JARO Components, Inc. An ISO Registered Firm

JALS-C-075W DIMMING SERIES

Features

- s Constant current design
- s Universal AC input（90-305Vac）
- s 3 in 1 dimming(0-10V,PWM,Rx resistance)
- s Protections: SCP, OVP, OTP,OPP
- s High Efficiency (Up to 91%)
- s Active Power Factor Correction (0.99 Typical)
- s Lightning Protection
- s Waterproof (IP67)
- s Comply With UL8750 & EN61347 Safety Regulations
- s 5 years warranty

■Application

- s Suitable for LED street lights,tunnel lights,landscape lights.

General Description

The document detail the electrical, mechanical and environmental specifications for JALS-C-075M series LED driver, these driver are single channel output and can provide 75 W max. continuous output power.

Models & Key parameters

Model	Output Power (W)	Rated Output Voltage(Vdc)	Output Current (A)	Typ. Efficiency ※1	Power Factor	
					110Vac	230Vac
JALS-C-075M012	60	12	5.00	86.0%	>0.99	>0.95
JALS-C-075M015	60	15	4.00	87.0%	>0.99	>0.95
JALS-C-075M020	75	20	3.75	89.0%	>0.99	>0.95
JALS-C-075M024	75	24	3.15	89.0%	>0.99	>0.95
JALS-C-075M030	75	30	2.50	90.0%	>0.99	>0.95
JALS-C-075M036	75	36★	2.10	90.5%	>0.99	>0.95
JALS-C-075M042	75	42★	1.80	90.5%	>0.99	>0.95
JALS-C-075M048	75	48★	1.60	90.5%	>0.99	>0.95
JALS-C-075M054	75	54	1.40	91.0%	>0.99	>0.95
NOTE	※1：Typ. Efficiency are measured at full load and 230 Vac input. ※2：★ means the popular models, we will keep sufficient stock for prompt delivery.					

Specification

OUTPUT SPECIFICATION										
OUTPUT	Rated Output（Vdc）	12	15	20	24	30	36	42	48	54
	CONSTANT CURRENT RANGE(V)	3～12	3～15	3～20	3～24	3～30	3～36	3～42	3～48	3～54
	RATED CURRENT(A)	5.00	4.00	3.75	3.15	2.50	2.10	1.80	1.60	1.40
	RATED POWER(W)	60	60	75	75	75	75	75	75	75
	RIPPLE& NOISE(max.)※3	10%Vo								
	VOLTAGE TOLERANCE	5%Vo								
	LINE REGULATION	1%Vo								
	LOAD REGULATION	3%Vo								
	HOLD UP TIME (Typ.)	8.5mS min. @ Full load &110Vac, 10mS min. @ Full load &230Vac								
INPUT SPECIFICATION										

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INPUT	VOLTAGE RANGE	90-305Vac							
	FREQUENCY RANGE	47-63Hz							
	EFFICIENCY (Typ.)	86.0%	87.0%	89.0%	89.0%	90.0%	90.5%	90.5%	90.5%	91.0%
	AC CURRENT (Typ.)	1.0Amax. @ 100-277Vac input & Full load.								
	INRUSH CURRENT	60Amax. @ 230Vac input,25℃.								
	LEAKAGE CURRENT	0.6mA max. at input 277Vac								
PROTECTION										
PROTECTION	Input OVP	315Vac (Latch mode. The power supply shall return to normal operation only after the power is turn-on again.)								
	Output OVP ※4	(1.2-1.4)V_O								
	SCP	No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed.								
ENVIRONMENT REQUIREMENTS										
ENVIRONMENT REQUIREMENTS	Operating Temperature	-35℃ to +70℃								
	Operating Relative Humidity	10%RH to 100%RH								
	Storage Temperature	-40℃ to +85℃								
	Storage Relative Humidity	5% to 100%RH non-condensing @ Sea level shall be low 10,000 feet.								
	Vibration	10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z.								
	Waterproof grade	P67								
SAFETY&EMC										
SAFETY&EMC	SAFETY STANDARDS	UL8750, UL1310,IEC61347,GB19510.								
	WITHSTAND VOLTAGE	L/N-GND:4KV, L-N:2KV								
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25 / 70% RH								
	EMC IMMUNITY	Compliance to EN 61000-3-2, 3EN 61000-4-2, 3,4,5,6,8,11, EN 61547								
SAFETY APPROVAL										
CERTIFIED		UL,CB,CE,CQC								
RELIABILITY REQUIREMENTS										
RELIABILITY REQUIREMENTS	Burn-in	The power supply shall undergo a minimum of 4 Hours burn-in test at 40℃±5℃ under full load condition								
	Life Time	≥50,000 hours at 60℃ measured at 110Vac input,and 80% load.								
	MTBF	≥ 360,000 hours at 25℃, measured at 110Vac input,and 80% load. (MIL-HDBK-217F)								
NOTE	※3： Latch mode. The power supply shall return to normal operation only after the power is turn-on again. Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic- capacitor and a 10uF electrolysis capacitor. And the test under the condition of rated input and rated output) ※4：Latch mode. The power supply shall return to normal operation only after the power is turn-on again.									

