JD2141

JISIM 仟思盟®

0/1–10V PWM RX Dimmable LED Driver

Product introduction

JISIM JD2141 is a 25W constant current LED intelligent dimmable driver specifically designed for built in driver luminaires. it supports deep dimming functions such as 0-10V,1-10V,10V PWM,and RX.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 LED Track light, LED surface-mounted downlights,LED wall lamps.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 0-10V,1-10V,10VPWM,Rx dimming
- Glue filling process, Global Certification
- Suitable for Class I/ II /III indoor light fixtures
- Smooth dimming,flicker-free,dimming range: 0.3-100%
- DIP switch for multi-current setting, Max. output power 25W
- Up to 30000 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	JD2141					
Input	DC Voltage Range	198-264V		Features	Output Type	Constant Current
	AC Voltage Range	198-264V			Dimming Interface	1-CH 0-10V/1-10V_RX_PWM
	Rated Voltage	220Vac/230Vac/240Vac			Output Feature	Isolation
	Input Frequency	0/50/60Hz			IP Rating	IP20
	Input Current	≤0.15A/230Vac(at full load)			Insulation Rating	Class II (Suitable for class I II III light fixtures)
	Input Power	Max.30W		Output	No Load Output Voltage	≤59Vdc
	Power Factor	PF＞0.9C/230Vac(at full load)			Output Voltage Range	9-40Vdc
	THD	THD<8%/230Vac(at full load)			Output Current Range	350-700mA
	Efficiency	≥84.5%(at full load)			Output Power Range	3-25W
	Inrush Current	Cold start 15A(Test twidth=102us under 50% Ipeak@230Vac)			Dimming Range	0.3~100%
	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	＜6000Hz
	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, I/P-DIM/P:1500Vac,5mA,60s,O/P-DIM/P:1500Vac,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	

0/1–10V PWM RX Dimmable LED Driver

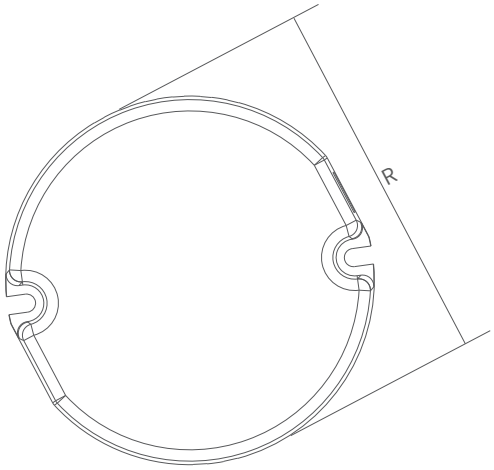
LED Current Settings

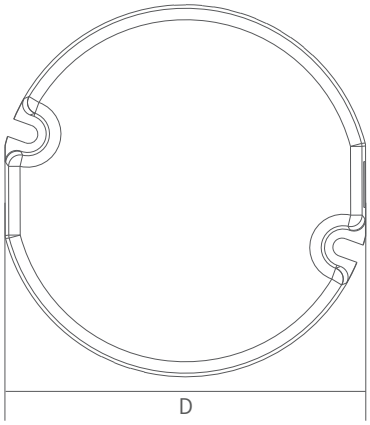
Number	Output				Switch Position		
	Current (mA)	Voltage (VDC)	NO Load Outout Voltage (VDC)	Power (W)	1	2	3
*1	350	9-40	59	14	/	/	/
2	400	9-40		16	ON	/	/
3	450	9-40		18	/	ON	/
4	500	9-40		20	ON	ON	/
5	550	9-40		22	/	/	ON
6	600	9-40		24	ON	/	ON
7	650	9-38		24.7	/	ON	ON
8	700	9-36		25	ON	ON	ON

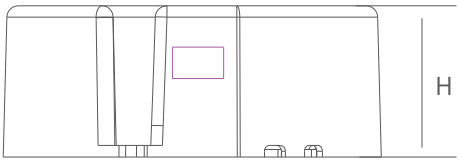
- * Factory default.
- 1. Please disconnect the AC input before adjusting the output current via the DIP switch, If not,it may damage the lighting fixture.
- 2. No Overload, The output power should be less than or equal to 25W.

