AUTEC POWER SYSTEMS
...POWERmatters.

"Compact Design" LWA320-CXXX-XYZ-B Series

320W, 90-305Vac Input, Constant Current Programmable LED Driver

RoHS Compliant

Features

- Power Rating: 320W
- Input Voltage: 90-305Vac
- Constant current design
- Output current settable(1050mA-4200mA)
- +/-2% Output Current Accuracy (Programmable Model)
- Near Field Communication Programmability
- High-Efficiency @ 90% and above
- 0-10V/PWM/Timer/DALI/DMX (Optional) Dimming
- Dim to Off with 0.5W Standby Power
- Optional External Thermal Protection NTC
- UL Class P, Type HL
- OVP, SCP, & OTP
- IP67
- 5+ year warranty
- Surge Immunity 10kV

*Product images are for illustrative purposes only and may vary from actual design.

Application

- Bay lights, Pole lights, Stadium lights, Horticultural lighting

Model List*(See part number scheme for model number details)

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min	Output Current Max	Efficiency	Certification
LWA320-C105-XYZ-B	90 ~ 305Vac	320W	182-420Vdc	750mA	1050mA	87% @ 120Vac 90% @ 277Vac	UL/cUL
LWA320-C140-XYZ-B	90 ~ 305Vac	320W	137-305Vdc	1050mA	1400mA	86.5% @ 120Vac 89.5% @ 277Vac	UL/cUL
LWA320-C210-XYZ-B	90 ~ 305Vac	320W	91-229Vdc	1400mA	2100mA	86% @ 120Vac 88.5% @ 277Vac	UL/cUL
LWA320-C700-XYZ-B	90 ~ 305Vac	320W	27-6Vdc	5000mA	7000mA	TBA	UL/cUL

Ordering Options	XY=	Dimming Method	Programmable	12Vaux	Dim-off
	NN	-	-	-	-
	DN	0-10V	-	-	-
	EN	0-10V	-	√	√
	TR	Timer	√	-	-
	DR	0-10V/PWM/Timer	√	-	-
	ER	0-10V/PWM/Timer	√	√	√
	AR	DALI	-	-	√
	MX	DMX	√	-	√
Cable Options	**Z=**	K=UL cable with ground wire (green), S=VDE cable/Class I, D=VDE cable/Class II			
External Thermal Protection NTC Option	**-THR**	LWA320-C105-XYZ-B-THR			

*If ordering DMX, Customer must specify DMX512 or RDM

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■ Technical Data

Input Voltage	90～305Vac or 127V-420Vdc
Input Frequency	47～63Hz
Power Factor	>0.95@60-100%load, refer to PF vs. Load curve
THD	<15%@60-100%load, refer to THD vs. Load curve
Input Current	2.9Amax@120Vac & Full-Load, 1.5Amax@220Vac & Full-Load
Inrush Current	65A peak, 1.2ms duration, <0.25A2s@230Vac, Cold Start 70A peak, 1.3ms duration, <0. 5A2s@277Vac, Cold Start
Leakage Current	1mA max @277Vac 60Hz, UL8750,0.75mAmax @220Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto-restart
Input Over Voltage	*Optional: Shutdown @320Vac
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Current Accuracy	±5%Io
Ripple Current	Ip-p:5%Io max
Setup Time	1.2s max
Overshoot	10% Io max & LED Load
Output Over Voltage	120% Vomax, typ.
Short Circuit	Auto recovery. The output recovers when short is removed.
Over Temperature	Lower the output current when Tc≧105±10℃; Auto Recovery When Tc≦70±10℃
Auxiliary Power (Vaux)	12V+/-5%, 300mA max
Operating Temperature	-40℃～+70℃； 10%RH～100%RH (See Derating Curve for more details）
Storage Temperature	-40℃～+85℃； 5%RH～100%RH
MTBF	≥280,000 hours, 75℃ case temperature (MIL-HDBK-217F)
Lifetime	≥100,000 hours, 75℃ case temperature, refer to life vs. Tc curve
Case Temperature	90℃ max, marked in the Tc point of label
Dimensions	8.81x2.66x1.32 by inch (body), 9.88x2.66x1.32 by inch (endcaps included)
	224 x 68.0x 38.5 by mm (body), 251 x 68 x 38.5 by mm (endcaps included)
Net Weight	1600g
Packing	10pcs/Carton/19kg, 500x370x335mm

Notes: Unless specified, all the test results are measured in 25℃ room temperature.

