

Bluetooth Tunable White Dimmable LED Driver 🖔 @ 🚳 CB C E SELV ErP RoHS

Product introduction

JISIM JD5220A is a 20W constant current LED intelligent tunable white dimmable driver specifically designed $for small\ aperture\ luminaires.\ lt\ supports\ Blue tooth\ dimming\ functions. The\ customized\ dimming\ curve$ 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.

Product Features

- Compact SELV independent Dimmable Driver
- Support Bluetooth tunable white dimming
- Global Certification, SELV equivalent
- Suitable for Class I/ II / III indoor light fixtures

- DIP switch for multi-current setting, Max. output power 20W
- Up to 50000 hours life time,5-Year Warranty(Long-lasting Capacitor)
- $\bullet\,$ Small size and light weight, High power factor, High Efficiency, Low THD
- 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







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

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Do Voltage Range 100-240V Part	Model	JD5220A				Output Type	Constant Curre	nt		
Razied Voltage	Input	DC Voltage Range	DC Voltage Range 100-240V			Features	Communication mode	Bluetooth		
Rated Voltage		AC Voltage Range	100-240V				Output Feature	Isolation		
Input Protection		Rated Voltage	120Vac/230Vac				IP Rating	IP20		
Input Power Max.249V Power Factor Prob. 05C/100Vaccjar full load) Prob. 05C/1200Vaccjar full load) Prob. 0		Input Frequency	50/60Hz			1	Insulation Rating	Class II (Suitable	for class I II III light fixtures)	
Protection		Input Current	≤0.25A/100Vac(at full load) ≤0.12A/230Vac(at full load)				No Load Output Voltage	Max.59V		
PowerFactor		Input Power	Max.24W				Output Voltage Range	15-40Vdc		
Efficiency \$383%fact full load Innsh Current Cold start 15A(Test knidth=102us under 50% lpeak@230Vac) Innsh Current Cold start 15A(Test knidth=102us under 50% lpeak@230Vac) Innsh Current Cold start 15A(Test knidth=102us under 50% lpeak@230Vac) Innsh Current Cold start 15A(Test knidth=102us under 50% lpeak@230Vac) Innsh Current Accuracy ±5% Cu		Power Factor	PF>0.95C/100Vac(at full load) PF>0.9C/230Vac(at full load)				Output Current Range	350-700mA	350-700mA	
Innash Current		THD	THD<10%/230Vac(at full load)			1	Output Power Range	5-20W		
Anti-Surge		Efficiency	≥83%(at full load)			Output	Dimming Range	0.1~100%		
Leakage Current		Inrush Current	Cold start 15A(Test twidth=102us under 50% Ipeak@230Vac)				Ripple Current	<5%		
Protection Protection Protection Open Circuit Open		Anti-Surge	L-N:1KV				Current Accuracy	±5%		
Protection		Leakage Current	<0.5mA/230Vac				PWM Frequency	4000Hz		
Protection			Hiccup Mod	le (Auto-Recovery af	ter Flimination)		Working Temperature	ta:-20°C~45°C		
Protection Protection Protection Substitution Protection Hiccup Mode (Auto-Recovery after Elimination) Life Time Substitution Life Time Life Tim			The state of the s			Environment	Working Humidity	20~90%RH(No	Condensation)	
Stort Circuit Prioccuit Hiccup Mode (Auto-Recovery after Elimination) Case Temperature tc.75°C	Protection		≤59Vdc				Storage Temperature/Hum	idity -40~85°C/5~95	%RH	
Protection							Case Temperature	tc:75°C		
Insulation Resistance			Hiccup Mod	le (Auto-Recovery af	ter Elimination)		Life Time	>50000h@tc=	75°C	
CCC		Withstand Voltage	I/P-O/P:3750Vac,5mA,60s							
CE		Insulation Resistance	I/P-O/P:100	MΩ/500VDC/25°C/7	0%RH					
KC Korea KC61347-1, KC61347-2-13 K61347-2-13 K6										
TUV Germany EN61347-1, EN61347-2-13, EN62493			CE	European Union	EN61347-1, EN61347-2-13, EN62493					
Safety Standards		Safety Standards	KC	Korea	KC61347-1, KC61347-2-13					
