

Product introduction

JISIM JD5120A is a 20W constant current LED intelligent dimmable driver specifically designed for small aperture luminaires. It supports Bluetooth 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 dimming
- Global Certification, SELV equivalent
- Suitable for Class I/ II /III indoor light fixtures
- Smooth dimming, flicker-free, dimming range: 0.5-100%
- DIP switch for multi-current setting, Max. output power 20W
- 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 230VAC input, full load and 25°C of ambient temperature)

Model	JD5120A			Features	Output Type	Constant Current	
Input	DC Voltage Range	100-300V			Communication mode	Bluetooth	
	AC Voltage Range	100-240V			Output Feature	Isolation	
	Rated Voltage	120Vac/230Vac			IP Rating	IP20	
	Input Frequency	50/60Hz		Insulation Rating	Class II (Suitable for class I II III light fixtures)		
	Input Current	≤0.25A/100Vac(at full load) ≤0.12A/230Vac(at full load)		No Load Output Voltage	Max.59V		
	Input Power	Max.24W		Output Voltage Range	9-40Vdc		
	Power Factor	PF>0.95C/100Vac(at full load) PF>0.9C/230Vac(at full load)		Output Current Range	350-700mA		
	THD	THD<10%/230Vac(at full load)		Output Power Range	3-20W		
	Efficiency	≥83%(at full load)		Dimming Range	0.5~100%		
	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)			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	
					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:100MQ/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	

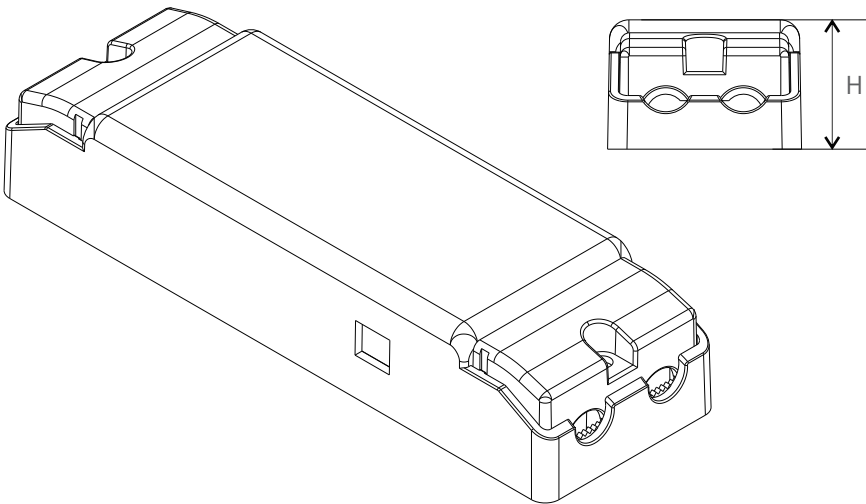
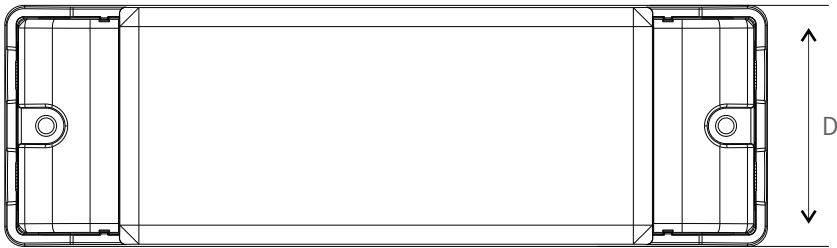
LED Current Settings >>>

Number	Output				Switch Position		
	Current (mA)	Voltage (VDC)	NO Load Outout Voltage (VDC)	Power (W)	1	2	3
•1	350	9-40	59	14	/	/	/
2	400	9-40		16	ON	/	/
3	450	9-40		18	/	ON	/
4	500	9-40		20	ON	ON	/
5	550	9-36		19.8	/	/	ON
6	600	9-33		19.8	ON	/	ON
7	650	9-30		19.5	/	ON	ON
8	700	9-28		19.6	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 20W.

2D Diagram >>>

Length (L)	Width (D)	Heigh(H)	Weight(W)
120mm	38mm	23mm	95.4±10g



Bluetooth 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-	Negative electrode output of the driver	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)

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.