* Marked items are optional. Please contact Autec Sales to specify the required functions.

■ Safety/EMC Compliance

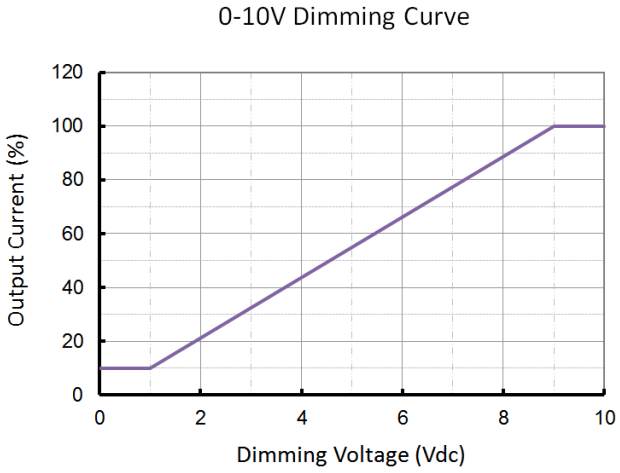
Safety Standards	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012	Power units other than class 2
IEC 61347-1	Lamp control gear Part 1: general and safety requirements
IEC 61347-2-13	Lamp control gear Part 2-13: particular requirement for DC or AC supplied electronic control gear for LED modules
EMI Standards	**Description**
IEC 55015	Conducted emission test & radiated emission test
IEC 61000-3-2	Harmonic current emissions; Class C
IEC 61000-3-3	Voltage fluctuations & flicker
FCC Part 15	ANSI C63.4:2009 Class B
EMS Standards	**Description**
IEC 61000-4-2	Electrostatic discharge (ESD): 8 kV air discharge, 4 kV contact discharge
IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
IEC 61000-4-4	Electrical fast transient (EFT)
IEC 61000-4-5	Surge immunity test
IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
IEC 61000-4-8	Power frequency magnetic field test
IEC 61000-4-11	Voltage dips
IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

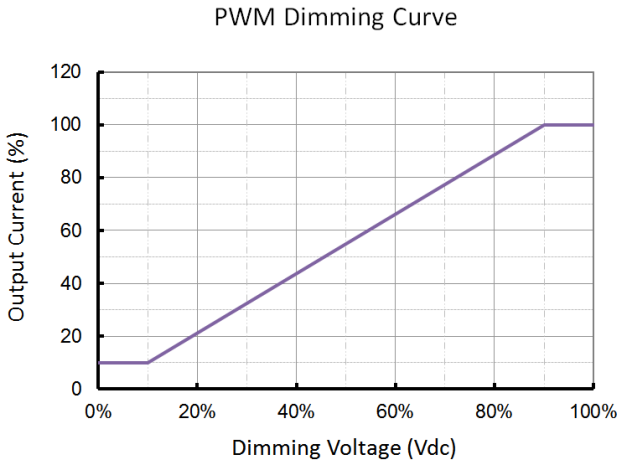
■ Dimming

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim-off threshold		0.5V or 5%	0.6V or 6%
Dim-on threshold	0.6V or 6%	0.7V or 7%	
PWM High	3V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		
DA1,DA2 High Level	9.5	16	22.5
DA1,DA2 Low Level	-6.5	0	6.5
DA1,DA2 Current	0		2mA