CB			TUV	Germany	EN61347-1, EN61347-2-13, EN62493					
CB			ENEC	Europe	EN61347-1, EN61347-2-13, EN IEC62384					
BIS			СВ	CB Member States	IEC61347-1, IEC61347-2-13					
EAC			RCM	Australia	AS/NZS61347.1, AS61347.2.13					
BS ENG1347-1, BS EN IEC61347-2-13, BS EN62493			BIS	India	IS15885(PART2/SEC13)					
EMC CCC			EAC	Russia	IEC61347-1, IEC61347-2-13					
CCC			UKCA	United Kingdom	BS EN61347-1, BS EN IEC61347-2-13, BS EN62493					
KC Korea KSC9815, KSC9547	LIVIC	EMC Emission	CCC	China	GB/T17743, GB17625.1					
EMC Emission			CE	European Union	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 BIS India IS15885(PART2/SEC13) EMC Immunity EN61000-4-2,3,4,5,6,8,11,EN61547 Power Consumption Stanby Power Consumption <0.5W (PWM Off) Flicker/ Stroboscopic Effect CIESVM Pst≤1, SVM≤0.4 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 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load			KC	Korea	KSC9815, KSC9547					
EAC Russia IEC62493.IEC61547, EN55015.IEC61000-3-2, IEC61000-3-3 BIS			RCM	Australia	EN IEC55015, EN IEC61000-3-2, EN61000-3-3					
BIS India IS15885(PART2/SEC13) EMC Immunity EN61000-4-2,3,4,5,6,8,11,EN61547 Power Consumption Stanby Power Consumption <0.5W (PWM Off) Flicker/ Stroboscopic Effect DF Phase Factor DF>0.9 AC Source PS-61005 Withstand Voltage Tester TH9302D Other Test Equipment Spectrum Analyzer KH3932 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load			UKCA	United Kingdom	BS EN IEC55015, BS EN IEC6100-3-2, BS EN61000-3-3					
EMC Immunity EN61000-4-2,3,4,5,6,8,11,EN61547 Power Consumption Stanby Power Consumption <0.5W (PWM Off) Flicker/ Stroboscopic Effect CIESVM Pst≤1, SVM≤0.4 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 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load			EAC	Russia	IEC62493.IEC61547, EN55015.IEC61000-3-2, IEC61000-3-3					
Power Consumption Stanby Power Consumption <0.5W (PWM Off)										
ErP Flicker/ Stroboscopic Effect IEEE1789 Meet IEEE Std1789-2015 DF CIESVM Pst≤1, SVM≤0.4 DF Phase Factor DF≥0.9 AC Source PS-61005 Withstand Voltage Tester TH9302D DC Electronic Load IT8512A+ Thermostatic Humidity Chamber HT-H-802 Spectrum Analyzer KH3932 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load		-	EN61000-4-	2,3,4,5,6,8,11,EN615	47					
ErP Stroboscopic Effect CIESVM Pst≤1, SVM≤0.4 DF Phase Factor DF≥0.9 AC Source PS-61005 Withstand Voltage Tester TH9302D DC Electronic Load IT8512A+ Thermostatic Humidity Chamber HT-H-802 Spectrum Analyzer KH3932 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load		Power Consumption	Stanby Power Consumption		<0.5W (PWM Off)					
DF	FrP		IEEE1789							
AC Source PS-61005 Withstand Voltage Tester TH9302D Other Test Equipment Spectrum Analyzer KH3932 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load										
Test Equipment DC Electronic Load IT8512A+ Thermostatic Humidity Chamber HT-H-802 Spectrum Analyzer KH3932 Ntelligent Electrical Parameter Meter PF9800 Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load		DF	Phase Factor		DF≥0.9					
Test Equipment DC Electronic Load IT8512A+ Thermostatic Humidity Chamber HT-H-802	Test Equipment		AC Source		PS-61005	Withstand Vo	ltage Tester	TH9302D	– Other	
Surge Generator SUG61005TB(7.5KV)-2216 Oscilloscope TBS1102B LED Load			DC Electronic Load		IT8512A+	Thermostation	: Humidity Chamber	HT-H-802		
			Spectrum Analyzer		KH3932	Ntelligent Ele	ectrical Parameter Meter	PF9800		
Stroboscope LANSHU-201B Digital Wattmeter PM2818C			Surge Generator		SUG61005TB(7.5KV)-2216	Oscilloscope		TBS1102B	LED Load	
				e	LANSHU-201B	Digital Wattn	neter	PM2818C		

