

Product introduction



JISIM JD5221C is a 40W constant current LED intelligent tunable white dimmable driver specifically designed for small aperture luminaires. It supports Bluetooth 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, LED spotlights and LED 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.

Product Features



- Compact SELV independent Dimmable Driver
- DIP switch for multi-current setting, Max. output power 40W
- Support Bluetooth tunable white dimming
- Up to 50000 hours life time, 5-Year Warranty (Long-lasting Capacitor)
- Global Certification, SELV equivalent
- Small size and light weight, High power factor, High Efficiency, Low THD
- Suitable for Class I / II / III indoor light fixtures
- The housing is made from V0 flame retardant PC materials from CHIMEI
- Smooth dimming, flicker-free, dimming range: 0.1-100%
- Standby power consumption <0.5 W, meets ErP energy efficiency certification



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

Model	JD5221C			Features	Output Type	Constant Current	
Input	DC Voltage Range	100-240V	Communication mode		Bluetooth		
	AC Voltage Range	100-240V	Output Feature		Isolation		
	Rated Voltage	100Vac/230Vac	IP Rating		IP20		
	Input Frequency	50/60Hz	Insulation Rating		Class II (Suitable for class I II III light fixtures)		
	Input Current	≤0.6A/100Vac(at full load) ≤0.25A/230Vac(at full load)	No Load Output Voltage		Max.59V		
	Input Power	Max.46W	Output Voltage Range		15-40Vdc		
	Power Factor	PF>0.95C/100Vac(at full load) PF>0.9C/230Vac(at full load)	Output Current Range		750-1050mA		
	THD	THD<10%/230Vac(at full load)	Output Power Range		10.5-40W		
	Efficiency	≥86%(at full load)	Dimming Range		0.1~100%		
Protection	Inrush Current	Cold start 15A(Test twidth=102us under 50% Ipeak@230Vac)	Output		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~45°C	
	Open Circuit Protection	≤59Vdc			Working Humidity	20~90%RH(No Condensation)	
	Short Circuit Protection	Hiccup Mode (Auto-Recovery after Elimination)			Storage Temperature/Humidity	-40~85°C/5~95%RH	
Safety & EMC	Withstand Voltage	I/P-O/P:3750Vac, 5mA,60s			Case Temperature	tc:90°C	
	Insulation Resistance	I/P-O/P:100MΩ/500VDC/25°C/70%RH			Life Time	>50000h@tc=90°C	
	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)			
	EMC Emission	EAC	Russia	IEC61347-1, IEC61347-2-13			
		UKCA	United Kingdom	BS EN61347-1, BS EN IEC61347-2-13, BS EN62493			
		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 IEC61000-3-2, BS EN61000-3-3			
		EAC	Russia	IEC62493.IEC61547, EN55015.IEC61000-3-2, IEC61000-3-3			
ErP	EMC Immunity	BIS	India	IS15885(PART2/SEC13)			
		EN61000-4-2,3,4,5,6,8,11,EN61547					
		Power Consumption	Standby Power Consumption	<0.5W (PWM Off)			
		Flicker/ Stroboscopic Effect	IEEE1789	Meet IEEE Std1789-2015			
		CIESVM		Pst≤1, SVM≤0.4			
Test Equipment	Test Equipment	DF	Phase Factor	DF≥0.9			
		AC Source	PS-61005	Withstand Voltage Tester	TH9302D	Other	
		DC Electronic Load	IT8512A+	Thermostatic Humidity Chamber	HT-H-802		
		Spectrum Analyzer	KH3932	Intelligent Electrical Parameter Meter	PF9800	LED Load	
		Surge Generator	SUG61005TB(7.5KV)-2216	Oscilloscope	TBS1102B		
		Stroboscope	LANSHU-201B	Digital Wattmeter	PM2818C		

Bluetooth Tunable White Dimmable LED Driver

LED Current Settings

Number	Output				Switch Position		
	Current (mA)	Voltage (VDC)	NO Load Outout Voltage (VDC)	Power (W)	1	2	3
*1	700	15-40	59	28	/	/	/
2	750	15-40		30	ON	/	/
3	800	15-40		32	/	ON	/
4	850	15-40		34	ON	ON	/
5	900	15-40		36	/	/	ON
6	950	15-40		38	ON	/	ON
7	1000	15-40		40	/	ON	ON
8	1050	15-38		40	ON	ON	ON