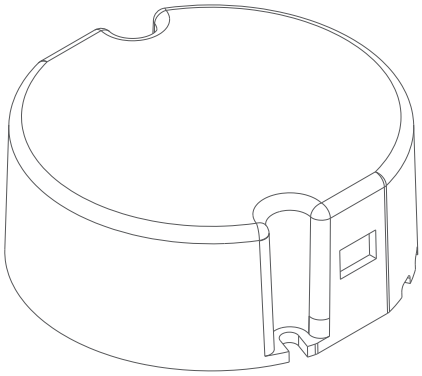
2D Diagram

Diameter (R)	Width (D)	Heigh(H)	Weight(W)
65mm	63mm	26mm	121±10g



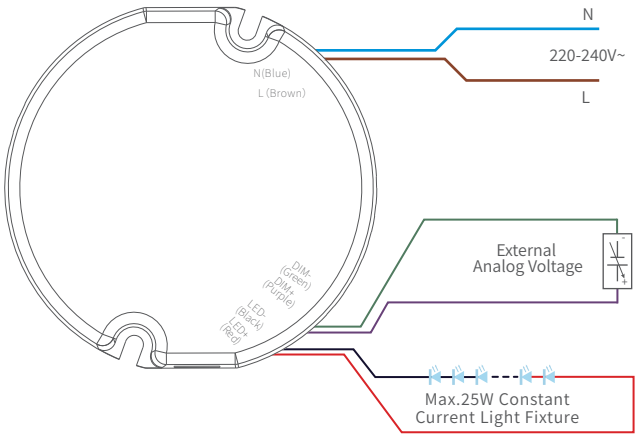






0/1-10V PWM RX Dimmable LED Driver

Wiring Diagram

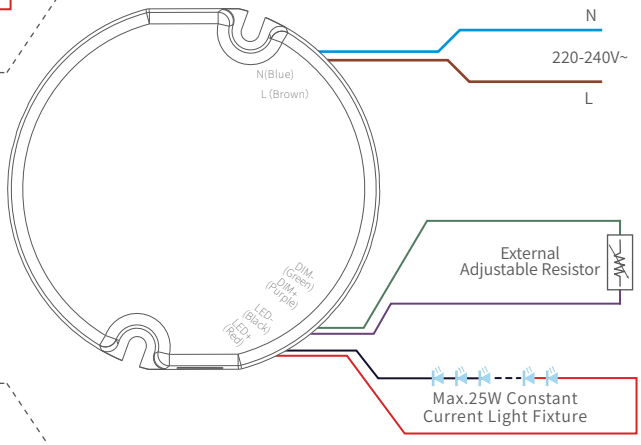


Explanation of 0/1-10V Interface Signals

- The DIM+ terminal is used to adjust brightness:

  When the voltage at the DIM+ terminal is adjusted within the range of 0/1-10V, the brightness changes from 0 to 100%.The light turns on/off at a voltage value of 1.1±0.05V.

  When DIM+ terminals is left floating (unconnected), the default output is 100% Brightness.