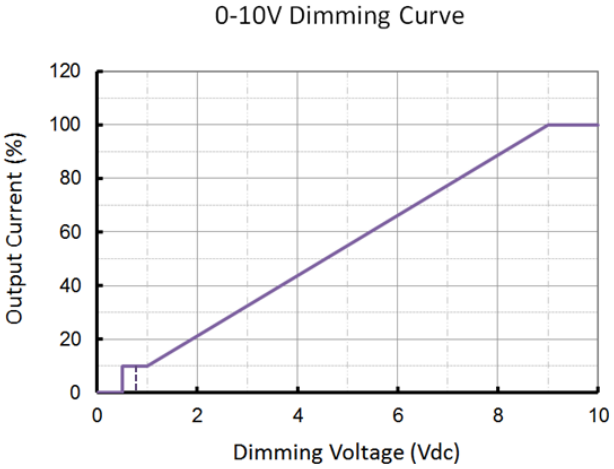
■ Dimming Curve

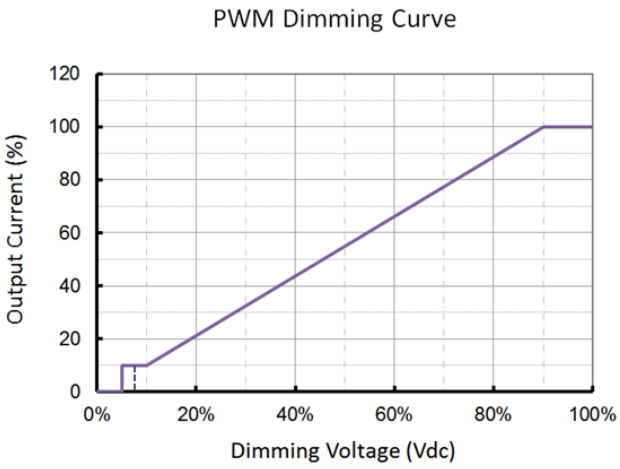
a. Without dim-off



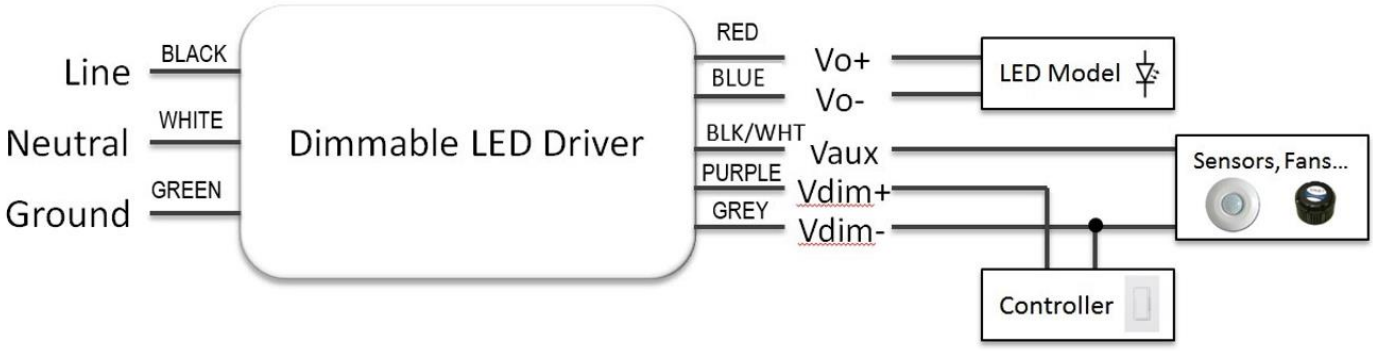


b. With dim-off

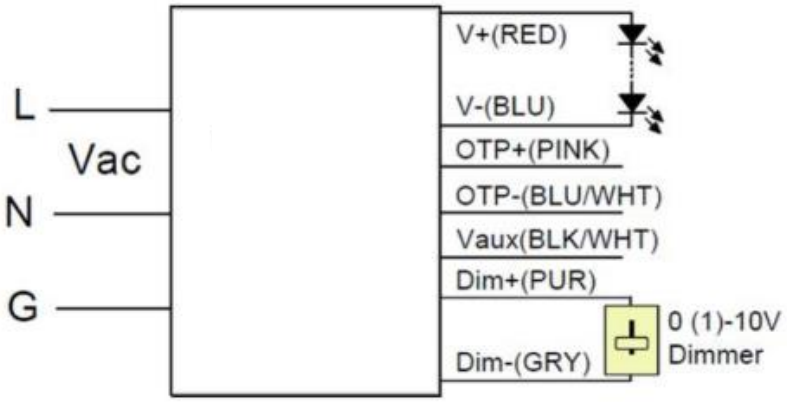




■ Wiring Diagram



■ Wiring Diagram/Optional External Thermal Protection



■ External Thermal Protection Table(optional)

Parameter		Min.	Typ.	Max.	Notes
External Thermal Protection NTC	R1	-	7.81 kOhm	-	When R_NTC falls below R1, External Thermal Protection is triggered, reducing output current until R2 is reached.
	R2	-	4.16 kOhm	-	When R_NTC is less than R2, output current is reduced to the programmed "Protection Current Floor."
	Protection Current Floor	10%Ioset	60%Ioset	100%Ioset	10%Ioset>Iomin (default setting is 60%)
