JD3103X

JISIM 仟思盟®

DALI -2+PushDim DT6 Dimmable LED Driver

Product introduction

JISIM JD3103X is a constant current LED intelligent dimmable driver specifically designed for built in driver luminaires. it supports DALI-2 dimming functions.The customized dimming curve provides a more comfortable viewing experience for the human eye.When not connected to anexternal signal,it can be used as a non-dimmable driver and supports a gradual start-up effect.It is suitable for surface mounted downlights, spotlights, track lights, wall 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 built in Dimmable Driver
- Support DALI-2 dimming
- Glue filling process, Global Certification
- Suitable for Class I/ II /III indoor light fixtures
- Smooth dimming,flicker-free,dimming range: 1-100%
- Up to 30000 hours life time,3-Year Warranty(Long-lasting Capacitor)
- Max. output power 14W
- Small size and light weight,High power factor,High Efficiency,Low THD
- The housing is made from V0 flame retardant PC materials from CHIMEI

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

Model	JD3103X (See the following table)					
Input	DC Voltage Range	100-240V		Features	Output Type	Constant Current
	AC Voltage Range	100-240V			Dimming Interface	DALI-2 DT6(IEC62386-101-102-207)+PushDim
	Rated Voltage	220Vac/230Vac/240Vac			Output Feature	Isolation
	Input Frequency	50/60Hz			IP Rating	IP20
	Input Current	≤0.2A/100Vac(at full load) ≤0.09A/230Vac(at full load)			Insulation Rating	Class II (Suitable for class I II III light fixtures)
	Input Power	Max.17W		Output	No Load Output Voltage	≤59Vdc
	Power Factor	PF>0.9C/230Vac(at full load) PF>0.95C/110Vac(at full load)			Output Voltage Range	9-42Vdc
	THD	THD<10%/230Vac(at full load)			Output Current Range	100-350mA
	Efficiency	≥84%(at full load)			Output Power Range	0.9-14W
	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~60°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:90°C
					Life Time	>30000h@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	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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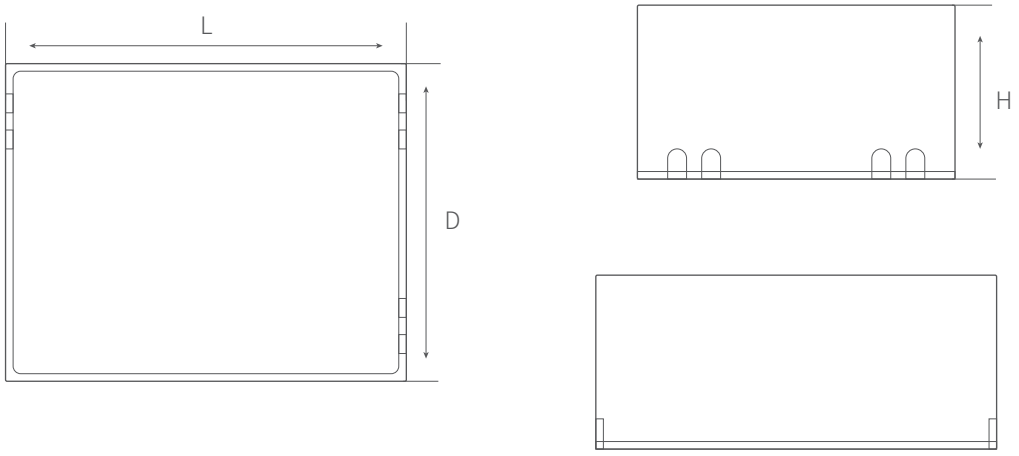
Model/parameter comparison table

Model	JD3103	JD3103A	JD3103B	JD3103C	JD3103D	JD3103E	JD3103F	JD3103G	JD3103H	JD3103K
Output Power	Max.14W	Max.12.8W	Max.12W	Max.10.8W	Max.10W	Max.8W	Max.7.2W	Max.6W	Max.4.8W	Max.4W
Output Current	350mA	320mA	300mA	270mA	250mA	200mA	180mA	150mA	120mA	100mA

2D Diagram

Length (L)	Width (D)	Heigh(H)	Weight(W)
53mm	42mm	23mm	91.5±10g



Wiring Diagram

DALI Application Wiring Diagram

Remark

- The two DALI control lines polarity-reversible.
- Default setting brightness is 100%.
- The default is logarithmic dimming curve.
- Max.64 DALI drivers per DALI control line.
- The current consumption of the DALI interface is less than 2mA.
- The maximum distance length of the DALI control line is 200m at 2x1.0mm.
- DALI bus can be wired together with any mains voltage cables,but separate wiringis recommended.
- Max. 64 DALI drivers per DALI control line.DALI protocol includes Max.16 scene groups and 16 sences.
- The configuration parameters ofthe driver can be set through the DALI configuration tool or DALI application controller during installation, such as setting device address, group addresspower-on level, bus-failure level, scene level, fade time, dimming curve, etc.