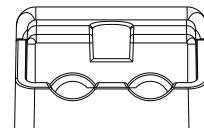
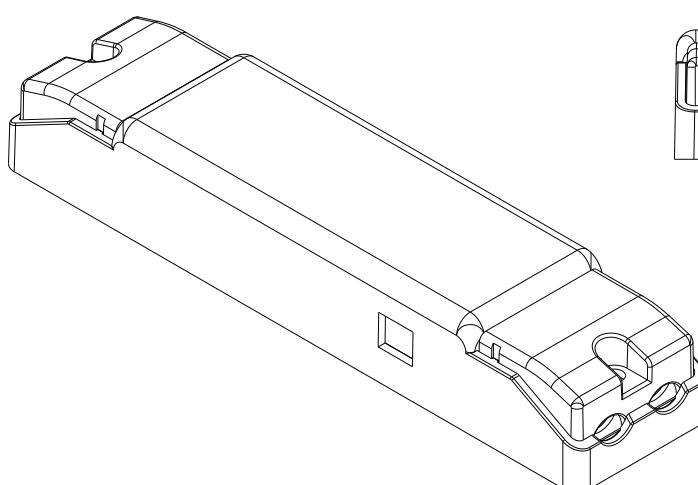
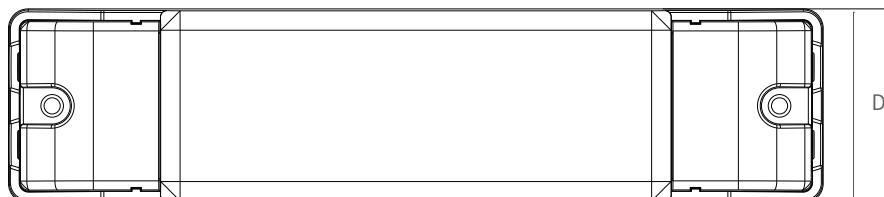
◀ * Factory default.

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 40W.

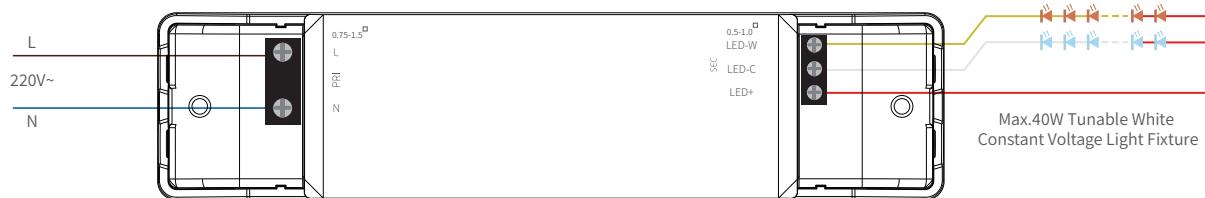
2D Diagram

Length (L)	Width (D)	Heigh(H)	Weight(W)
165mm	42mm	30mm	185.7±10g



Bluetooth Tunable White Dimmable LED Driver

Wiring Diagram



Installation Instructions

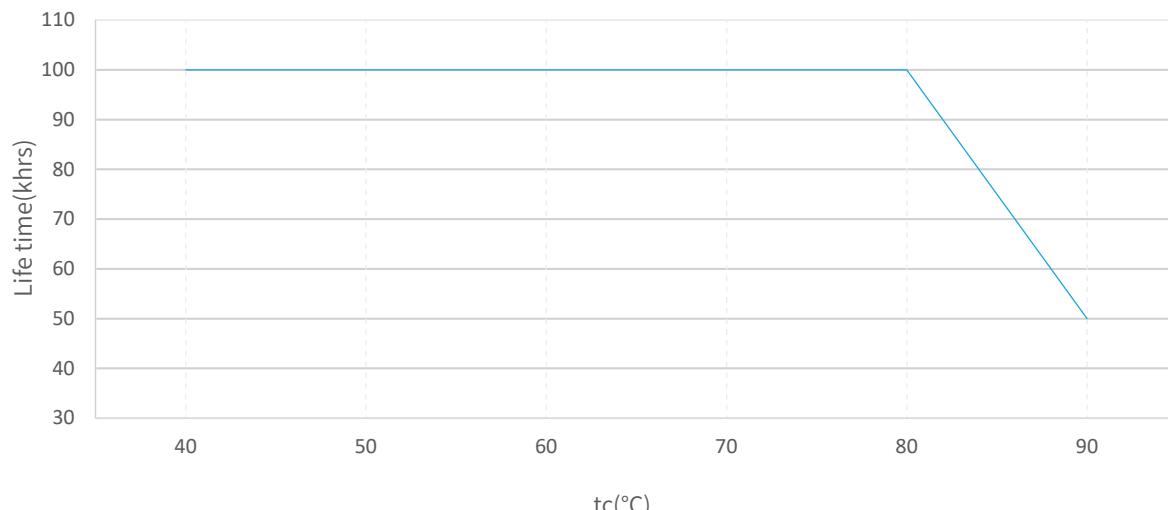
Interface	Marking	Description	Wire cross Section	Wire Stripping Length
Input	L	Input terminal of AC live wire	0.75...1.5mm ² (16-18AWG)	5..6mm
	N	Input terminal of AC neutral wire	0.75...1.5mm ² (16-18AWG)	5..6mm
Output	LED-W	Negative electrode output of warm light	0.5...1.0mm ² (16-20AWG)	5..6mm
	LED-C	Negative electrode output of cold light	0.5...1.0mm ² (16-20AWG)	5..6mm
	LED+	Positive electrode output of the driver	0.5...1.0mm ² (16-20AWG)	5..6mm