		Iomin	60%Ioset	100%Ioset	10%Ioset≤Iomin (default setting is 60%)

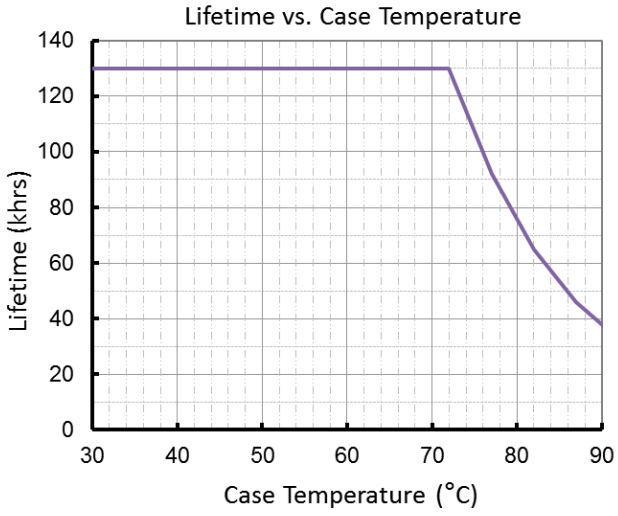
■ Near Field Communication Programmability

Programming Module
REF. Part# UPRG-NFC

NOTES:

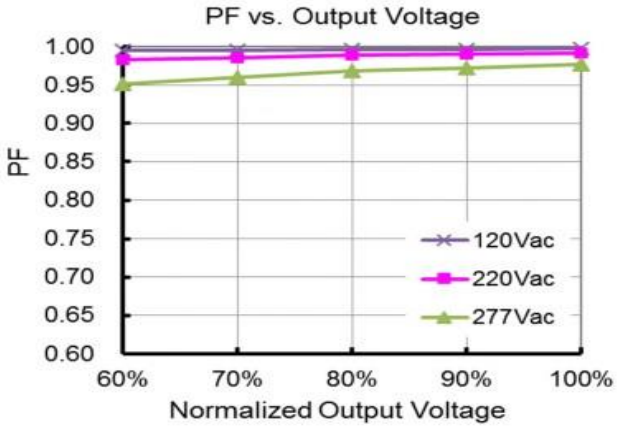
1. The Near Field Communication programming module is used to program the output current, voltage, dimming, and timer settings.
2. The programming function is a non-contact process, which is safer and more efficient compared to traditional programming methods.
3. During programming the LED Driver does not require any external power source.
4. REF. Ordering part number UPRG-NFC (includes programming module, USB cable, and *software).
5. Contact Autec Sales for User Guide and programming software for complete programming instructions.