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PushDim Application Wiring Diagram

Push function

Long press: Adjust brightness, short press: Turn on/off.

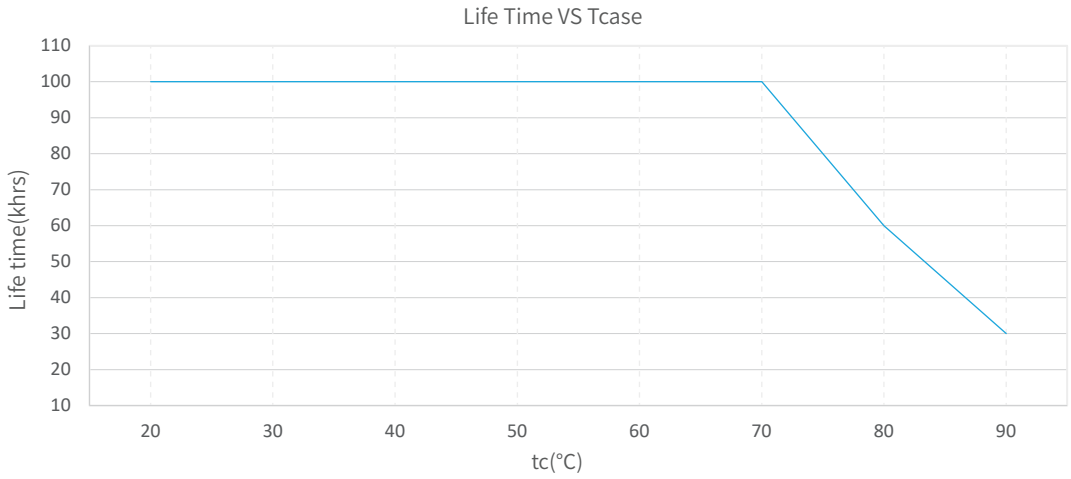
Installation Instructions

Interface	Marking	Description
Input	L	Input terminal of AC live wire
	N	Input terminal of AC neutral wire
Output	LED+	Positive electrode output of the driver
	LED-	Negative electrode output of the driver
Signal	DA	DALI/PUSH dimming input
	DA	DALI/PUSH dimming input

