase Factor                                             |                                               | DF≥0.9                                                |                                       |                              |                                                       |                           |          |
| Test Equipment | AC Source                    |                                                          | PS-61005                                      |                                                       | Withstand Voltage Tester              |                              | TH9302D                                               |                           | Other    |
|                | DC Electronic Load           |                                                          | IT8512A+                                      |                                                       | Thermostatic Humidity Chamber         |                              | HT-H-802                                              |                           |          |
|                | Spectrum Analyzer            |                                                          | KH3932                                        |                                                       | Ntelligent Electrical Parameter Meter |                              | PF9800                                                |                           | LED Load |
|                | Surge Generator              |                                                          | SUG61005TB(7.5KV)-2216                        |                                                       | Oscilloscope                          |                              | TBS1102B                                              |                           |          |
|                | Stroboscope                  |                                                          | LANSHU-201B                                   |                                                       | Digital Wattmeter                     |                              | PM2818C                                               |                           |          |

Zigbee Tunable White Dimmable LED Driver

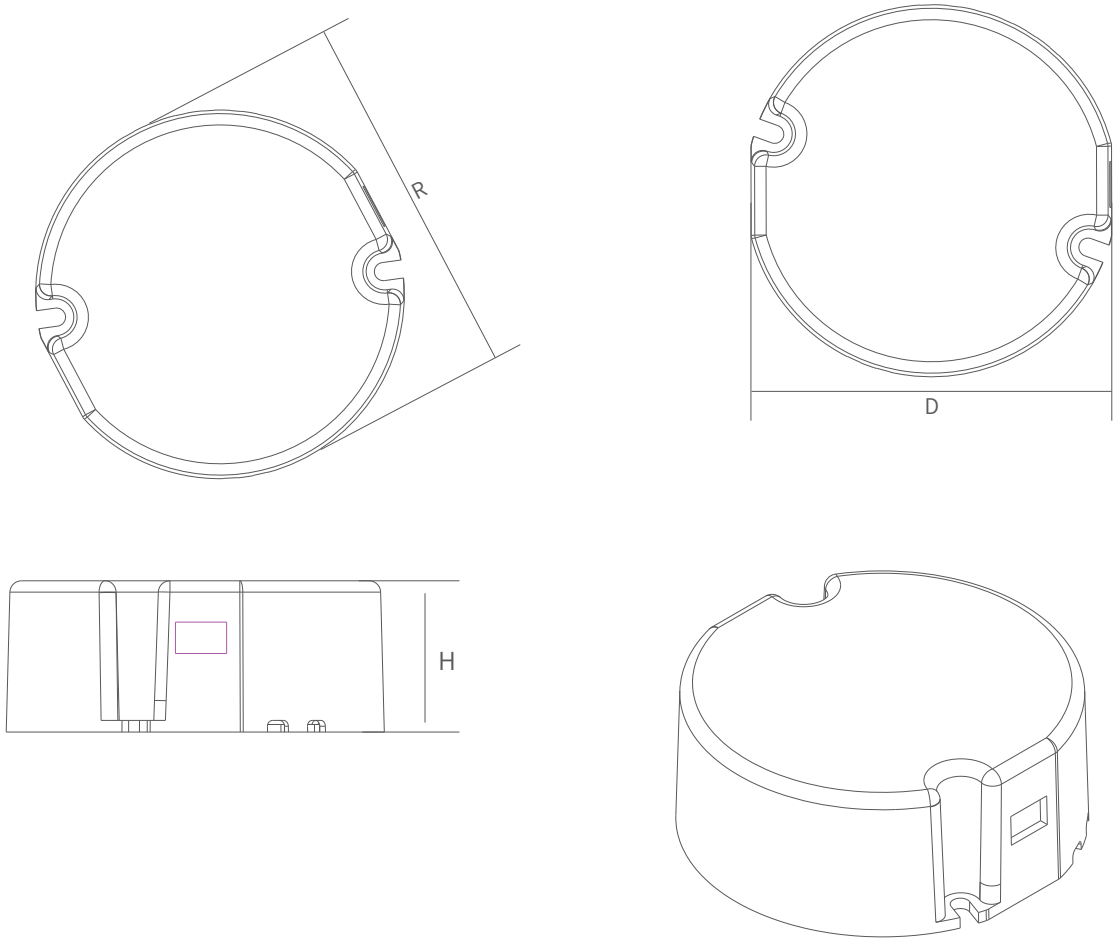
LED Current Settings >>>

| Number | Output          |                  |                                       |              | Switch Position |    |    |