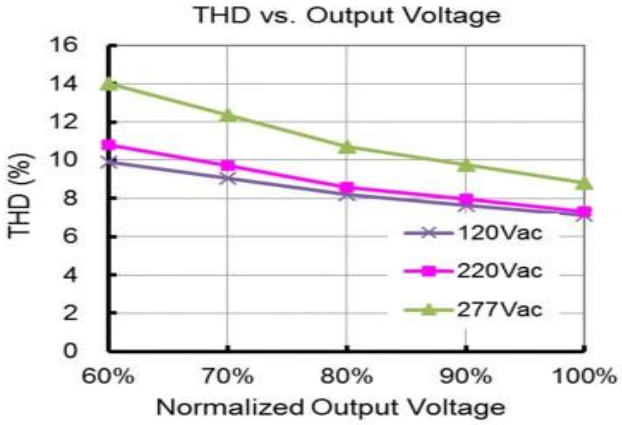
■ Lifetime vs. Case Temperature

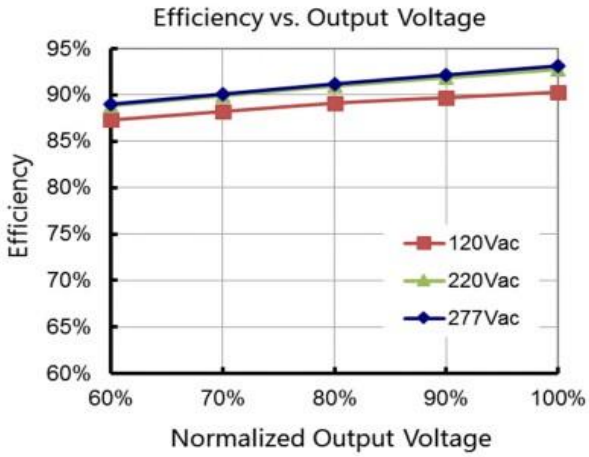


(End of Life: Maximum Failure Rate=10%)