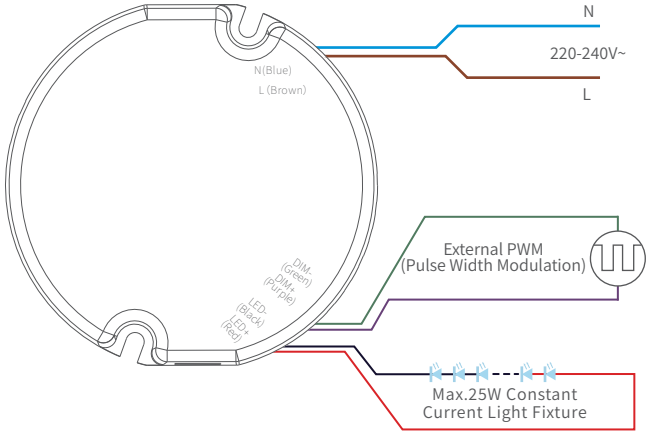


Potentiometer (Rx) Interface Signal Description

- The DIM+ terminal is used for adjusting brightness:

  When the resistance value at the DIM+ terminal is adjusted within 0-100KΩ,the brightness changes from 0 to 100%. Specifically, a resistance value of 3KΩ ± 1KΩtriggers the light to turn on/off.

  When DIM+ terminals is left floating (unconnected), the default output is 100% Brightness.



PWM Interface Signal Description

- The DIM+ terminal is used for adjusting brightness:

  When the 10V PWM signal at the DIM+ terminal is adjusted from 0 to 100%, the brightness changes correspondingly from 0 to 100%.

  When DIM+ terminals is left floating (unconnected), the default output is 100% cool Brightness.

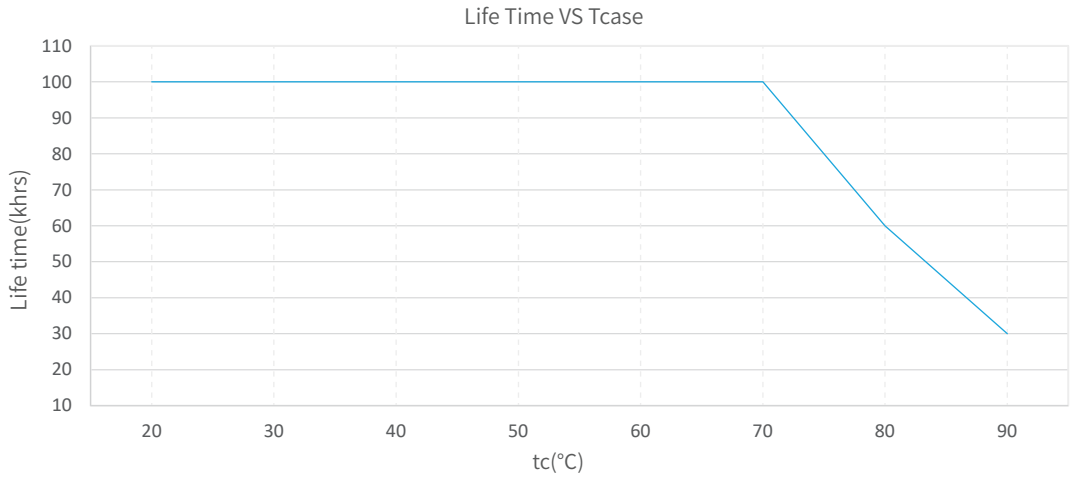
Installation Instructions

Interface	Marking	Description
Input	N	Input terminal of AC neutral wire
	L	Input terminal of AC live wire
Output	LED-	Negative electrode output of the driver
	LED+	Positive electrode output of the driver
Signal	DIM-	Negative electrode input 0-10V/PWM/RX dimming
	DIM+	Positive electrode input 0-10V/PWM/RX dimming