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LED Current Settings

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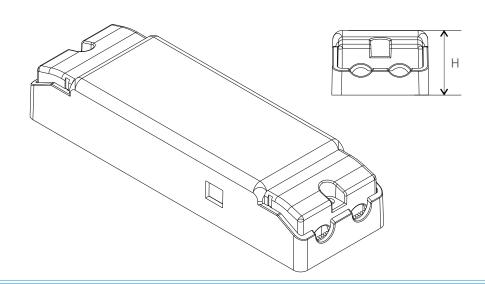
	Output				Switch Position		
Number	Current	Voltage (VDC)	NO Load Outout Voltage (VDC)	Power	1	2	3
	(mA)			(W)			
*1	350	15-40		14	/	/	/
2	400	15-40		16	ON	/	/
3	450	15-40	 	18	/	ON	/
4	500	15-40	59	20	ON	ON	/
5	550	15-36	29	19.8	/	/	ON
6	600	15-33		19.8	ON	/	ON
7	650	15-30		19.5	/	ON	ON
8	700	15-28		19.6	ON	ON	ON

- ★ * Factory default.
 - 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 20W.

2D Diagram









Wiring Diagram





Installation Instructions

Interface	Marking Description		Wire cross Section	Wire Stripping Length
Input	L	Input terminal of AC live wire	0.751.5mm² (16-18AWG)	56mm
	N	Input terminal of AC neutral wire	0.751.5mm² (16-18AWG)	56mm
Output	LED-W	Negative electrode output of warm light	0.51.0mm² (16-20AWG)	56mm
	LED-C	Negative electrode output of cold light	0.51.0mm² (16-20AWG)	56mm
	LED+	Positive electrode output of the driver	0.51.0mm ² (16-20AWG)	56mm ¦

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. Driver output support hot swap.
- 4.Incorrect wiring can damage the LED.
- 5. The power cable should be kept at a certain distance from the driver and other connecting cables (5-10cm recommended) and the power cable should be kept at a certain distance from the driver and other connecting cables (5-10cm recommended) and the power cable should be kept at a certain distance from the driver and other connecting cables (5-10cm recommended) and the power cables (5-10cm recommended) are cables (5-10cm recommended). The power cables (5-10cm recommended) are cables (5-10cm recommended) and the power cables (5-10cm recommended) are cables (5-10cm recommended). The power cables (5-10cm recommended) are cables (5-10cm recommended) and the power cables (5-10cm recommended) are cables (5-10cm recommended). The power cables (5-10cm recommended) are cables (5-10cm recommended) are cables (5-10cm recommended). The power cables (5-10cm recommended) are cables (5-10cm recommended) and cables (5-10cm recommended) are cables (5-10cm recommended). The power cables (5-10cm recommended) are cables (5-10cm recommended) are cables (5-10cm recommended). The cables (5-10cm recommended) are cables (5-10cm recommended) are cables (5-10cm recommended). The cables (5-10cm recommended) are

App operation Instructions

1.Account Registration

Download and install the Mi Home App via HarmonyOS/IOS/Android. Once installed, you can proceed with login/registration.