■ Power Factor/Efficiency/THD vs. Load





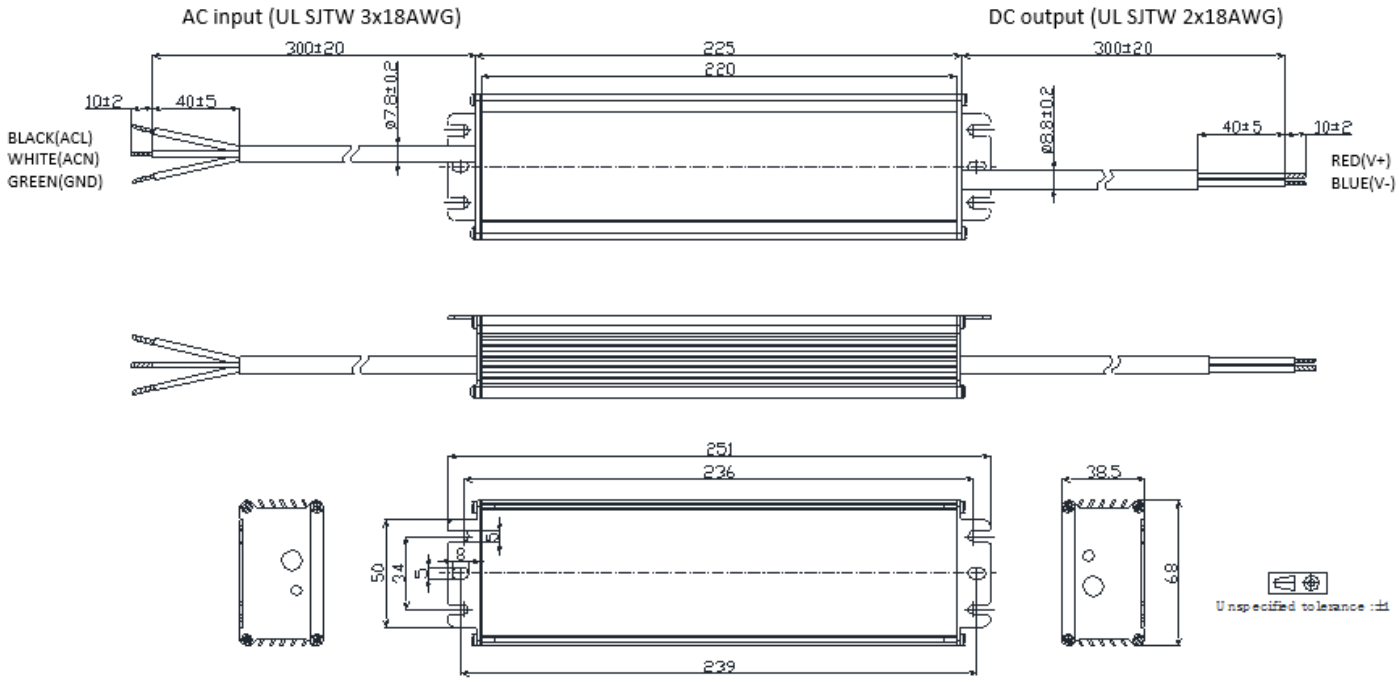


■ Tc Location(LED Driver Label)

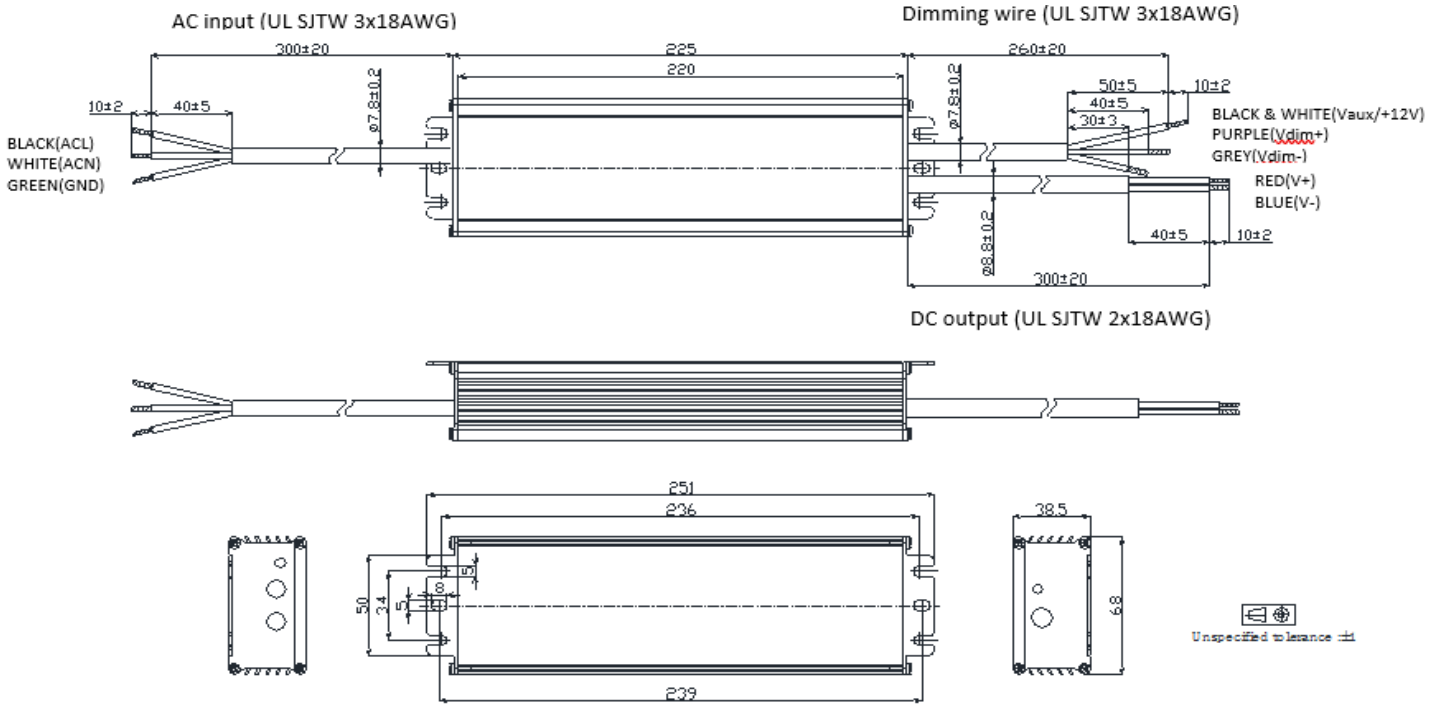
***Contact Autec Sales for Tc Location**

