JD4219

JISIM 仟思盟®

ZigBee Tunable White Dimmable LED Driver

Product introduction

JISIM JD4219 is a 12W constant current LED intelligent dimmable driver specifically designed for small aperture luminaires. It supports Zigbee tunable white 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 small aperture downlights, spotlights, linear lights.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.

works with Tuya

Product Features

- Compact SELV independent dimmable driver
- Support Zigbee tunable white dimming
- Global certification, SELV equivalent
- 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 12W
- Up to 50000 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 230V~50Hz input,full load and 25°C of ambient temperature)

Model	JD4219					
Input	DC Voltage Range	100-240V		Features	Output Type	Constant Current
	AC Voltage Range	100-240V			Communication mode	Zigbee
	Rated Voltage	100Vac/230Vac			Output Feature	Isolation
	Input Frequency	50/60Hz			IP Rating	IP20
	Input Current	⩽0.2A/100Vac(at full load) ⩽0.1A/230Vac(at full load)			Insulation Rating	Class II (Suitable for class I II III light fixtures)
	Input Power	Max.15W		Output	No Load Output Voltage	⩽59Vdc
	Power Factor	PF＞0.95C/100Vac(at full load) PF＞0.9C/230Vac(at full load)			Output Voltage Range	15-40Vdc
	THD	THD<10%/230Vac(at full load)			Output Current Range	150-500mA
	Efficiency	⩾80%(at full load)			Output Power Range	1.35W-12W
	Inrush Current	Cold start 15A(Test twidth=102us under 50% Ipeak@230Vac)			Dimming Range	1~100%
	Anti-Surge	L-N:1KV			Ripple Current	＜5%
	Leakage Current	<0.5mA/230Vac			Current Accuracy	±5%
Protection	Overload Protection	Hiccup Mode (Auto-Recovery after Elimination)			PWM Frequency	4000Hz
	Open Circuit Protection	⩽59Vdc		Environment	Working Temperature	ta:-20°C~45°C
	Stort Circuit Protection	Hiccup Mode (Auto-Recovery after Elimination)			Working Humidity	20~95%RH(No Condensation)
					Storage Temperature/Humidity	-20~85°C/10~95%RH
					Case Temperature	tc:75°C
					Life Time	＞50000h@tc=75°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	

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LED Current Settings

Number	Output				Switch Position		
	Current (mA)	Voltage (VDC)	NO Load Outout Voltage (VDC)	Power (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	15-34		11.9	/	/	ON
6	400	15-30		12	ON	/	ON
7	450	15-27		12	/	ON	ON
8	500	15-24		12	ON	ON	ON

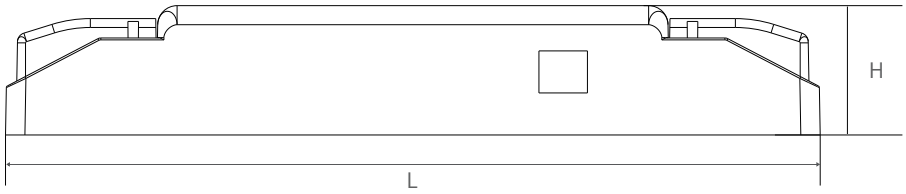
* Factory default.

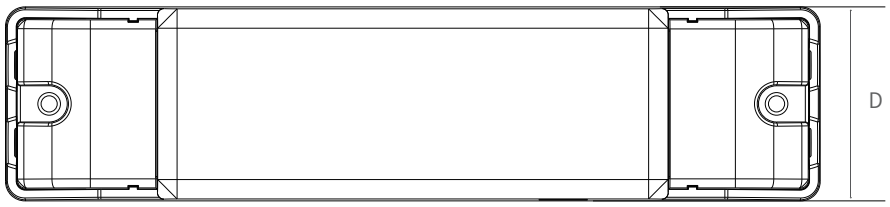
1. Please disconnect the AC input before adjusting the output current via the DIP switch, If not,it may damage the lighting fixture.

