TWWC024 SERIES

24W Triac Dimming Constant Current LED Driver

- High efficiency: 85% typical @110Vac, full load
- High power factor: 0.99 typical. @ 110Vac, full load
- Triac/ELV Dimmer compatible
- IP65 Waterproof Rating, Fully isolated
- With Lightning Protection & all-round protections (OVP, SCP , OTP)
- Comply with UL8750 class2 Safety Regulations

5 Year Warranty

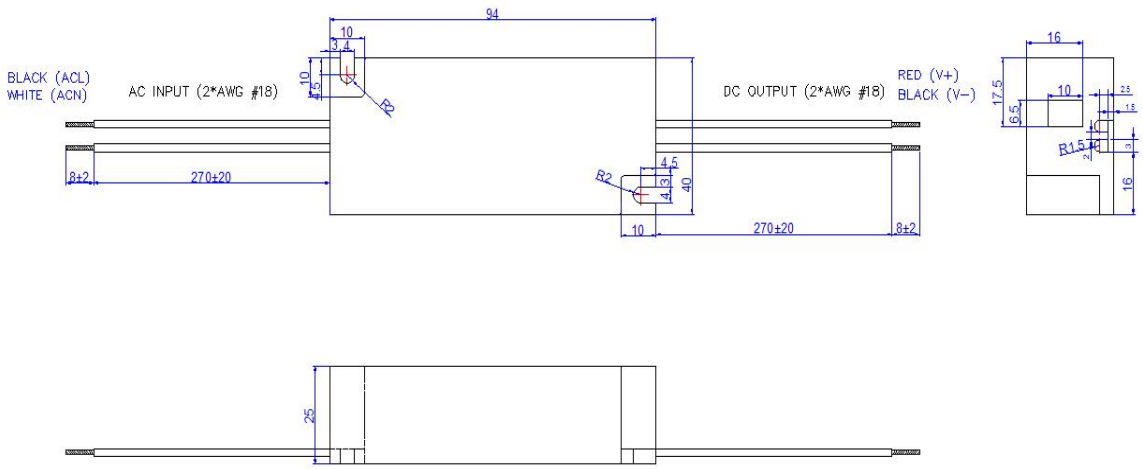
Approvals: **IP65** RoHS

SPECIFICATION

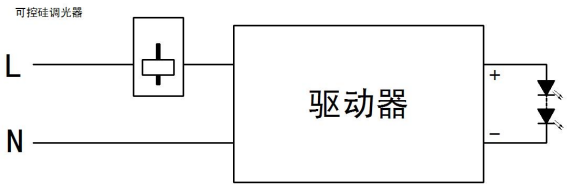
Part Number		TWWC024-0300SR
OUTPUT	DC VOLTAGE	48-80V
	CONSTANT CURRENT REGION Tested@110V Input Note.4	300mA
	RATED POWER	24W
	CURRENT RIPPLE & NOISE(max.) Note.2	±30% Io max
	VOLTAGE TOLERANCE Note.3	±5.0%
	LINE REGULATION	±5.0%
	LOAD REGULATION	±8.0%
	SETUP, RISE TIME(Typ.) Note.7	350ms/90ms 110VAC 150ms/90ms 220VAC at full load
INPUT	VOLTAGE RANGE Note.5	90 to 305VAC
	FREQUENCY RANGE	47 ~ 63Hz
	POWER FACTOR(Typ.)	>0.94
	EFFICIENCY(Typ.)	85%
	AC CURRENT(Typ.)	0.28A/110VAC
	INRUSH CURRENT(Typ.)	COLD START 10A (Twidth=270us measured at 50% Ipeak) at 230VAC
	LEAKAGE CURRENT	<0.5mA/277VAC
PROTECTION	OVER CURRENT Note.4	95 ~ 108% Protection type: Constant current limiting, recovers automatically after fault condition is removed
	SHORT CURRENT	Hiccup mode, recovers automatically after fault condition is removed
	OVER VOLTAGE	90V Protection type: Hiccup mode, recovers automatically after fault condition is removed
	OVER TEMP.	Hiccup mode, recovers automatically after fault condition is removed
ENVIRONMENT	WORKING TEMP.	-35 ~ +70℃ (Refer to “Derating Curve”)
	WORKING HUMIDITY	10 ~ 80% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃,10 ~ 80% RH
	TEMP. COEFFICIENT	±0.2%℃ (0~50℃)
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes
SAFETY & EMC	SATETY STANDARDS Note.6	UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
	WITHSTAND VOLTAGE	I/P – O/P: 3.75kVAC
	ISOLTATION RESISTANCE	I/P – O/P: 100M Ohms / 500VDC /25℃ / 70% RH
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C (≥60% load); EN61000-3-3
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level (surge 2kV), criteria A
OTHERS	MTBF	450khrs min. MIL-HDBK-217F (25℃)
	DIMENSIION	94*40*25MM (L*W*H) 3.70*1.57*0.98 inch
	PACKING	170±10g

NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance: includes set up tolerance, line regulation & load regulation. 4. Please refer to "DRIVING METHODS OF LED MODULE". 5. Derating may bee needed under low input voltages. Please check the static characteristics for details. 6. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes. 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. 8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufactures must re-qualify EMC DIRECTIVE on the complete installation again. 9. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. 10. To fulfill requirements of the latest ERP regulation for lighting fixtures, this LED power supply can only be used behind switch without permanently connected to the mains.