■ Mechanical Design

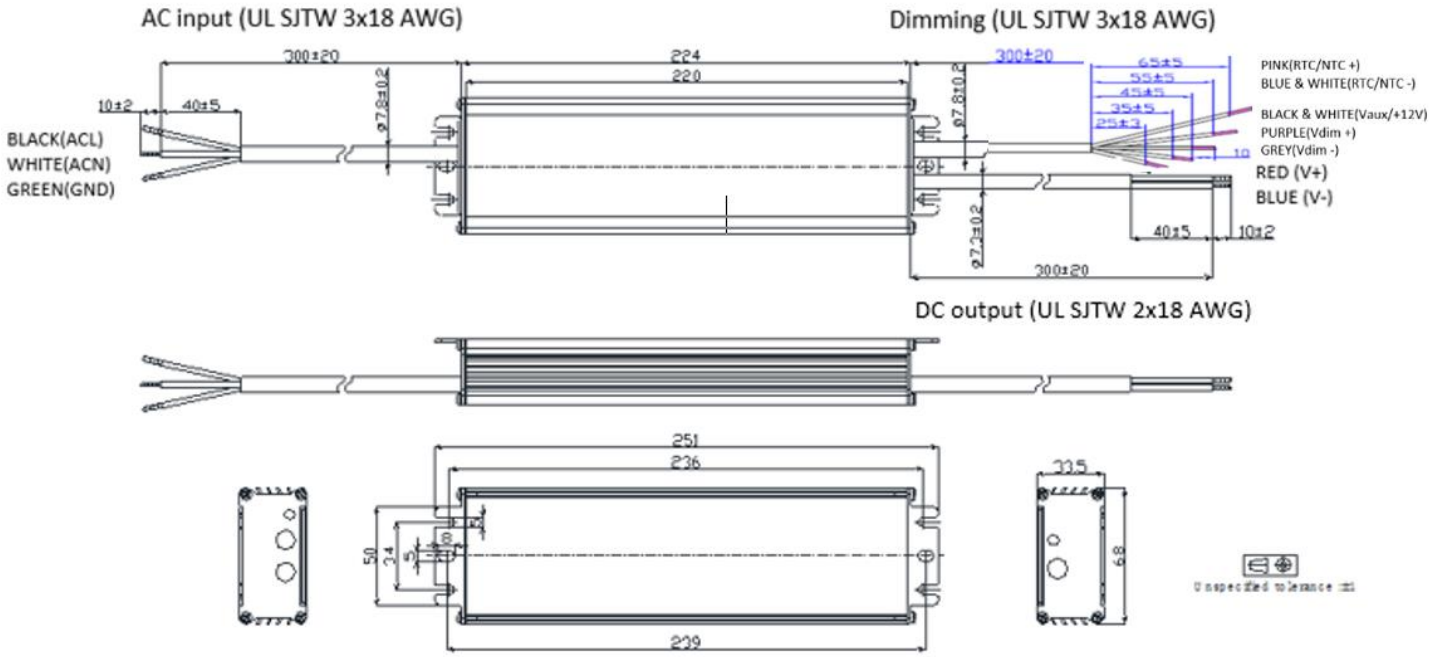
LWA320-Cxxx-NN/TRK-B (UL Cable)



