

■ Features

- Power Rating: 75W
- Input Voltage: 100-277Vac
- Constant current design
- Output current settable(350mA-2800mA)
- +/-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, Class 2
- OVP, SCP, & OTP
- Tc = 90°C
- IP67
- 5+ year warranty
- Surge Immunity 10kV



RoHS Compliant



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

■ Application

- Bay lights, Street lights, Tunnel lights, Flood lights, Horticultural lighting

■ Model List

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min	Output Current Max	Efficiency	Certification
LWA075-C050-XYZ	120-277Vac	75W	90-214Vdc	350mA	500mA	TBD	UL/cUL
LWA075-C070-XYZ	120-277Vac	75W	64-150Vdc	500mA	700mA	TBD	UL/cUL
LWA075-C105-XYZ	120-277Vac	75W	43-107Vdc	700mA	1050mA	88.5%@120Vac 91%@277Vac	UL/cUL
LWA075-C140-XYZ	120-277Vac	75W	30-71Vdc	1050mA	1400mA	88%@120Vac 90.5%@277Vac	UL/cUL
LWA075-C210-XYZ	120-277Vac	75W	21-54Vdc	1400mA	2100mA	TBD	UL/cUL
LWA075-C280-XYZ	120-277Vac	75W	16-36Vdc	2100mA	2800mA	87.5%@120Vac 90%@277Vac	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	√	-	√
	AN	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	LWA075-C050-XYZ-THR			

75W, 120-277Vac Input, Constant Current Programmable LED Driver

DMX Notes: Works with DMX-512 Presently. DMX Dimming range 10-100% (1% DMX command will be treated as 10% Dimming). Recommended number of LED drivers per DMX channel is ~32, and ~40 meter (132 ft) drop length. You may need a DMX signal amplifier for quantities above 32 drivers per channel, with a maximum allowed of 150 drivers per single channel.

■ Technical Data

Input Voltage	120-277Vac or 127V-420Vdc
Input Frequency	47~63Hz
Power Factor	>0.9@60-100%load, refer to PF vs. Load curve
THD	<15%@60-100%load, refer to THD vs. Load curve
Input Current	0.8Amax@120Vac & Full-Load, 0.4Amax@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 $T_c \geq 105 \pm 10^\circ\text{C}$; Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$ 105 +/- 10°C (relates to internal component temperature / optional settings are possible, contact Autec sales)
Auxiliary Power (Vaux)	12V+/-5%, 300mA max
Operating Temperature	-40°C~+70°C ; 10%RH~100%RH (See Derating Curve for more details)
Storage Temperature	-40°C~+85°C; 5%RH~100%RH
MTBF	≥320,000 hours, 75°C case temperature (MIL-HDBK-217F)
Lifetime	≥100,000 hours, 75°C case temperature, refer to life vs. Tc curve
Case Temperature	90°C max, marked in the Tc point of label
Dimensions	5.16x2.66x1.32 by inch (body), 6.22x2.66x1.32 by inch (endcaps included) 131.0x67.5x33.5 by mm (body), 158.0x67.5x33.5 by mm (endcaps included)
Net Weight	650g
Packing	25pcs/Carton/17.3kg, 490x370x315mm

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

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

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March 19, 2020

■ Safety/EMC Compliance

Safety Standards	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012/1310	Power units other than class 2 / Class 2 power units
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

Disclaimer:

Autec Power Systems' (Autec) LED Drivers are Hi-Pot tested during the manufacturing process. Autec assumes no responsibility for secondary Hi-Pot testing at customer location or designated production line(s). Should customer require further Hi-Pot testing, at their own production line, following assembly of the LED Driver into the customer's assembled fixture, Autec requests advance notice. This request must be communicated to Autec in a timely manner and is recommended to be requested at time of issuing each purchase order.

■ 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	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim-on threshold	0.6V or 6%	0.7V or 7%	0.8V or 8%
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