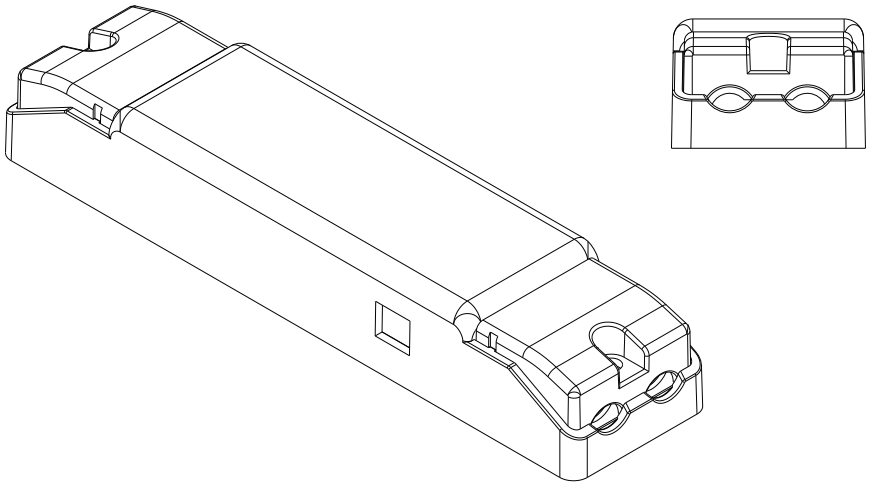
2. No Overload, The output power should be less than or equal to 12W.

2D Diagram

Length (L)	Width (D)	Heigh(H)	Weight(W)
126mm	30mm	20mm	66±10g







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Wiring Diagram

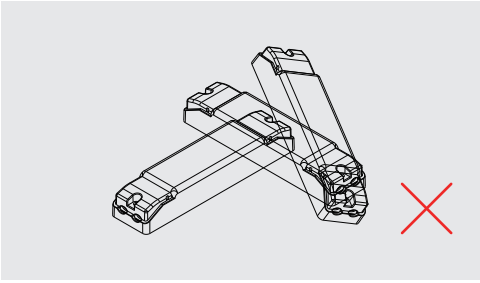
Installation Instructions

Interface	Marking	Description	Wire cross Section	Wire Stripping Length
Input	N	Input terminal of AC neutral wire	0.75...1.5mm² (16-18AWG)	5...6mm
	L	Input terminal of AC live wire	0.75...1.5mm² (16-18AWG)	5...6mm
Output	LED-W	Negative electrode output of warm light	0.5...1.0mm² (17-20AWG)	5...6mm
	LED-C	Negative electrode output of cold light	0.5...1.0mm² (17-20AWG)	5...6mm
	LED+	Positive electrode output of the driver	0.5...1.0mm² (17-20AWG)	5...6mm

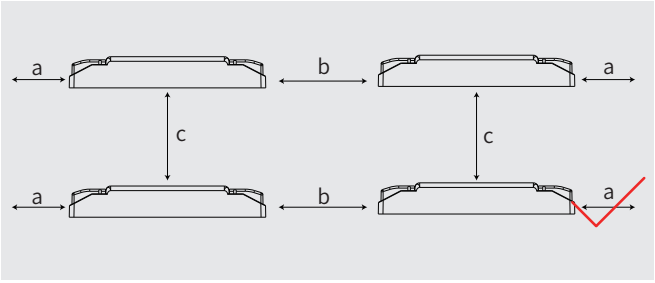
Connection instructions

1.Before connecting the input terminals, adjust the torque of the electric screwdriver to 0.35–0.4 N·m;
before connecting the output terminals, adjust the torque of the electric screwdriver to 0.15–0.2 N·m.
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.
6.The power cable should be kept at a certain distance from the driver and other connecting cables (5-10cm recommended).

Installation Precautions



Do not stack the products. The distance between adjacent products should be more than 5 cm to avoid affecting the heat dissipation and service life of the products.



dimensions for safe installation should be: a>5cm; b>5cm; c>5cm

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 CV" 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, tunable white , 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

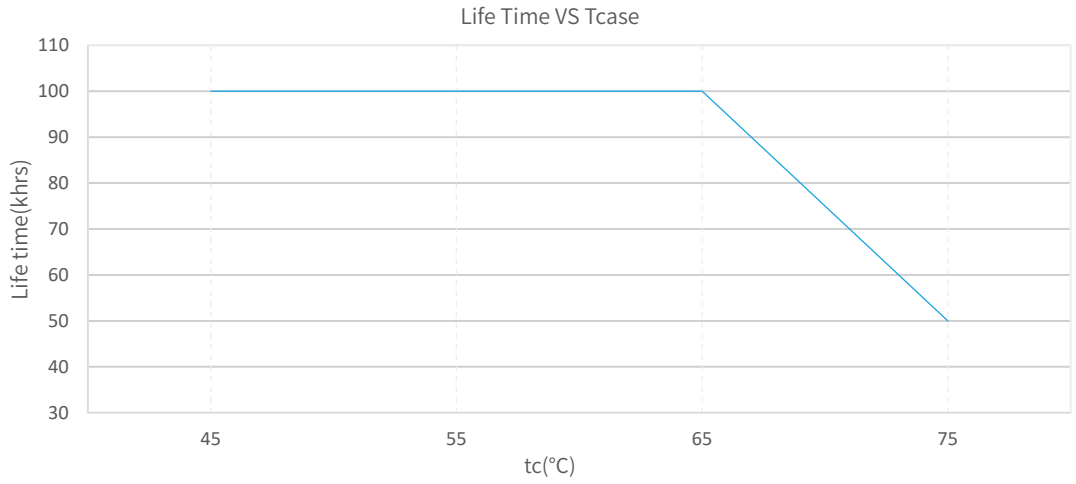
Unnetworked Devices:either quickly power the device on and off 5 times, or press the reset button continuously 5 times. When the light enters the breathing state, it indicates that the device has been reset successfully and entered the network configuration state.