|--------|-----------------|------------------|---------------------------------------|--------------|-----------------|----|----|
|        | Current<br>(mA) | Voltage<br>(VDC) | NO Load<br>Outout<br>Voltage<br>(VDC) | Power<br>(W) | 1               | 2  | 3  |
| * 1    | 150             | 15-40            | 59                                    | 6            | /               | /  | /  |
| 2      | 200             | 15-40            |                                       | 8            | ON              | /  | /  |
| 3      | 250             | 15-40            |                                       | 10           | /               | ON | /  |
| 4      | 300             | 15-40            |                                       | 12           | ON              | ON | /  |
| 5      | 350             | 15-40            |                                       | 14           | /               | /  | ON |
| 6      | 400             | 15-36            |                                       | 14.4         | ON              | /  | ON |
| 7      | 450             | 15-33            |                                       | 14.85        | /               | ON | ON |
| 8      | 500             | 15-30            |                                       | 15           | ON              | ON | ON |

- ◀ \* Factory default.
- ◀ 1. Please disconnect the AC input before adjusting the output current via the DIP switch, If not, it may damage the lighting fixture.
- ◀ 2. No Overload, The output power should be less than or equal to 15W.

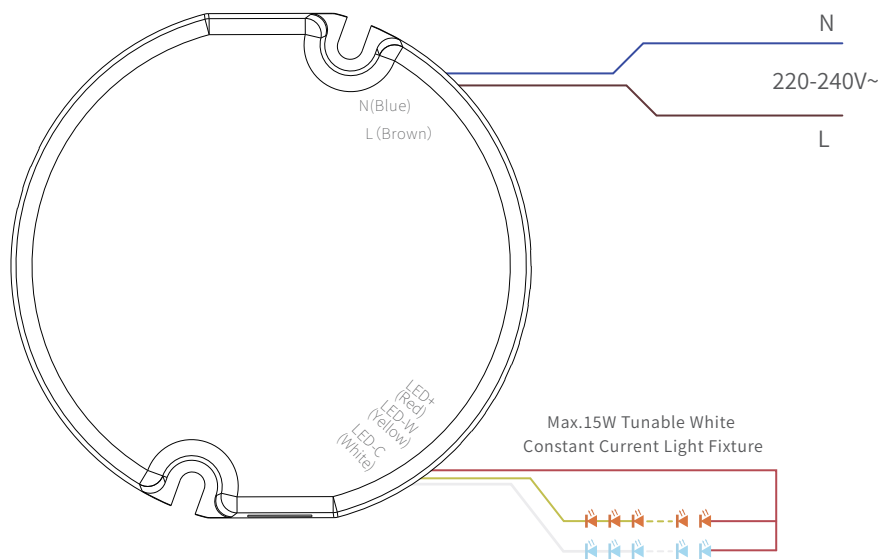
2D Diagram >>>

| Diameter (R) | Width (D) | Heigh(H) | Weight(W) |
|--------------|-----------|----------|-----------|
| 55mm         | 53mm      | 23mm     | 84.6±10g  |



Zigbee Tunable White Dimmable LED Driver

Wiring Diagram



Installation Instructions

| Interface | Marking | Description                                                |
|-----------|---------|------------------------------------------------------------|
| Input     | N       | Input terminal of AC neutral wire                          |
|           | L       | Input terminal of AC live wire                             |
| Output    | LED+    | Positive electrode output of the driver                    |
|           | LED-W   | Negative electrode output of warm light                    |
|           | LED-C   | Negative electrode output of cold light                    |
| Antennae  | ANT     | Do not attach the end of the antenna to the metal material |