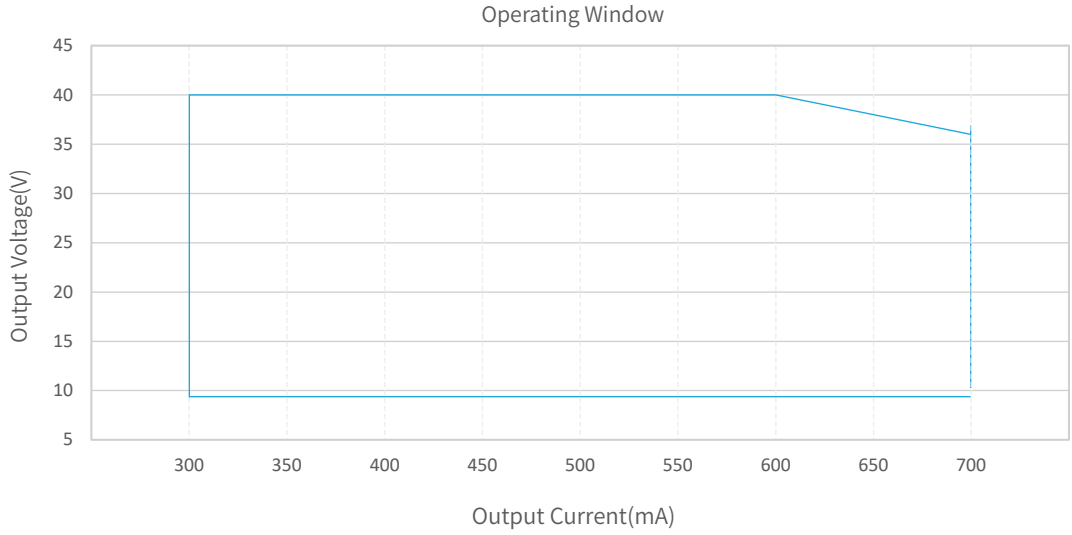
Connection instructions

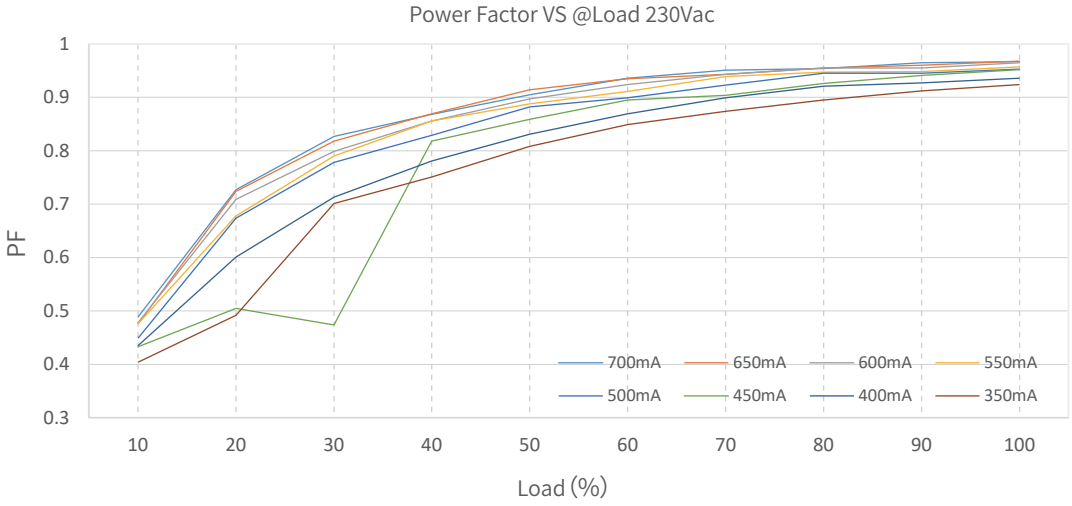
1.Check the color of the interface and cable carefully before wiring.
2.All connections must be as short as possible to ensure good EMI performance.
3.No secondary switches are allowed.
4.The driver output does not support hot swap
5.Incorrect wiring can damage the LED.