Networked Devices:either quickly power the device on and off 7 times, or press the reset button continuously 7 times. When the light enters the breathing state, it means the device has been reset successfully and entered the network configuration state.

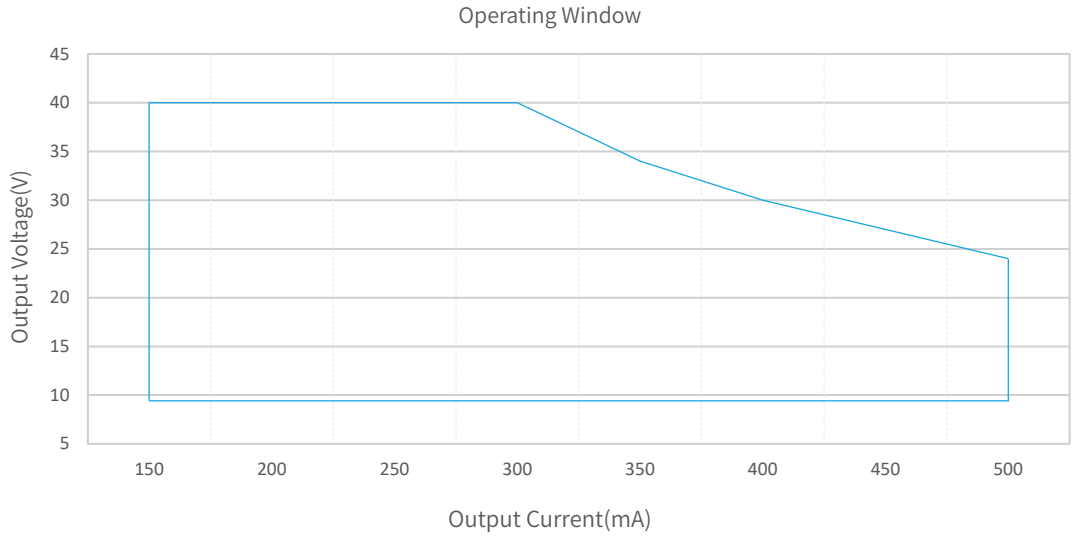
6.Voice Control

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.