LWA320-Cxxx-ERK-B (UL Cable)



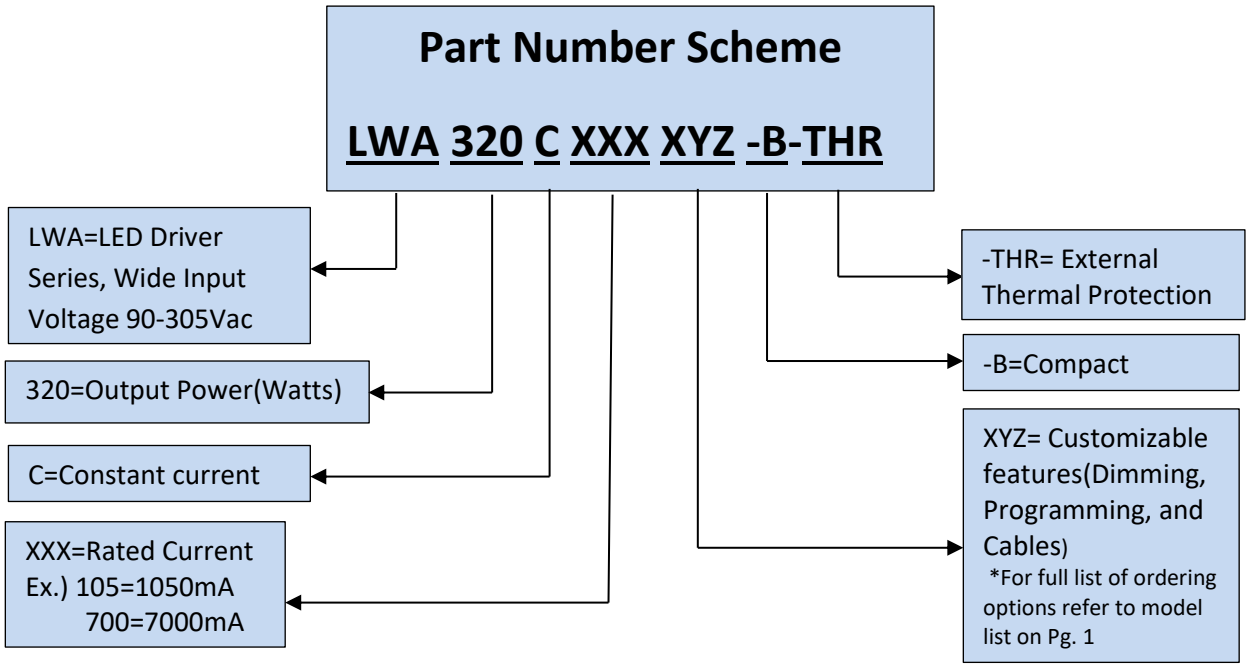
- **LWA320-Cxxx-ERK-B-THR (Optional Thermal Protection)**



Part Number Scheme

LWA 320 C XXX XYZ -B

- LWA=LED Driver Series, Wide Input Voltage 90-305Vac
- 320=Output Power(Watts)
- C=Constant current
- XXX=Rated Current Ex.) 105=1050mA 700=7000mA
- XYZ= Customizable features(Dimming, Programming, and Cables) *For full list of ordering options refer to model list on Pg. 1
- -B=Compact



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***Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**