Connection instructions

- 1.Rated torque: M2.6,0.35~0.40N.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)

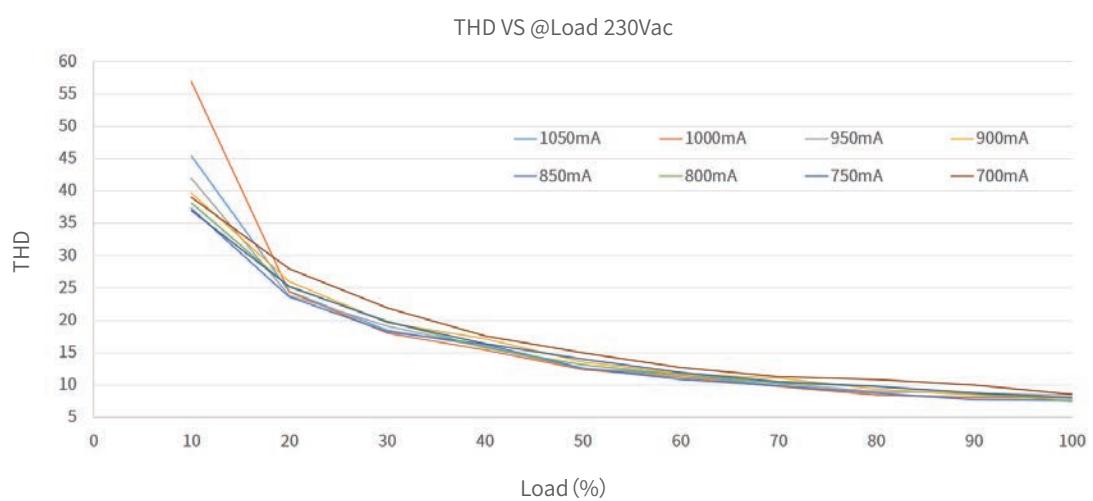
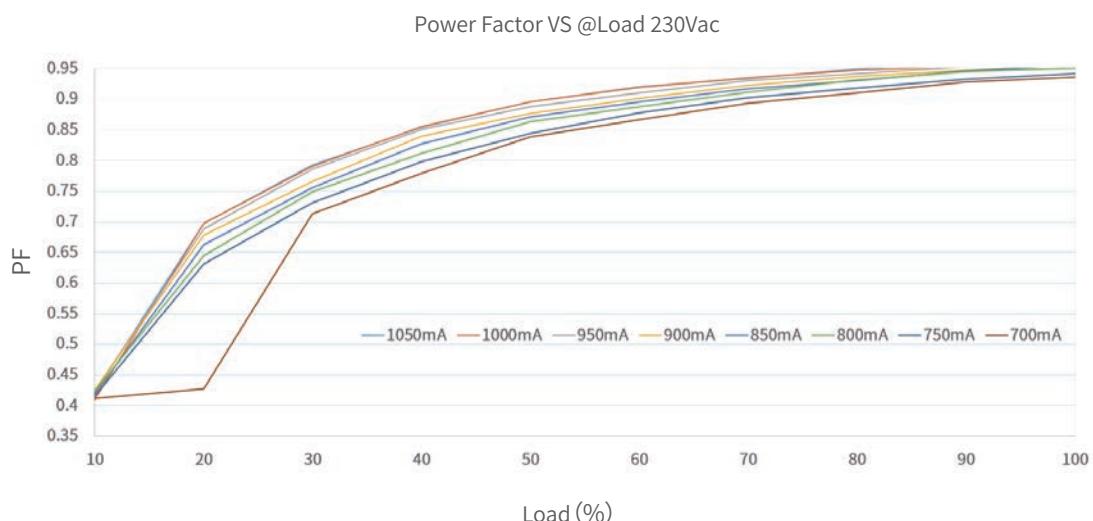
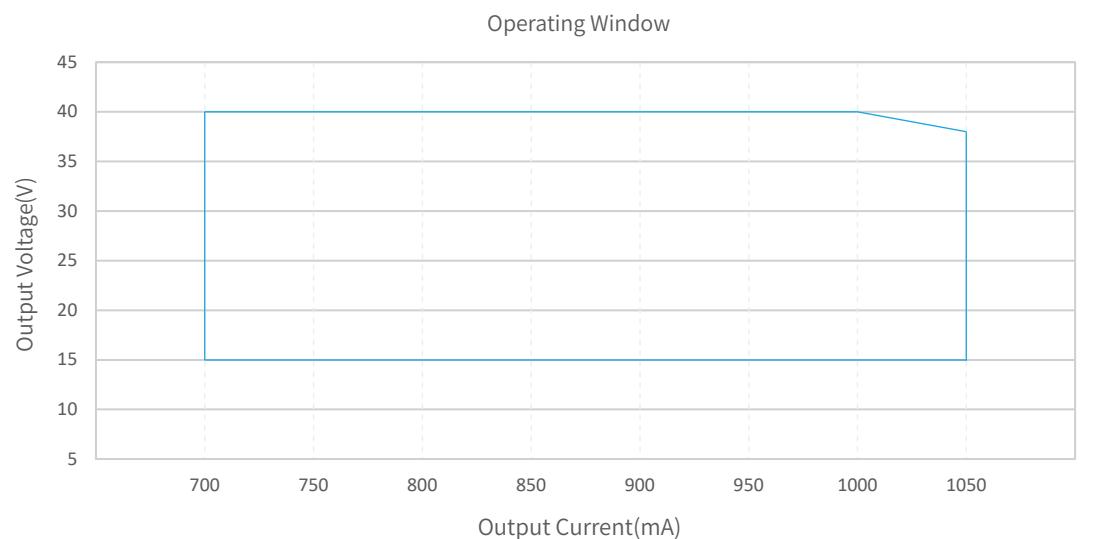
Product Characteristic Curves