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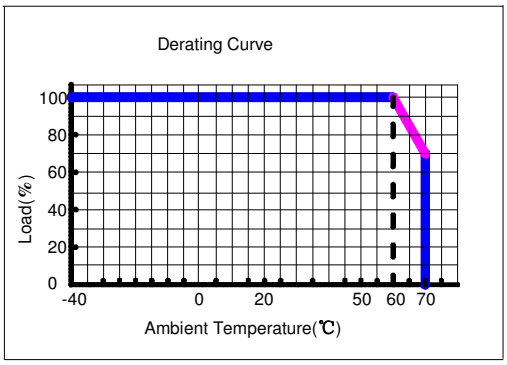
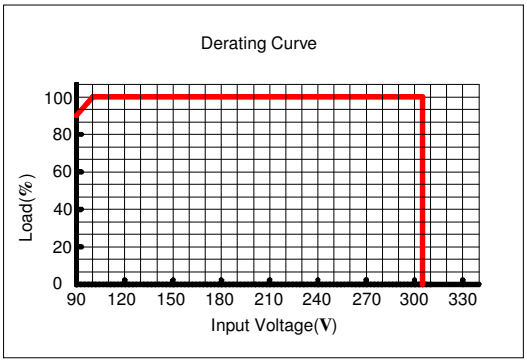
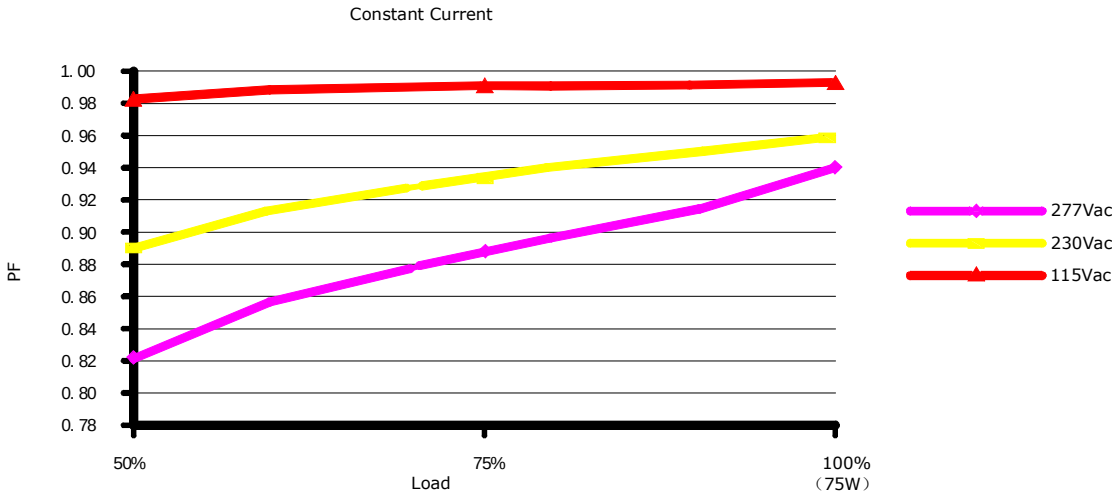
n Derating Curve