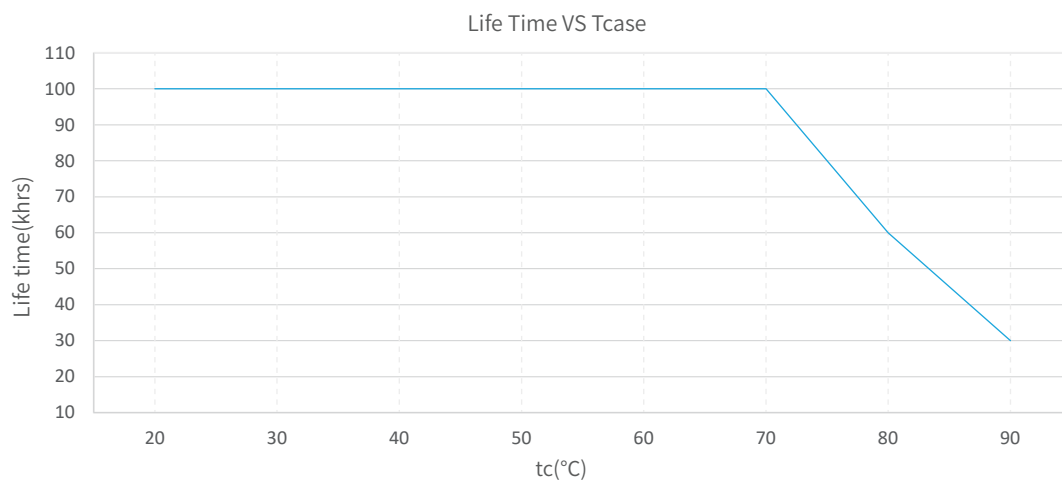
Connection instructions

- 1.Check the color of the interface and cable carefully before wiring.
- 2.All connections must be as short as possible to ensure good EMI performance.
- 3.No secondary switches are allowed.
- 4.The driver output does not support hot swap
- 5.Incorrect wiring can damage the LED.

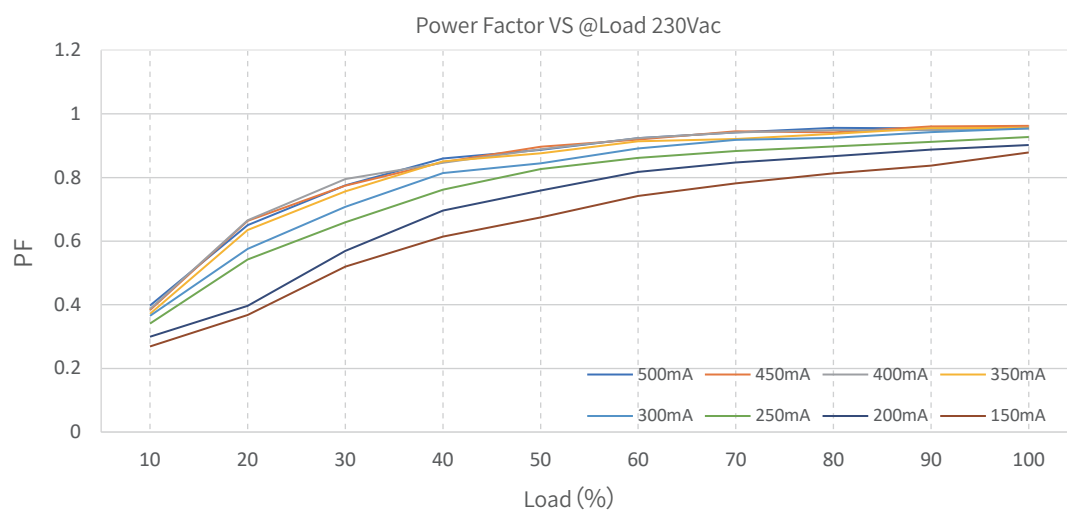
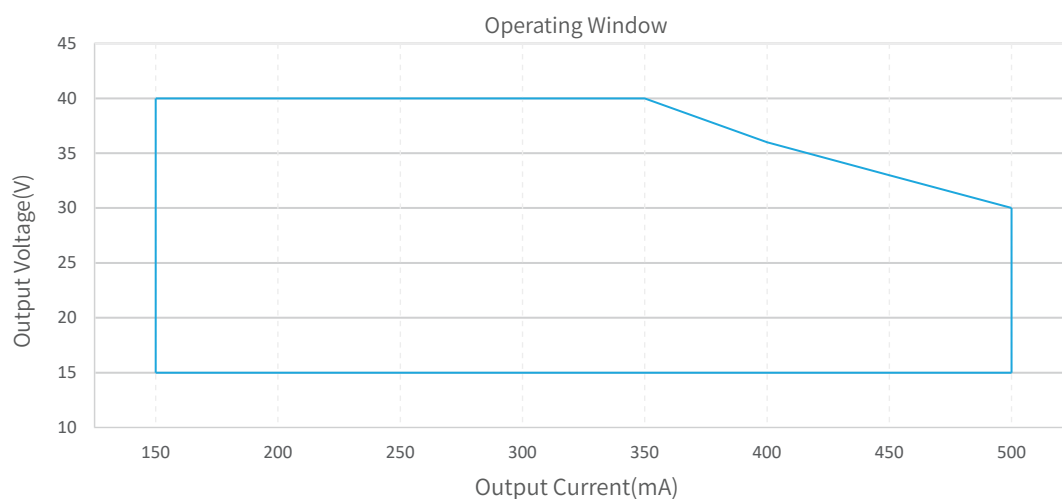
App operation Instructions