Mechanical Specification



Dimming Function



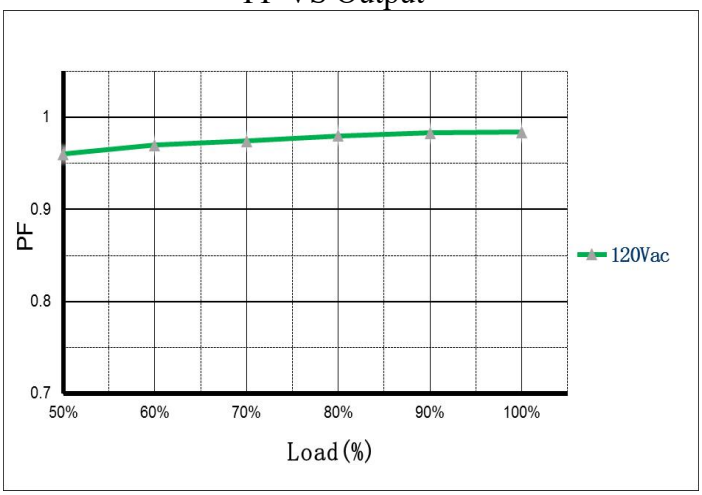
Mode 1：Triac/ELV dimmer on Dimming Control

Parameter	Min.	Typ.	Max.	Conditions
Dimming Range	10%Io	-	100%Io	120Vac
Conduction Angle	30°	-	180°	120Vac

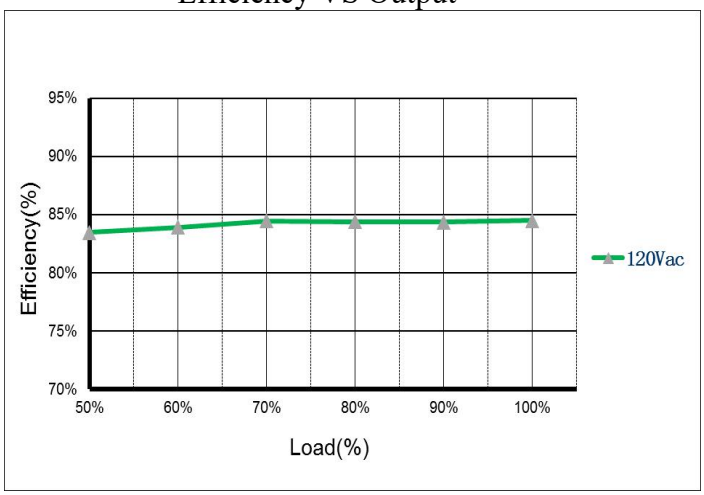
Dimmer Model	Dimming Mode	Model No.	Input Voltage	Output current without Dimmer(mA)	Cycle	Min time of dimmer turn on when reach the Max current(angle exceed 70%)	Dimmer turn on phase(Mult Pin)	Output current(mA)	Max Adjustment(%)
LEVITON	Triac dimming	6615-POT	90V 60Hz	310	8.33mS	5.83mS	6.40mS	299	96.5
			120V 60Hz	307			6.68mS	307	100
		RPI06	90V 60Hz	310			7.20mS	310	100
			120V 60Hz	307			7.44mS	307	100
		6683-IW	90V 60Hz	310			7.52mS	310	100
			120V 60Hz	307			7.68mS	307	100
		6621-PA	90V 60Hz	310			7.12mS	310	100
			120V 60Hz	307			7.24mS	307	100
LUTRON		S-600P	90V 60Hz	310			6.16mS	295	95.2
			120V 60Hz	307			6.48mS	306	99.7
		S-603P	90V 60Hz	310			6.20mS	308	99.4
			120V 60Hz	307			6.48mS	307	100
		DVCL-153P	90V 60Hz	310			6.16mS	310	100
			120V 60Hz	307			6.24mS	307	100