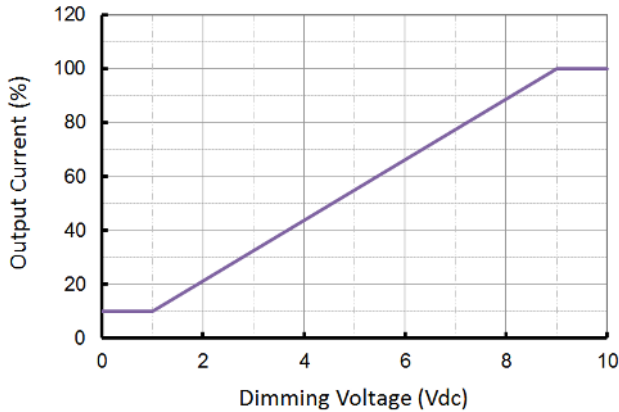
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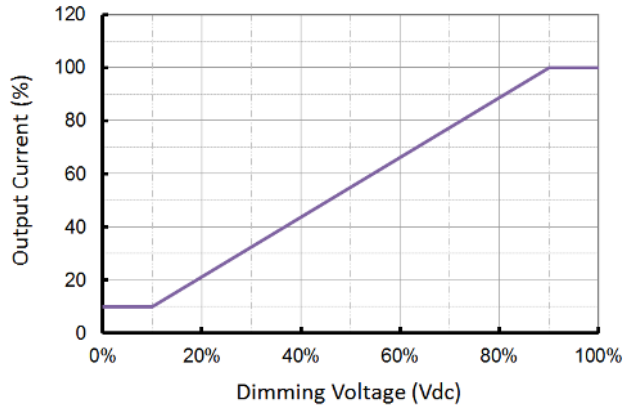
■ **Dimming Curve**