- 1.Account Registration
- Download and install the Tuya Smart App on IOS/Android. Once installed, you can proceed with login/registration.
- 2.Adding Devices
- After new users navigate to "My" > "Family Management" > "Create Family" to set up family location and manage room names, they can click on the "My Home" interface to "Add Device". When the device is powered on, the light will enter a breathing state. In the add device list, select "Auto-Discover" to automatically search for devices. The "2Ch Driver TW CC Ipex" can be automatically discovered. Follow the prompts to complete device addition (ensure the device is powered on or reset and in breathing mode,and that a ZigBee gateway has been added).
- 3.Function Settings
- After the device is successfully added, click on it to enter the specific lighting control interface, where you can freely control the device to turn on/off, adjust brightness, adjust color temperature, create groups, set schedules, and access more functions.
- 4.Scenes and Automation
- Based on individual needs, users can customize scenes and automations, with features such as a lighting scenario library, lighting music library, and biorhythmic lighting.
- 5.Resetting Devices
- To reset a device, quickly toggle the power on and off seven times. When the light enters breathing mode, it indicates that the device has been successfully reset and is ready for network configuration.
- 6.Voice Control
- The device supports control via Amazon Alexa, Google Assistant, SmartThings, Yandex Alice, Tmall Genie, Baidu Duer, Xiaomi XiaoAI, XiaoZhi Guanjia, Tencent WeChat Mini Programs, Tencent Dingdang, JD DingDong, and other voice assistants.

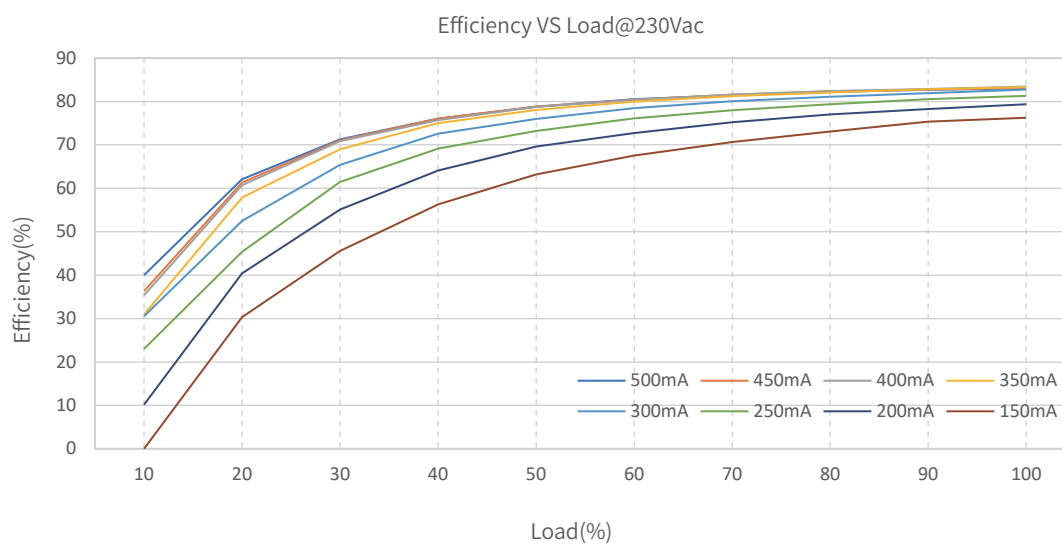
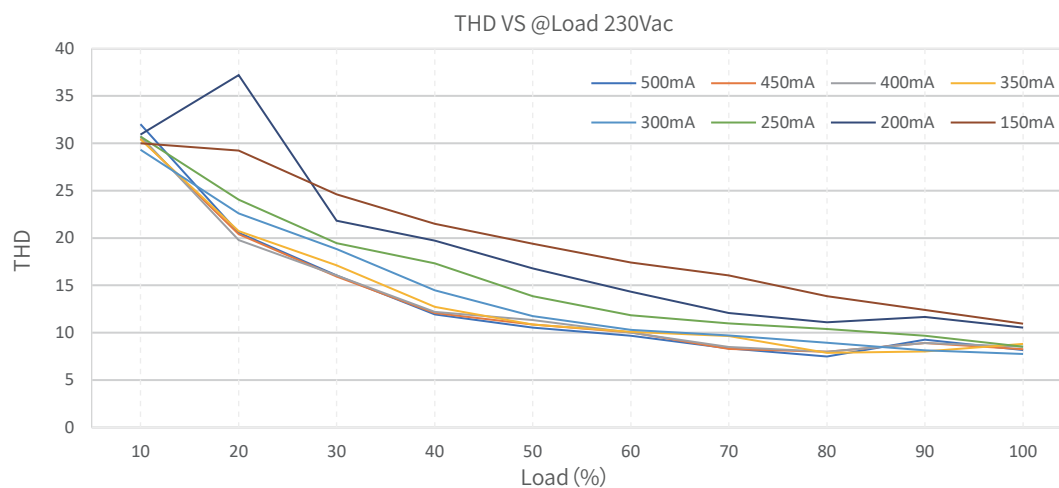
## Product Characteristic Curves