Derating Curve

PF VS Output

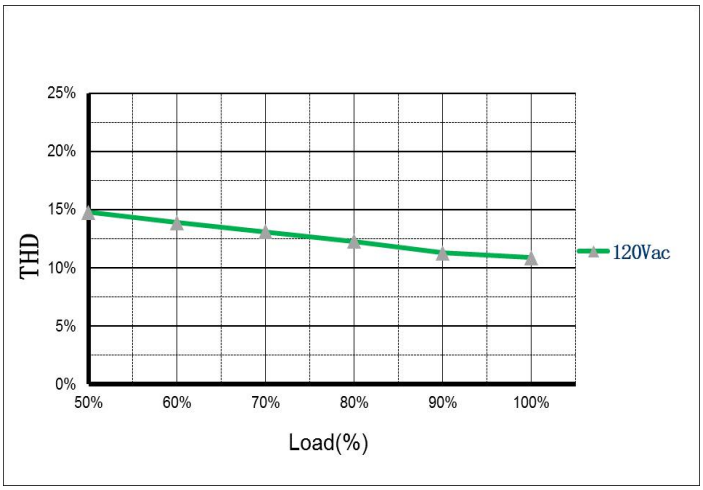


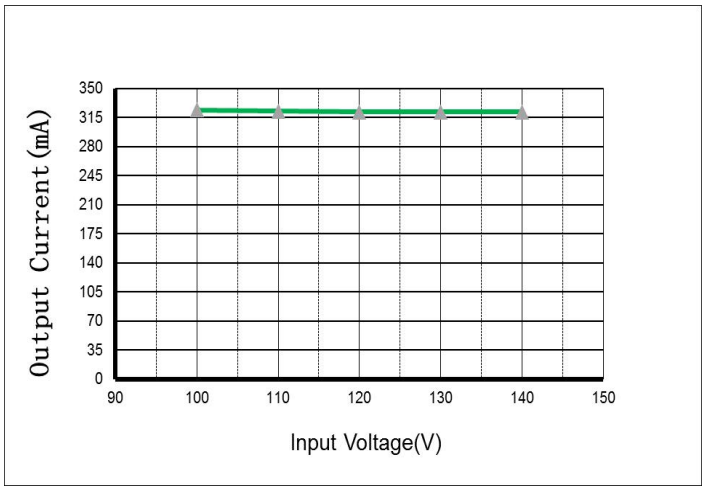
Efficiency VS Output



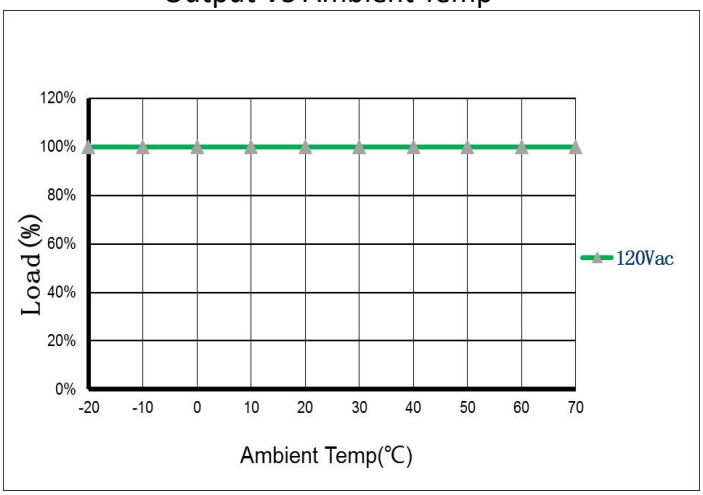
THD VS Output

Input Voltage VS Output Current

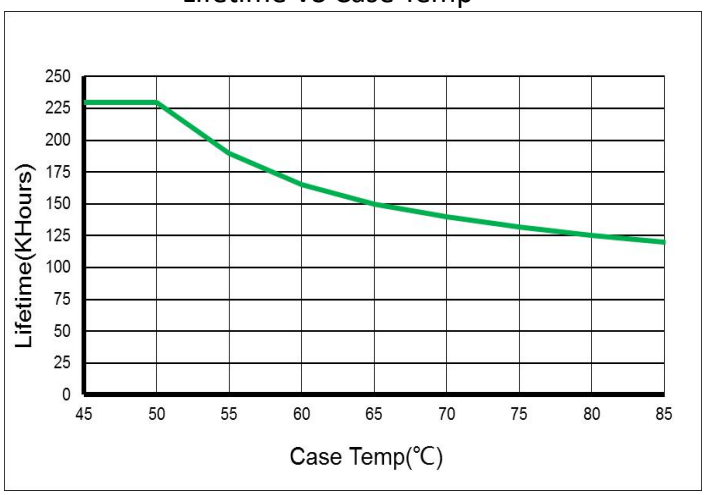




Output VS Ambient Temp



Lifetime VS Case Temp



Output Current VS Input Vrms,Lutron Dimmer