a. **Without dim-off**

0-10V Dimming Curve

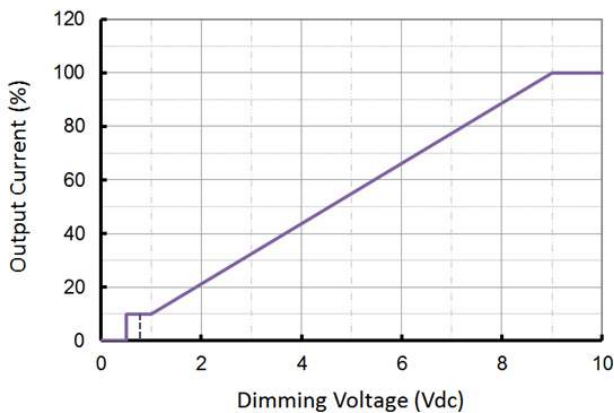


PWM Dimming Curve

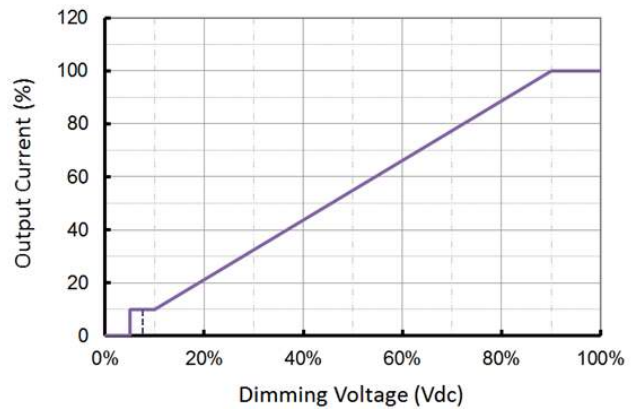


b. **With dim-off**

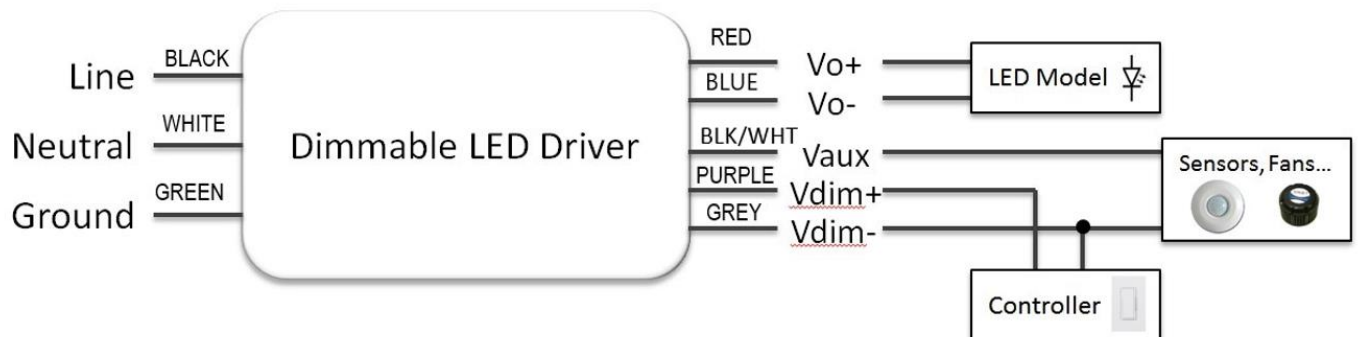
0-10V Dimming Curve



PWM Dimming Curve



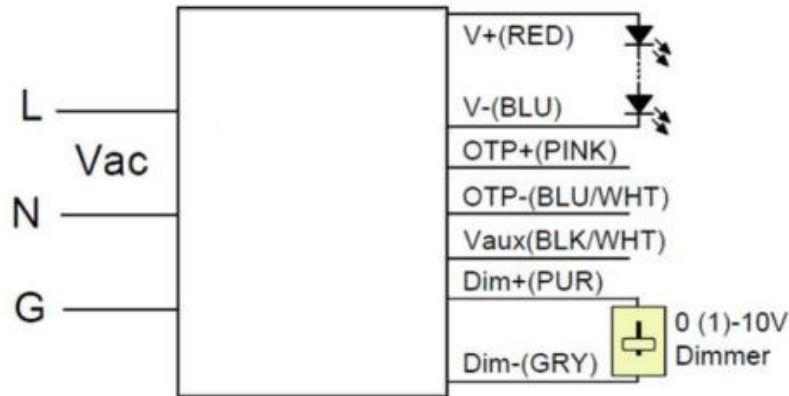
■ **Wiring Diagram**



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■ 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%loset	60%loset	100%loset	10%loset > lomin (default setting is 60%)
		lomin	60%loset	100%loset	10%loset ≤ lomin (default setting is 60%)

■ **Near Field Communication Programmability**

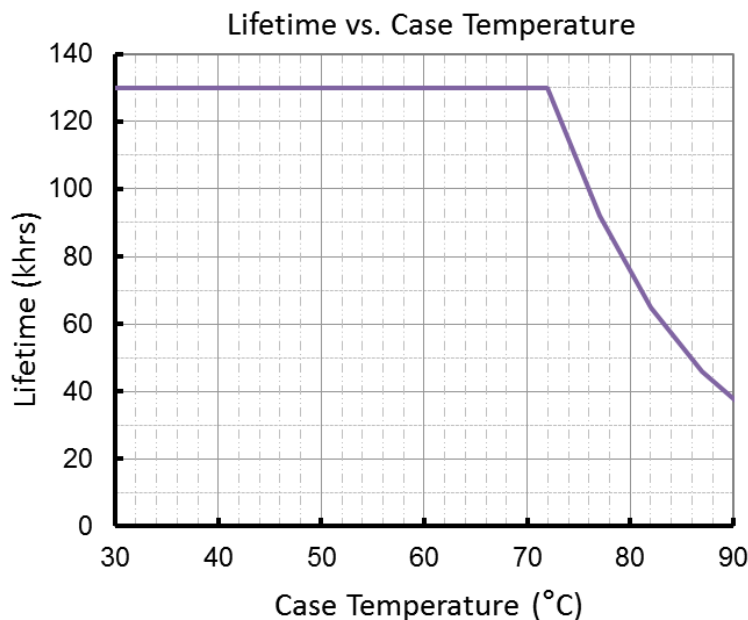


Programming Module
REF. Part# UPRG-NFC

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**

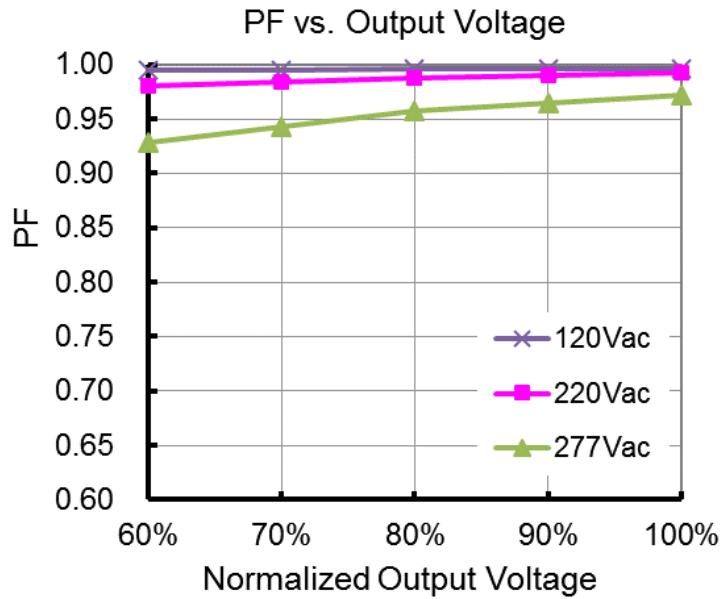


(End of Life: Maximum Failure Rate=10%)