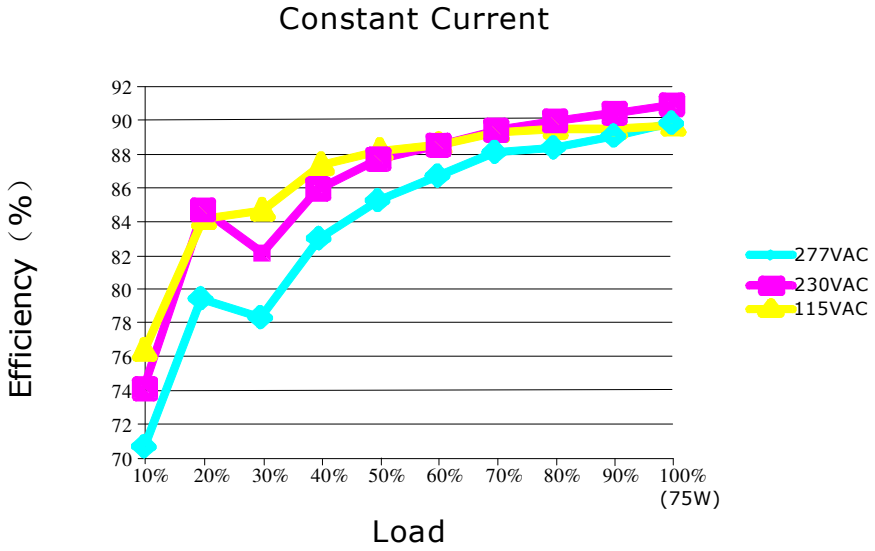




n Power Factor Characteristic



n Efficiency curve(Typ.Voltage 36V)



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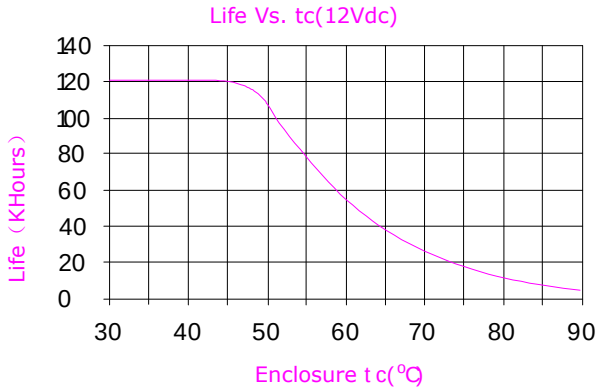
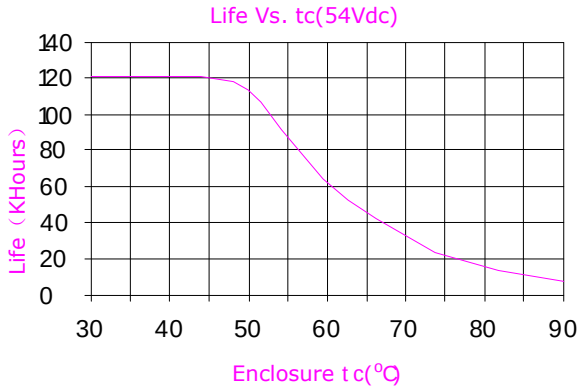
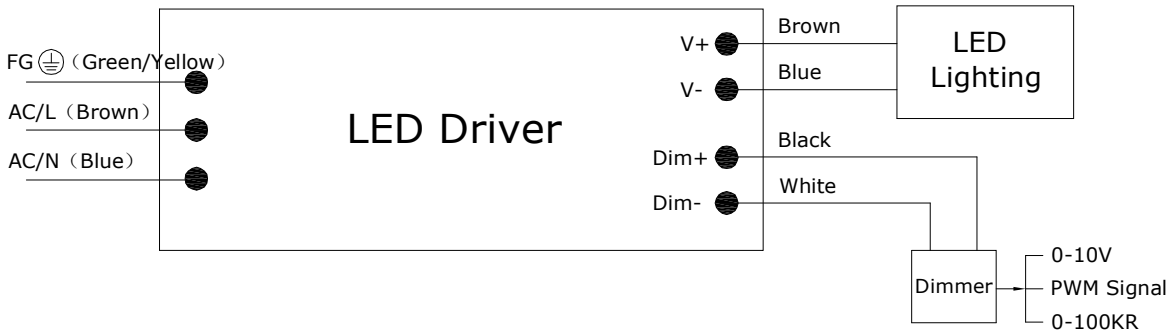
n Life vs tc curve