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.



## Zigbee Tunable White Dimmable LED Driver



## Packaging Image



## Zigbee Tunable White Dimmable LED Driver

## Packaging Size

| Packaging Details      | Carton Size       | Packing Units | Weight   |
|------------------------|-------------------|---------------|----------|
| Inner Packaging Box    | 69x65*30.5mm      | 1pcs          | 96.1±10g |
| Small Carton Packaging | 350 x 197 x 167mm | 64pcs         | 6.58kg   |
| Large Carton Packaging | 420 x 360 x 365mm | 256pcs        | 27.21kg  |

## Packaging instructions:

Each large carton packaging contains 4 small carton packagings, Each small carton packaging contains 64 inner packaging boxes.

## Cautions

- ▶ This product is used as a component in conjunction with a lighting fixture. Due to the influence of EMC from the lighting fixture and wiring, customers should perform EMC testing to confirm the entire product set.
- ▶ No operation with power on. Installation and debugging should be performed by qualified professionals. Please read the product manual carefully before installation.
- ▶ This product can be installed inside the luminaire for use, but the internal temperature of the luminaire must be strictly controlled to not exceed 60°C. Exceeding this temperature may adversely affect the service life of the luminaire.
- ▶ This product is not waterproof and should be avoided from direct sunlight and rain. If it is installed outdoors, please use a waterproof case.
- ▶ Good heat dissipation conditions are beneficial to the product's lifetime. Please install the product in a suitable environment, and strictly prohibit using double-sided tape to attach the casing or circuit board.
- ▶ Please check the parameters of the LED driver to ensure they meet the application requirements of the lighting fixture.
- ▶ Please install according to the standard wire gauge specified in the manual to avoid malfunctions caused by inappropriate wiring.
- ▶ Before powering on, please ensure that the wiring is correct to prevent damage to the driver or lighting fixture caused by incorrect wiring.
- ▶ If a malfunction occurs, please do not attempt to repair it yourself; if you have any questions, please contact the manufacturer.
- ▶ The manual is for reference only. Please refer to the actual product. Any changes to this product will not be notified separately.
- ▶ For more information, please send an email to fei.l@jisim-tech.com.

## Warranty Terms

- ▶ The product is warranted for 5 years. (The life and MTBF of the product are for reference only, and do not represent a warranty statement.)
- ▶ During the warranty period, if any quality issues arise, JISIM will provide free repair or replacement services.

## Non-Warranty Terms

The following situations are not covered by the free warranty or replacement service:

- ▶ The warranty period has expired.
- ▶ Damage caused by human factors such as overvoltage, overload, or improper operation.
- ▶ Deformation or damage to the exterior appearance.
- ▶ Damage caused by natural disasters or other irresistible human factors.
- ▶ The warranty label has been torn off or removed.
- ▶ No contract or invoice proof is provided.



## Notice:

1. Repair or replacement provided is the only remedy for customers. JISIM is not liable for any incidental or consequential damage unless it is within the law.
2. JISIM has the right to amend or adjust the terms of this warranty, and release in written form shall prevail.