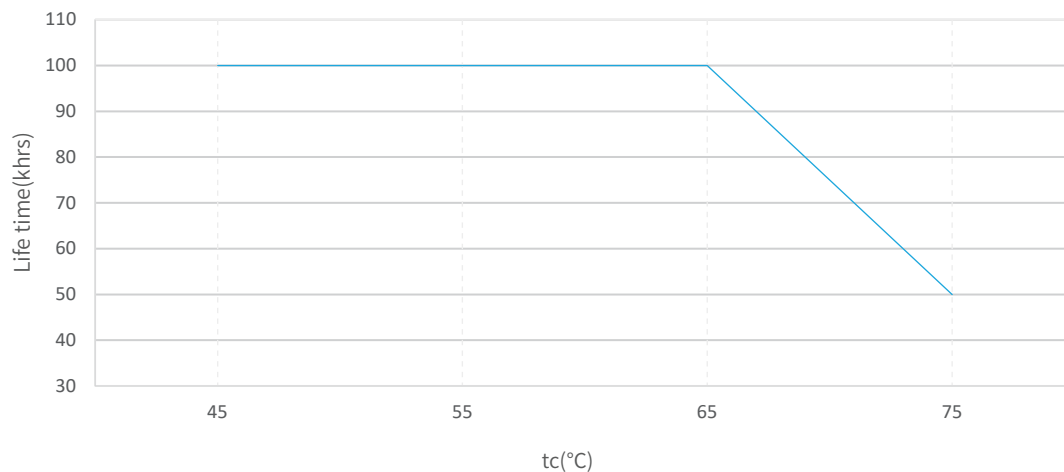
6.Voice Control

The device supports voice control within the Mi Home ecosystem.

Product Characteristic Curves

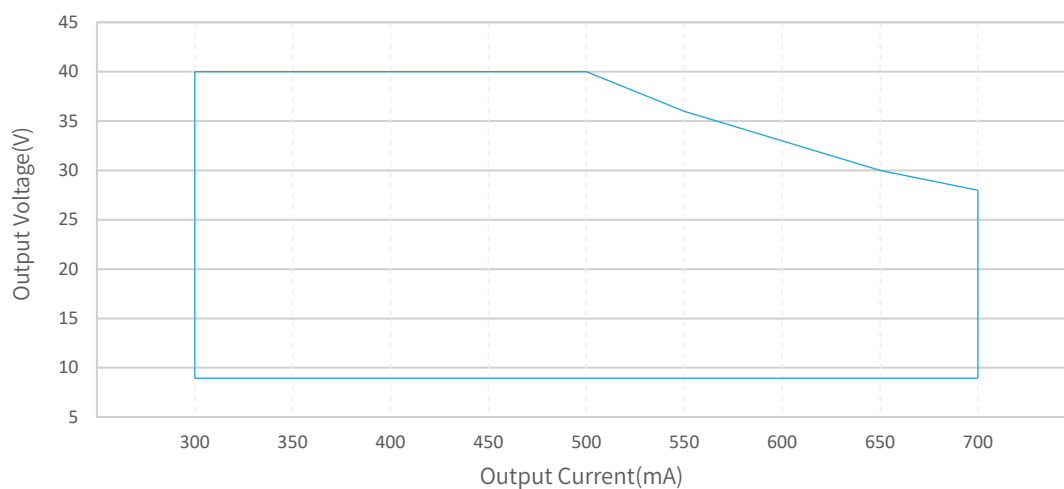


Life Time VS Tcase

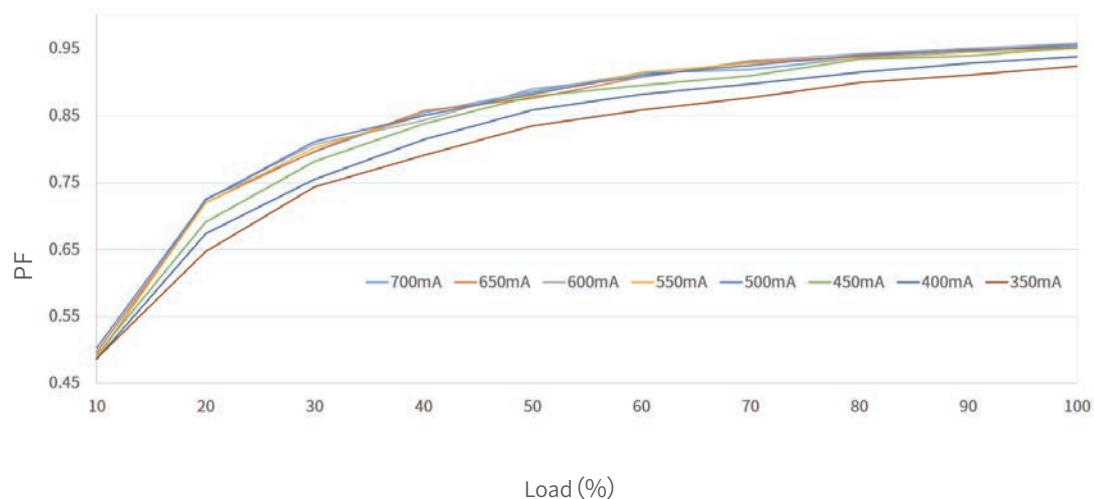


The life-time of the LED driver is shown in the figure above calculated (based on the 75% survival rate).
The relation of t_c to t_a temperature depends also on the luminaire design.