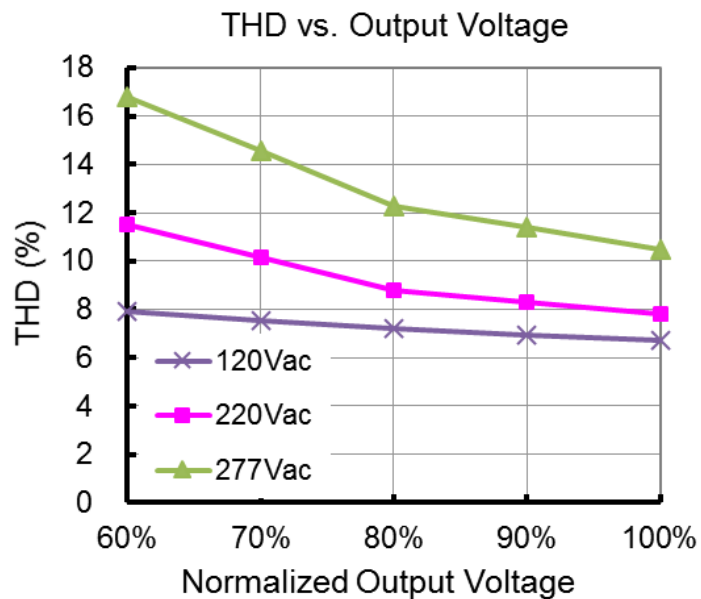
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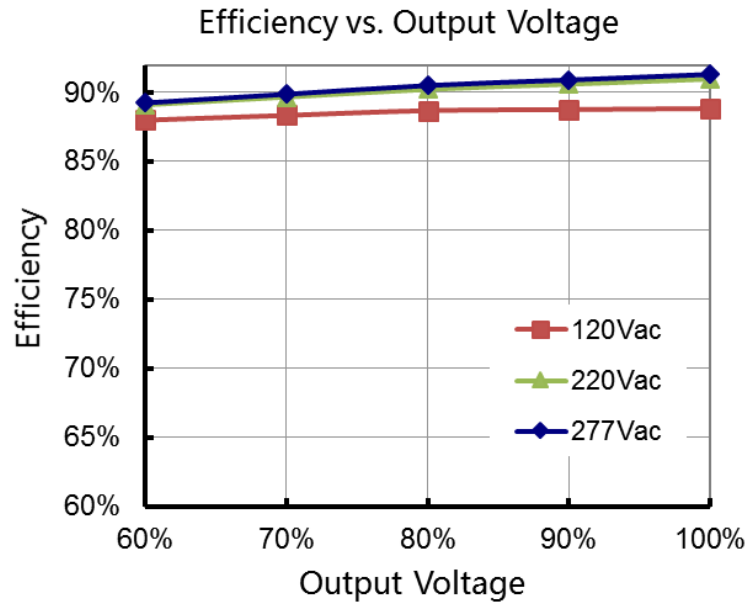
■ Power Factor vs. Load



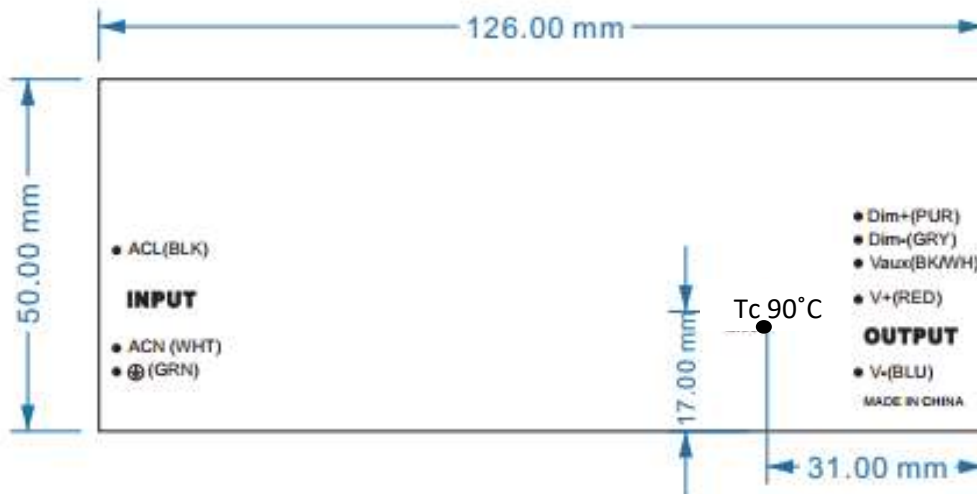
■ THD vs. Load



■ Efficiency vs. Load (1.05A Model)