Life Time VS Tcase

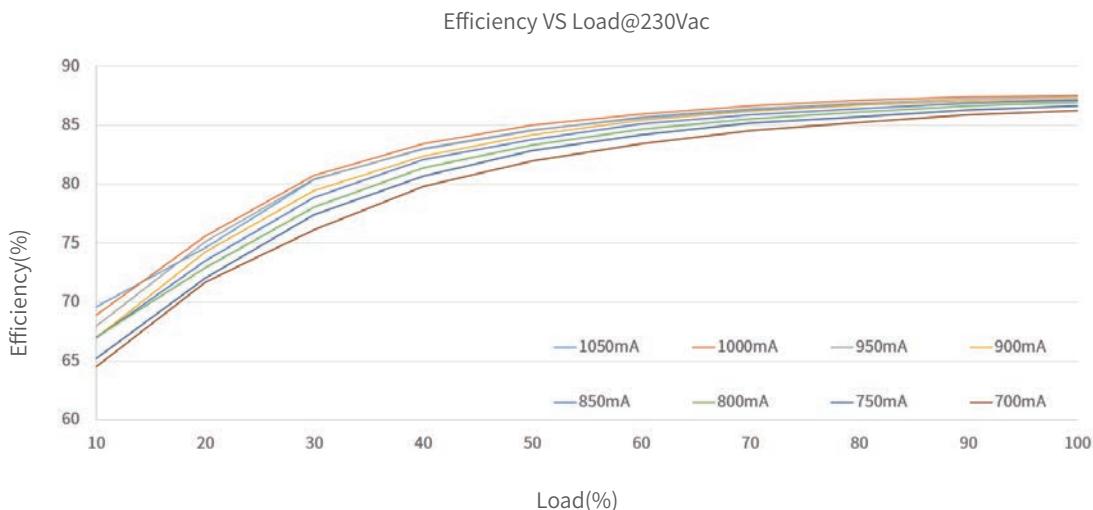


The life-time of the LED driver is shown in the figure above calculated (based on the 90% survival rate). The relation of tc to ta temperature depends also on the luminaire design.

Bluetooth Tunable White Dimmable LED Driver



Bluetooth Tunable White Dimmable LED Driver



Packaging Image



Packaging Size

Packaging Details	Carton Size	Packing Units	Weight
Inner Packaging Box	168x47x34mm	1pcs	202±10g
Small Carton Packaging	350 x 197 x 167mm	30pcs	6.36kg
Large Carton Packaging	420 x 360 x 365mm	120pcs	26.3kg

Packaging instructions:

Each large carton packaging contains 4 small carton packagings, Each small carton packaging contains 30 inner packaging boxes.

Bluetooth Tunable White Dimmable LED Driver

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 only be used outside the light body. Cannot be used inside the light, and it must be used within the specified working environment.
- 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 the written form shall prevail.