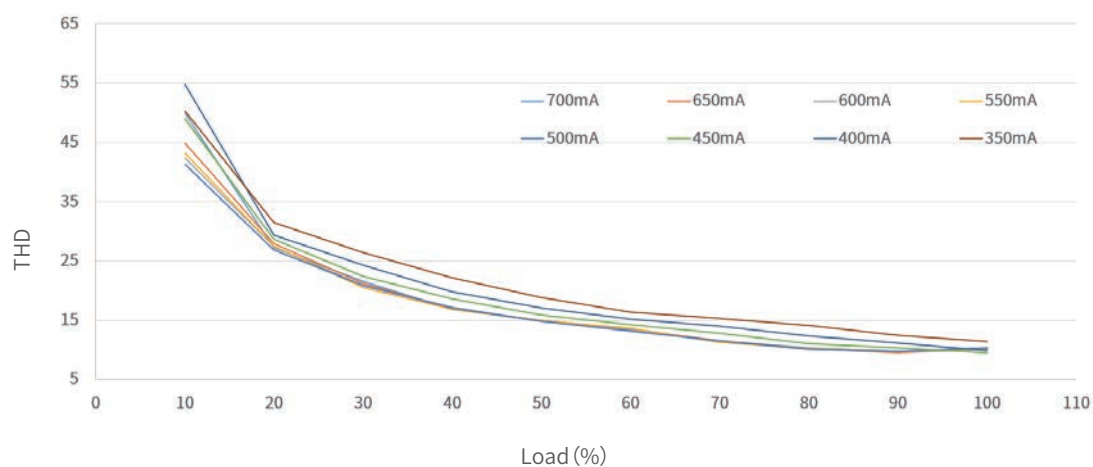
Operating Window



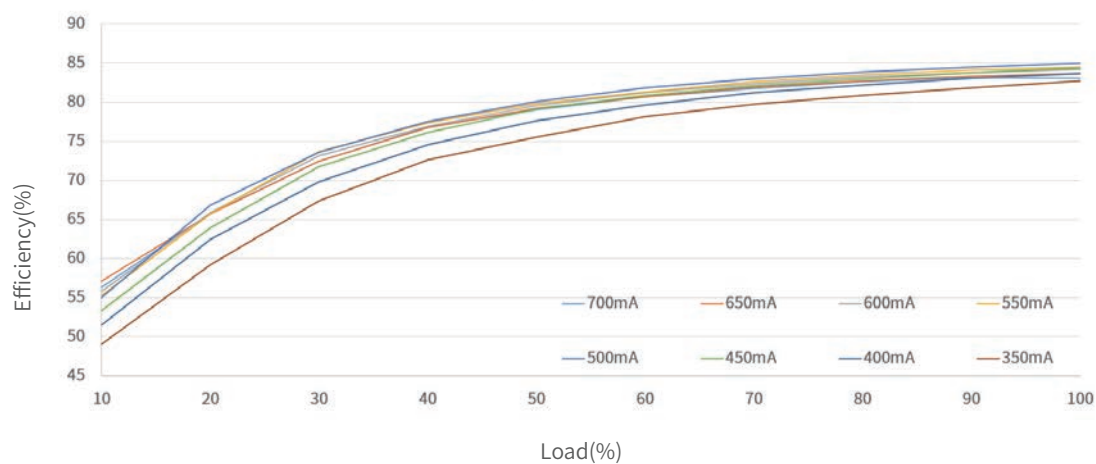
Power Factor VS @Load 230Vac



THD VS @Load 230Vac



Efficiency VS Load@230Vac



Packaging Image



Inner Packaging Box



Large Carton Packaging



Small Carton Packaging

Bluetooth Dimmable LED Driver

Packaging Size

Packaging Details	Carton Size	Packing Units	Weight
Inner Packaging Box	124x41x30mm	1pcs	116±10g
Small Carton Packaging	350 x 197 x 167mm	48pcs	5.87kg
Large Carton Packaging	420 x 360 x 365mm	192pcs	24.4kg

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 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 of 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 release in written form shall prevail.