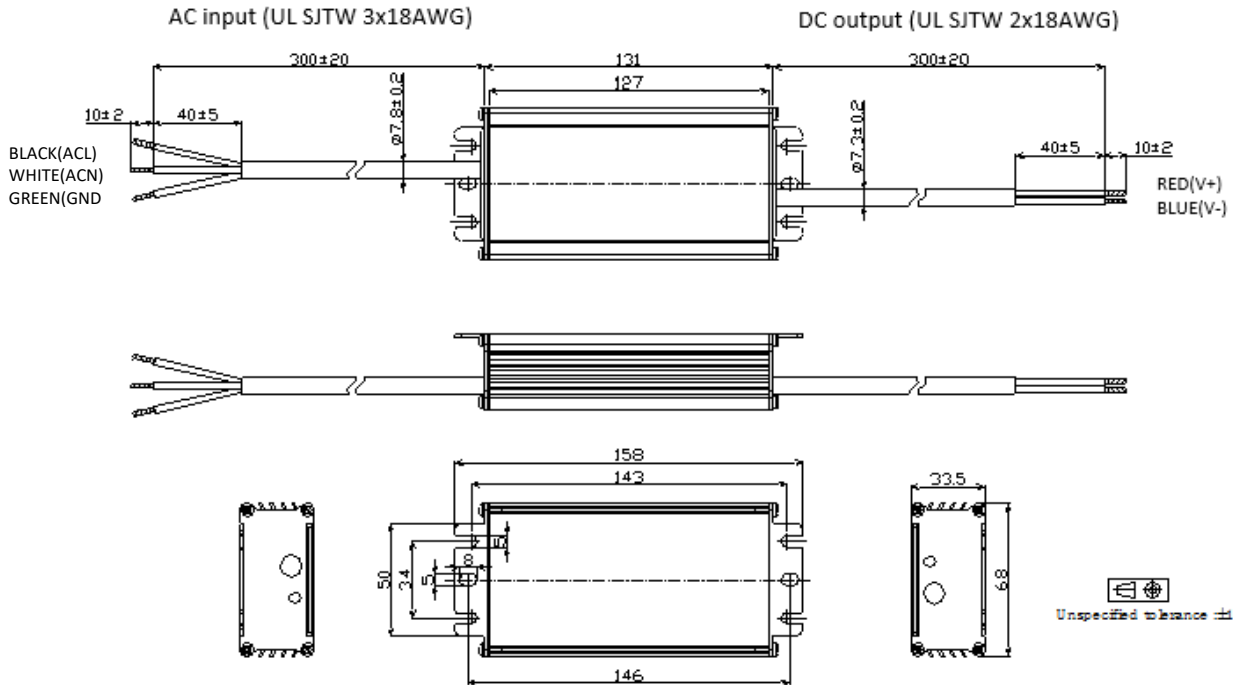


■ Tc Location(LED Driver Label)