2.Adding Devices

After creating a family in "My" - "Family Management" - "Create Family" as a new user, manage the family location and naming of rooms within the family. Tap the "Mi Home" interface to "Add Devices". Select "Auto Discover" in the device addition list to automatically search for devices. The Devices can be automatically discovered. Follow the prompts to complete device addition (ensure that already added devices are powered on or reset with the light in breathing mode. For remote control, a Bluetooth gateway should be paired).

3. Function Settings

After successfully adding the device, tap the device to enter the specific light control interface, where you can freely control the device's on/off status, lighting level, color temperature, grouping, scene timing, and more features.

4. Scenes and Automation

Users can customize scenes and automation based on their needs, with features such as lighting scene libraries and circadian rhythm lighting.

5.Resetting the Device

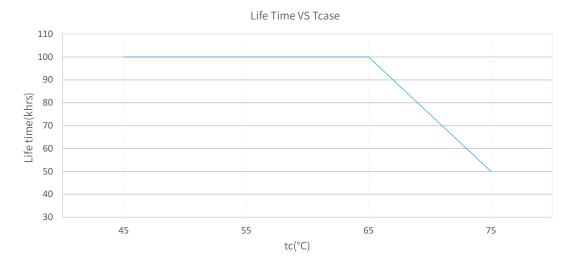
Turn the power switch on and off consecutively 8 times, After the 9th power-on, the lamp will breathe bright to dark 5 times, indicating successful resetting. The lamp defaults to neutral light at 100%, signifying that the device has been successfully reset and entered the network configuration state.

6.Voice Control

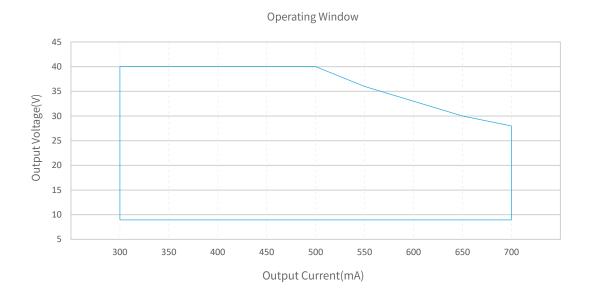
The device supports voice control within the Mi Home ecosystem.



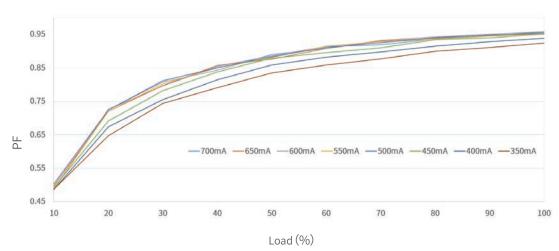
Product Characteristic Curves



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

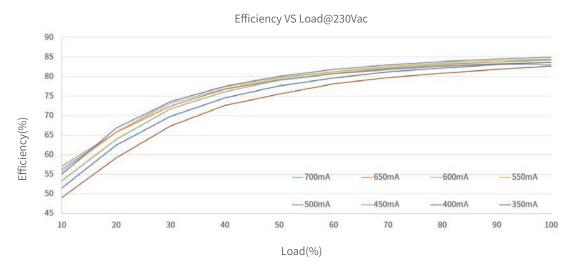


Power Factor VS @Load 230Vac









Packaging Image >>>>





Packaging Size

Packaging Details	Carton Size	Packing Units	Weight
Inner Packaging Box	124x41x30mm	lpcs	119±10g
Small Carton Packaging	350 x 197 x 167mm	48pcs	6kg
Large Carton Packaging	420 x 360 x 365mm	192pcs	24.9kg

Packaging instructions:

Each large carton packaging contains 4 small carton packagings, Each small carton packaging contains 48 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 ofthe ight, and it mustbe used within 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.
- $2. \ JISIM\ has\ the\ right\ to\ amend\ or\ adjust\ the\ terms\ of this\ warranty, and\ release\ in\ written\ form\ shall\ prevail.$