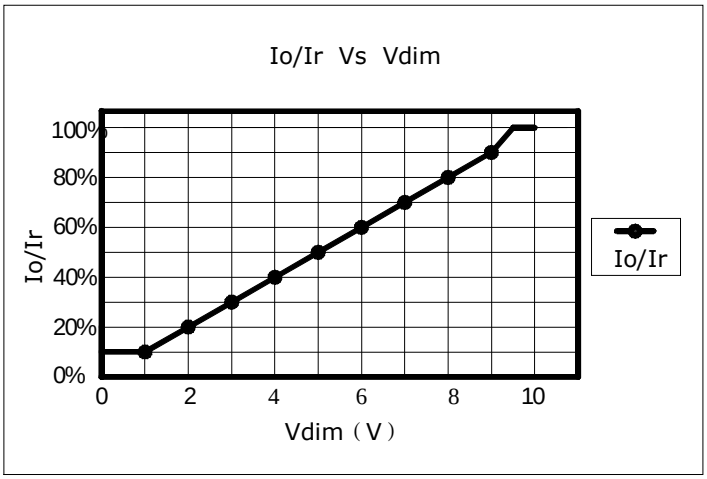




n Dimming Control



A） 0-10V Dimming Voltage/Current Proportion Curve



NoTE: Io is actual output current and Ir is rated currnet without dimming control.

0-10V signal level	1	2	3	4	5	6	7	8	9	10
Io（A)	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%

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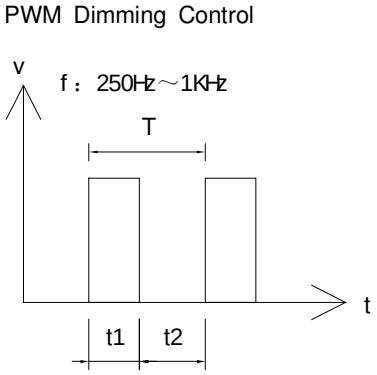
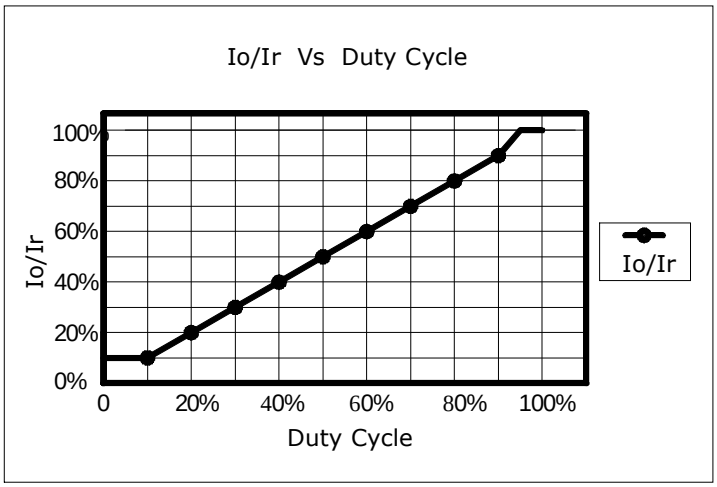
B） PWM Dimming Voltage/Current Proportion Curve



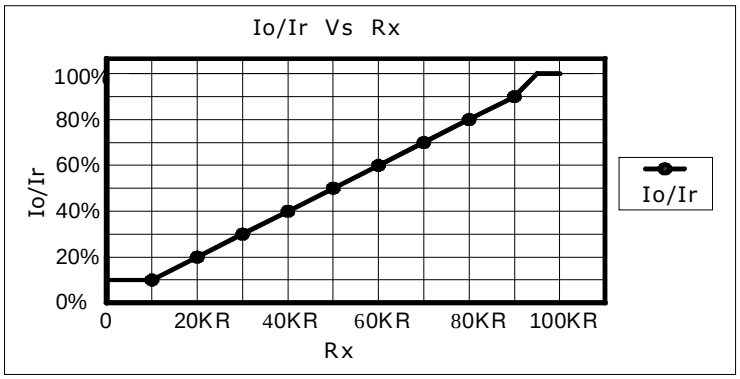
$$Duty = \frac{t1}{t1+t2} (10\% 100\%)$$