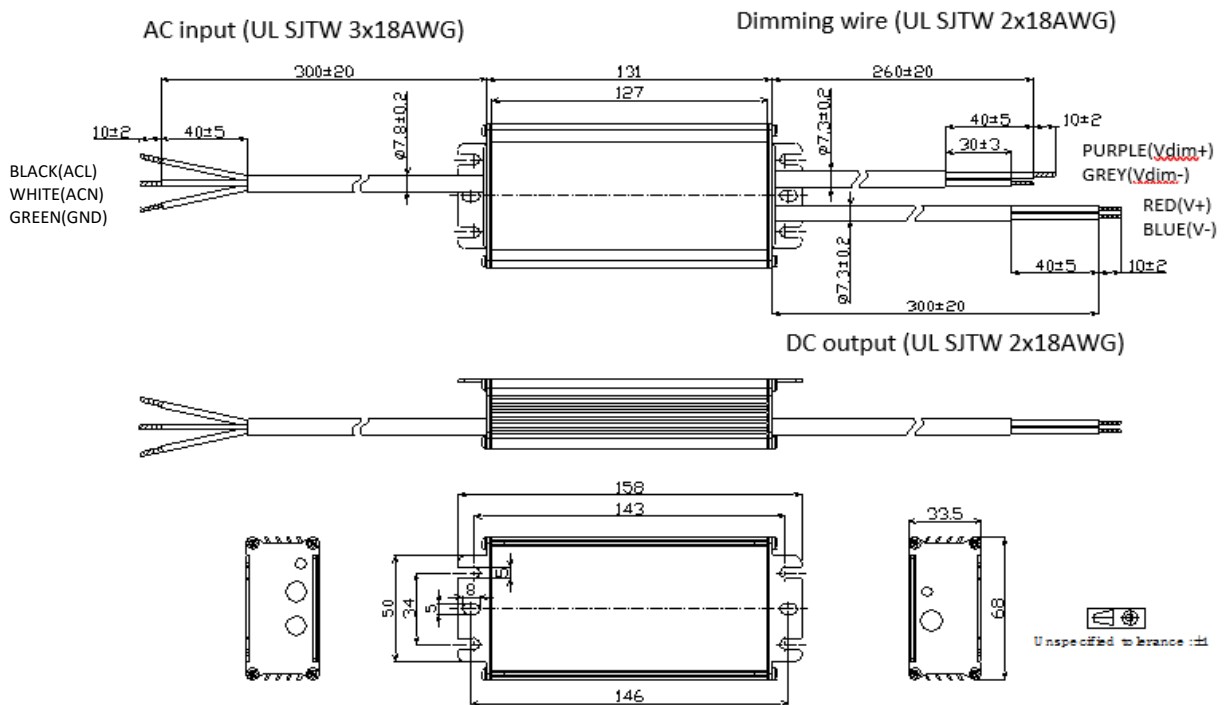


■ Mechanical Design

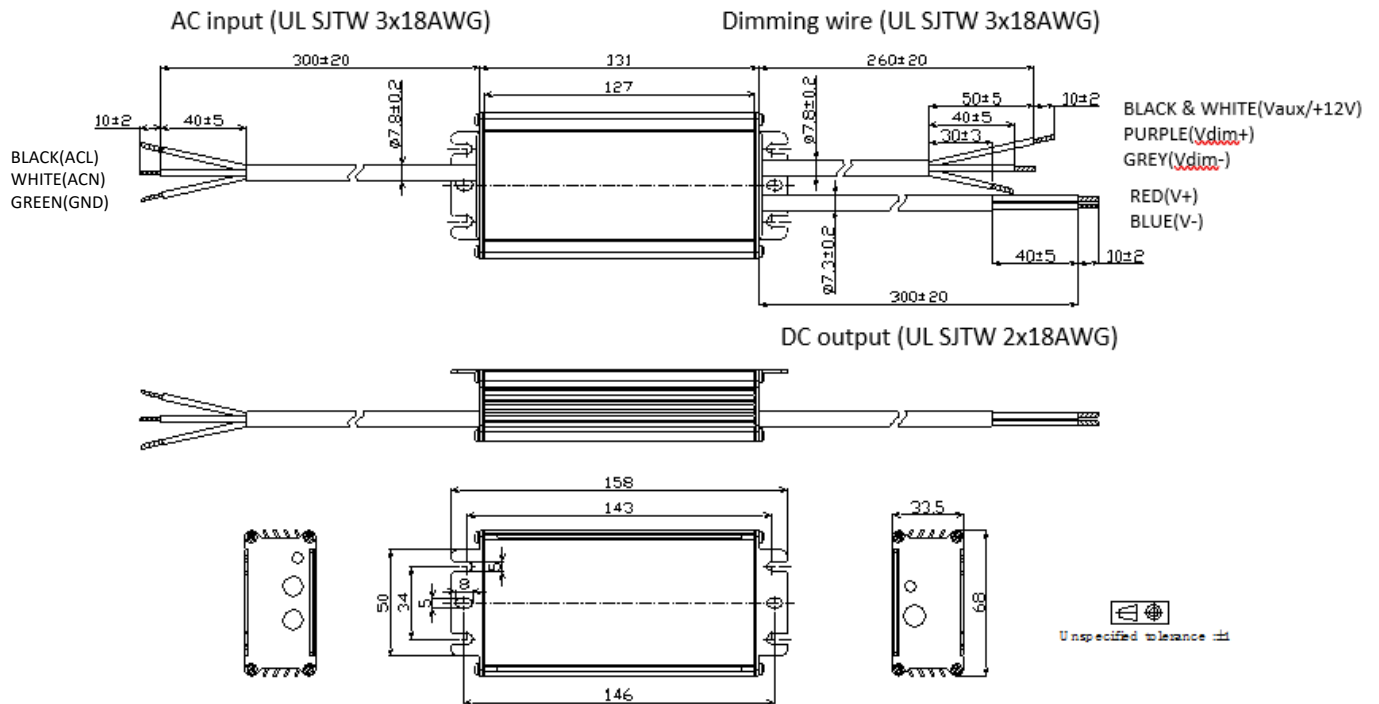
- LWA075-Cxxx-NN/TRK (UL Cable)