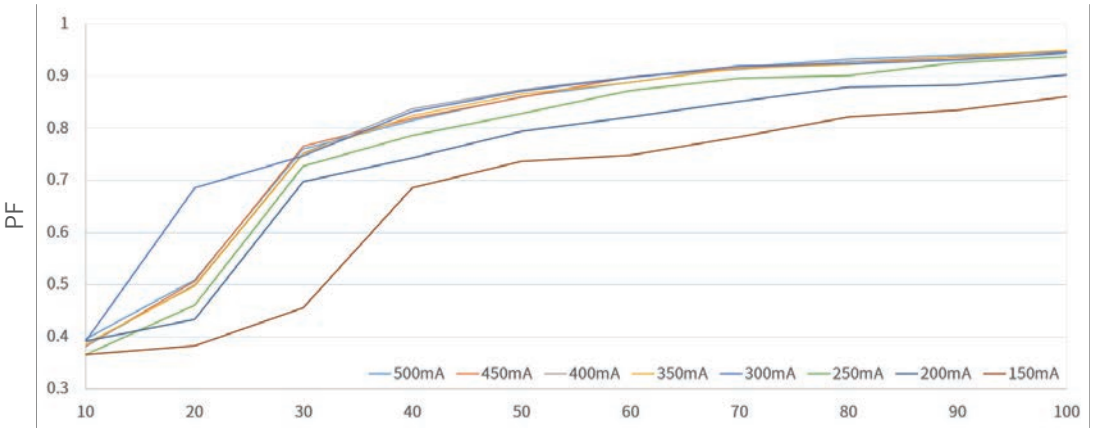
Product Characteristic Curves



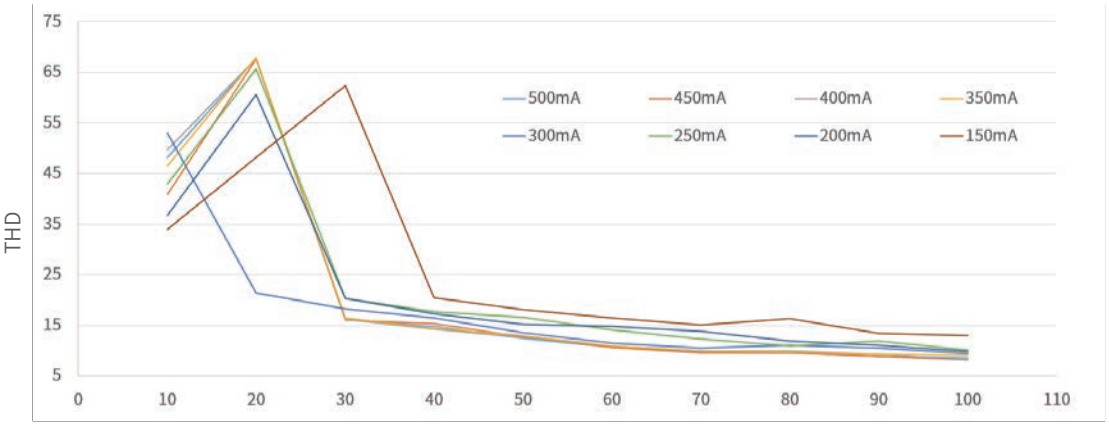
The life-time of the LED driver is shown in the figure above calculated (based on the tc:75°C survival rate).
The relation of tc to ta temperature depends also on the luminaire design.



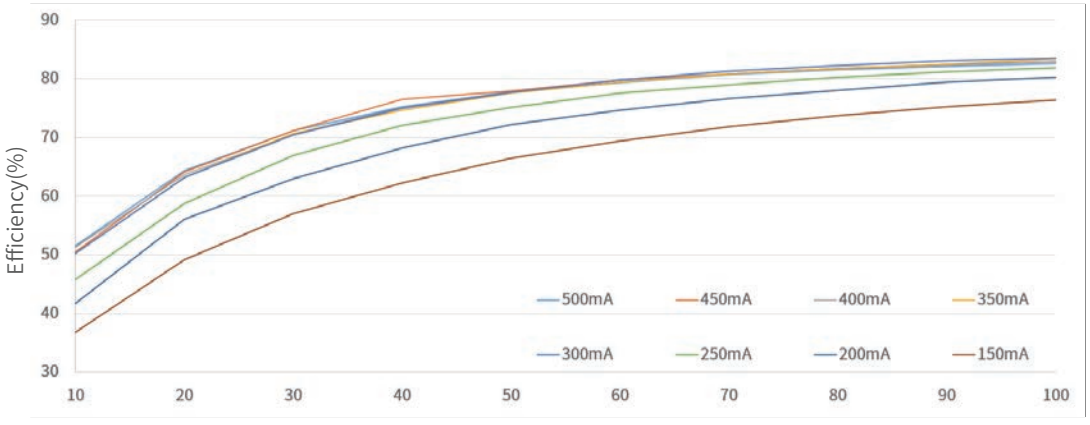
Power Factor VS @Load 230Vac



THD VS @Load 230Vac



Efficiency VS Load@230Vac



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Packaging Image

Inner Packaging Box

Large Carton Packaging

Small Carton Packaging

Packaging Size

Packaging Details	Carton Size	Packing Units	Weight
Inner Packaging Box	140x33x23mm	1pcs	76.8±10g
Small Carton Packaging	350 x 197 x 167mm	80pcs	6.4kg
Large Carton Packaging	420 x 360 x 365mm	320pcs	26.67kg

Packaging instructions:

Each large carton packaging contains 4 small carton packagings,Each small carton packaging contains 80 inner packaging boxes.

Cautions

- This product is used as a componentin 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 carefuly before installation.
- This product can only be used outside the light body, Cannot be used inside of the light,and it must be used with in the specifed working environment.
- This product is not waterproof and should be avoided from direct sunlight and rain. fit 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 ofthis warranty,and release in written form shall prevail.