Dimming Port Condition：

Type	Condition
PWM Dimming	Frequency, f：250Hz～1KHz
	High-Level, Ho：5-10V，5-10V can be respondeded,means"ON"
	Low-Level, Lo：0V，0～2.5V can be response, means"OFF"
	Sink current, Io ： <5 mA
	Signal Open, Po：100% Brightness
	Dimming range, Pr：10%～100%

C） Resistance Dimming /Current Proportion Curve



NOTE: Please DO NOT connect "V-" to "Dim-", otherwise the LED drive can not work normally.

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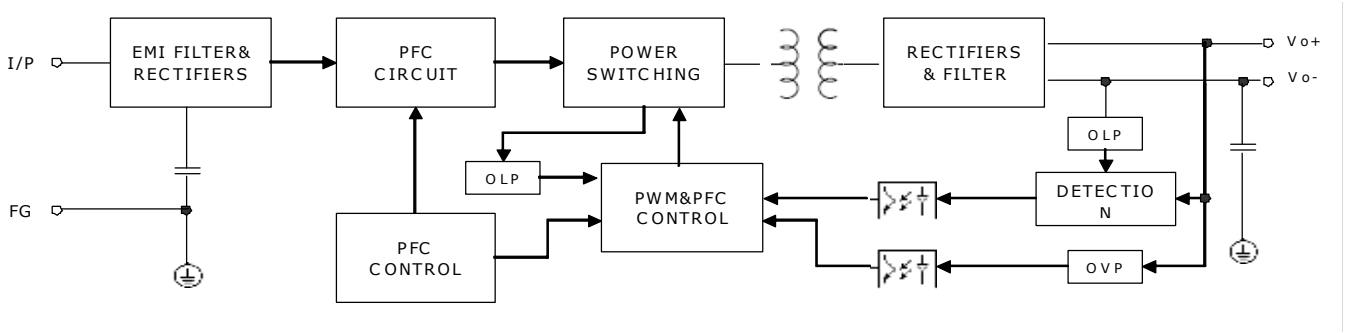
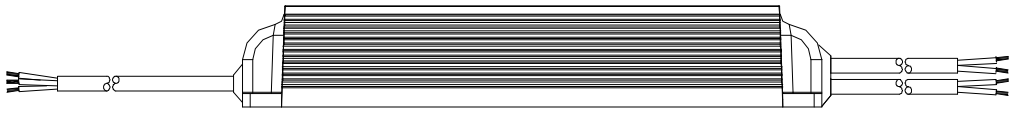
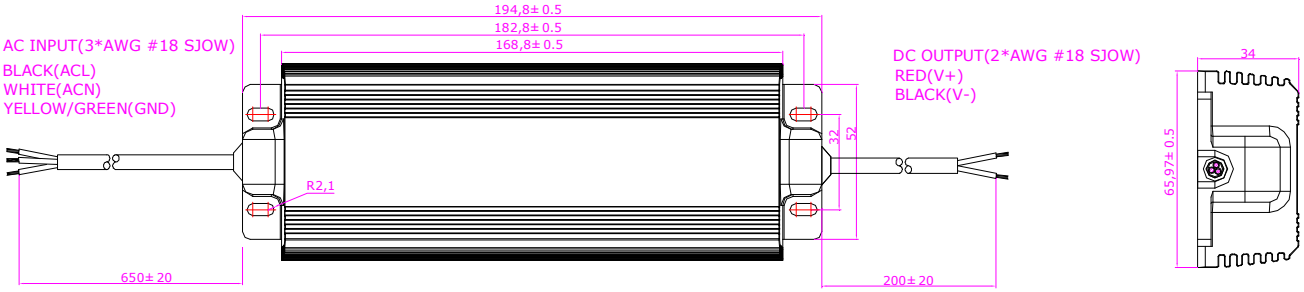
n Block Diagram



n Mechanical Specification





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