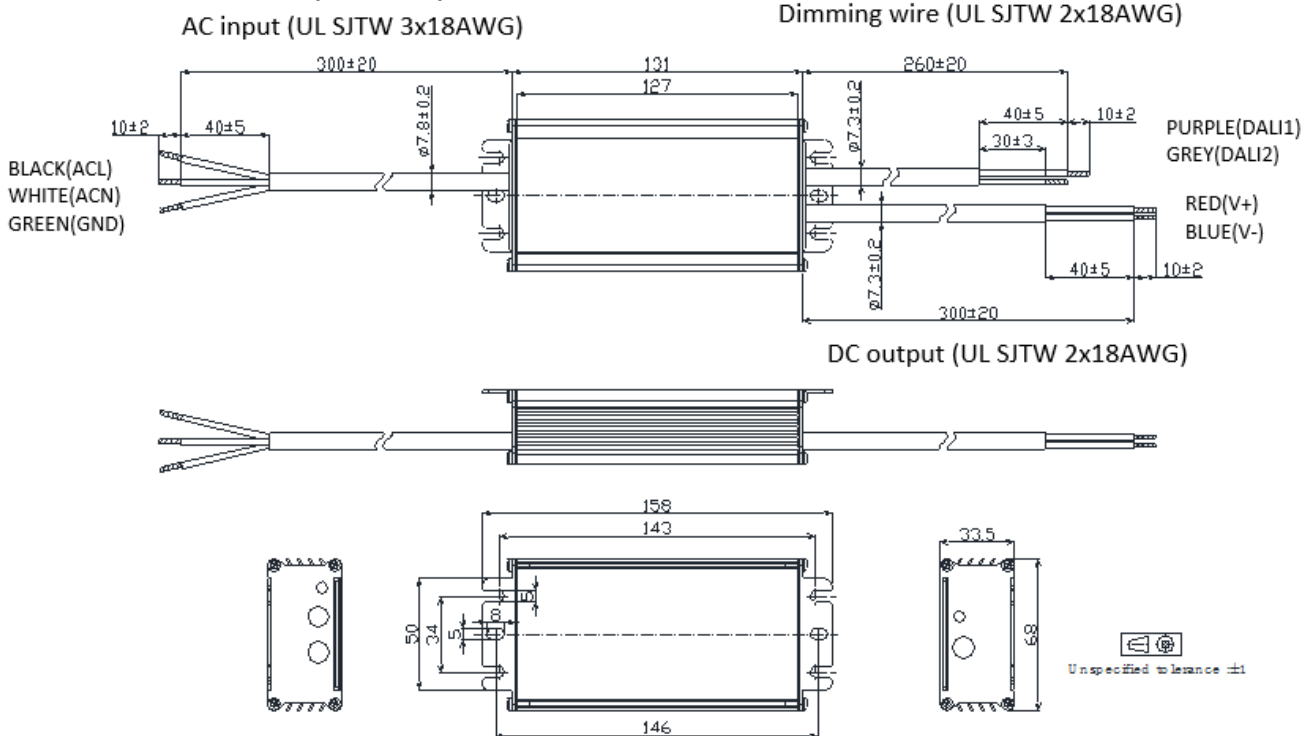
- LWA075-Cxxx-DN/DRK (UL Cable)