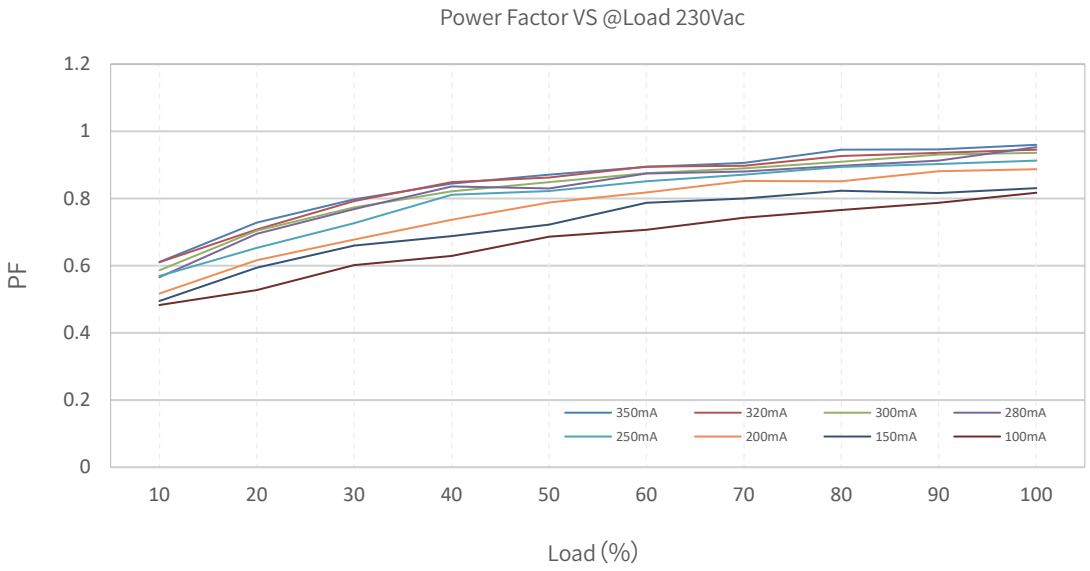
Connection instructions

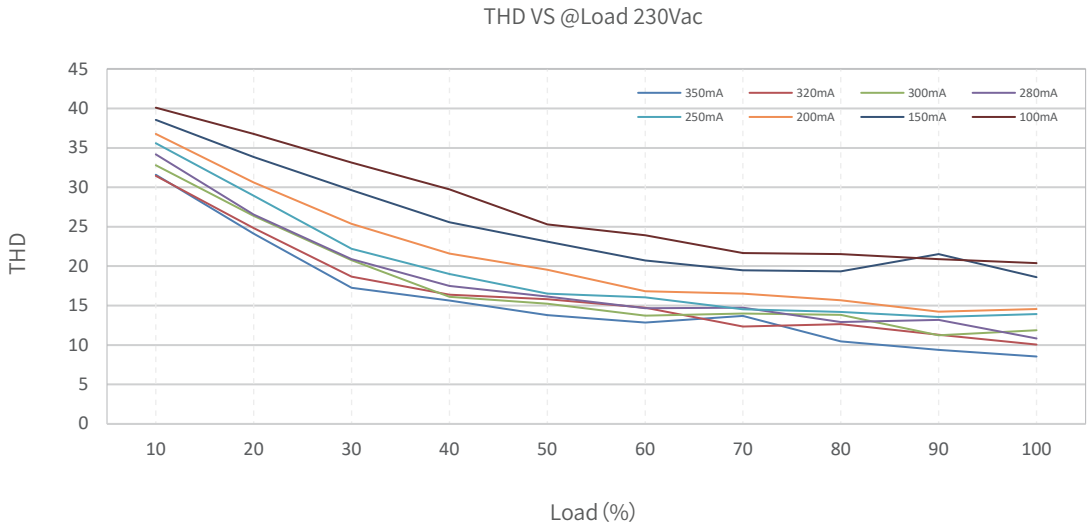
1.Check the color of the interface and cable carefully before wiring.
2.All connections must be as short as possible to ensure good EMI performance.
3.No secondary switches are allowed.
4.The driver output does not support hot swap
5.Incorrect wiring can damage the LED.

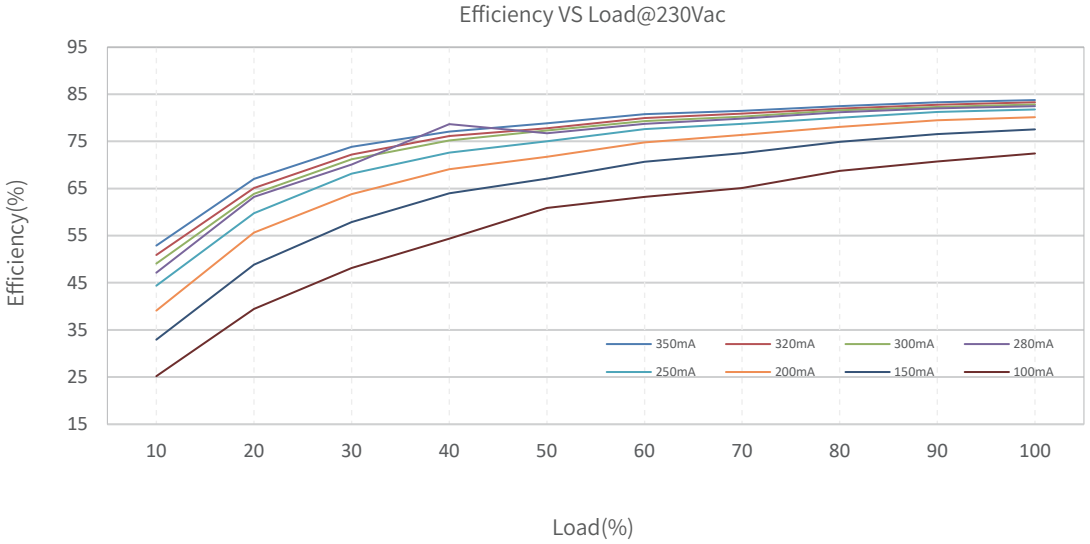
Product Characteristic Curves



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


Power Factor VS @Load 230Vac
PF
1.2
1
0.8
0.6
0.4
0.2
0
10
20
30
40
50
60
70
80
90
100
Load (%)
350mA
320mA
300mA
280mA
250mA
200mA
150mA
100mA


THD VS @Load 230Vac
THD
45
40
35
30
25
20
15
10
5
0
10
20
30
40
50
60
70
80
90
100
Load (%)
350mA
320mA
300mA
280mA
250mA
200mA
150mA
100mA


Efficiency VS Load@230Vac
Efficiency(%)
95
85
75
65
55
45
35
25
15
10
20
30
40
50
60
70
80
90
100
Load(%)
350mA
320mA
300mA
280mA
250mA
200mA
150mA
100mA

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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	69 x 65 x 30.5mm	1pcs	105.3±10g
Small Carton Packaging	350 x 197 x 167mm	64pcs	7.03kg
Large Carton Packaging	420 x 360 x 365mm	256pcs	29.1kg

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 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 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. 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 3 years. (The life and MTBF ofthe 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.