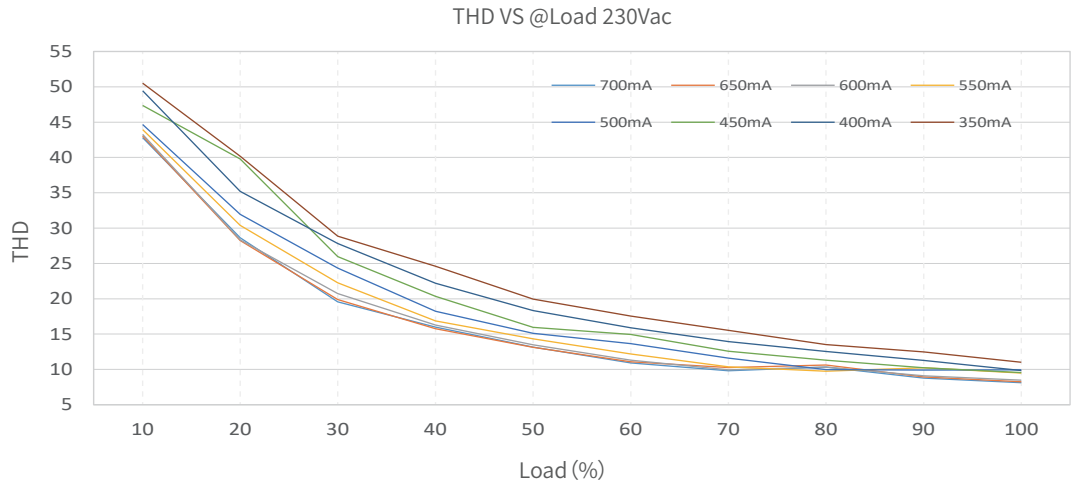
Product Characteristic Curves

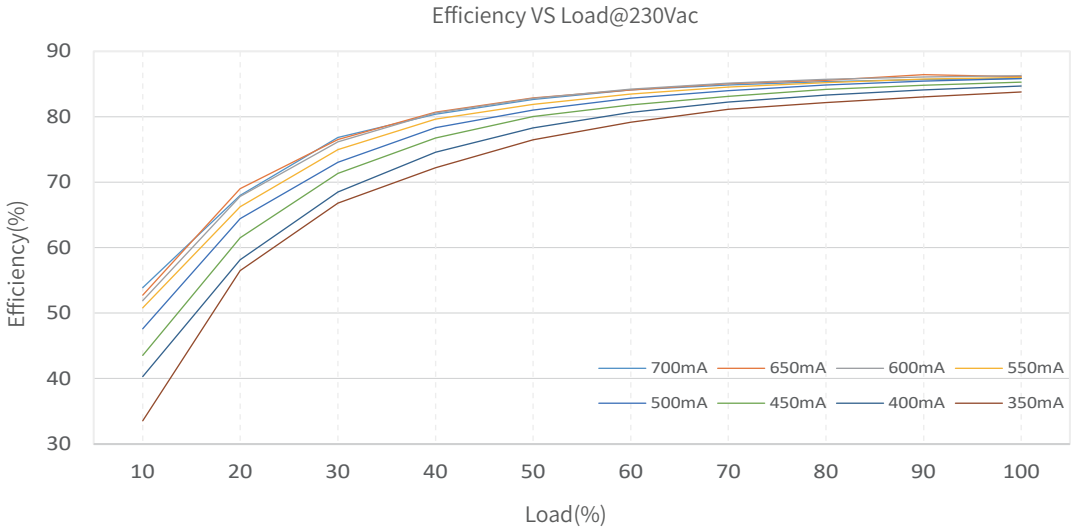


The life-time of the LED driver is shown in the figure above calculated (based on the 90% survival rate). The relation of tc to ta temperature depends also on the luminaire design.









Packaging Image

Inner Packaging Box

Large Carton Packaging

Small Carton Packaging

Packaging Size

Packaging Details	Carton Size	Packing Units	Weight
Inner Packaging Box	74x 75 x 33mm	1pcs	135.9±10g
Small Carton Packaging	350 x 197 x 167mm	48pcs	6.82kg
Large Carton Packaging	420 x 360 x 365mm	192pcs	28.19kg

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 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 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.