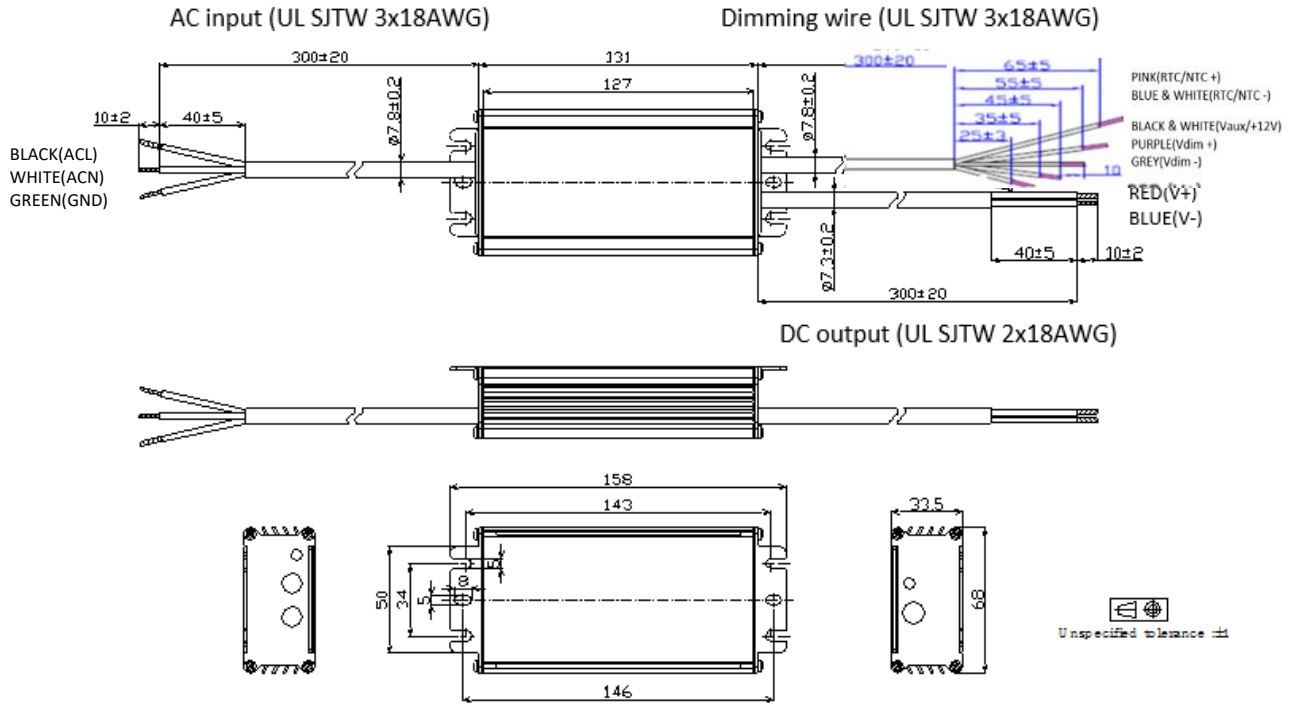
- **LWA075-Cxxx-ERK (UL Cable)**



- **LWA075-Cxxx-ANK (UL Cable)**



- LWA075-Cxxx-ERK-THR (UL Cable)



*Contact Autec Sales for non UL Mechanical Diagrams

■ Operation Range

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C050	500	75	90	150	50
	450	75	100	167	45
	400	75	113	188	40
	350	75	129	214	35
	300	64	129	214	35
	250	54	129	214	35
	200	43	129	214	35
	150	32	129	214	35

	35	8	129	214	35

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C070	700	75	64	107	70
	650	75	69	115	65
	600	75	75	125	60
	550	75	82	136	55
	500	75	90	150	50
	450	68	90	150	50
	400	60	90	150	50
	350	53	90	150	50

	50	8	90	150	50

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C105	1050	75	43	71	105
	1000	75	45	75	100
	950	75	47	79	95
	900	75	50	83	90
	850	75	53	88	85
	800	75	56	94	80
	750	75	60	100	75
	700	75	64	107	70
	650	70	64	107	70
	600	64	64	107	70
	550	59	64	107	70
	500	54	64	107	70

	70	8	64	107	70

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C140	1400	75	32	54	140
	1300	75	35	58	130
	1200	75	38	63	120
	1100	75	41	68	110
	1050	75	43	71	105
	1000	71	43	71	105
	950	68	43	71	105
	900	64	43	71	105
	850	61	43	71	105
	800	57	43	71	105
	750	54	43	71	105
	700	50	43	71	105

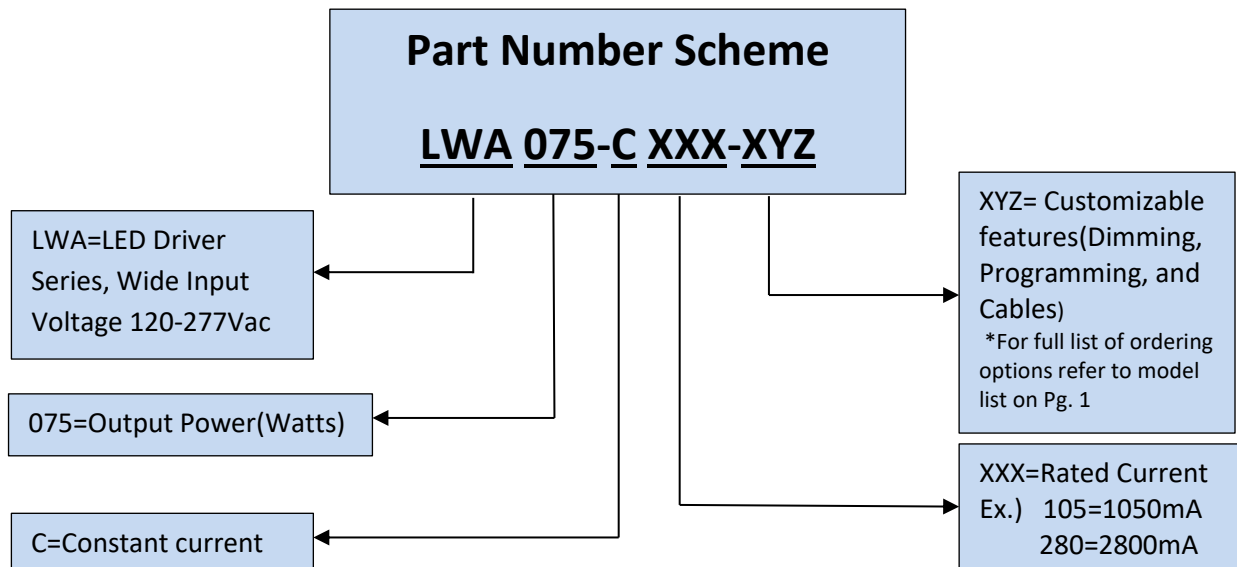
	105	8	43	71	105

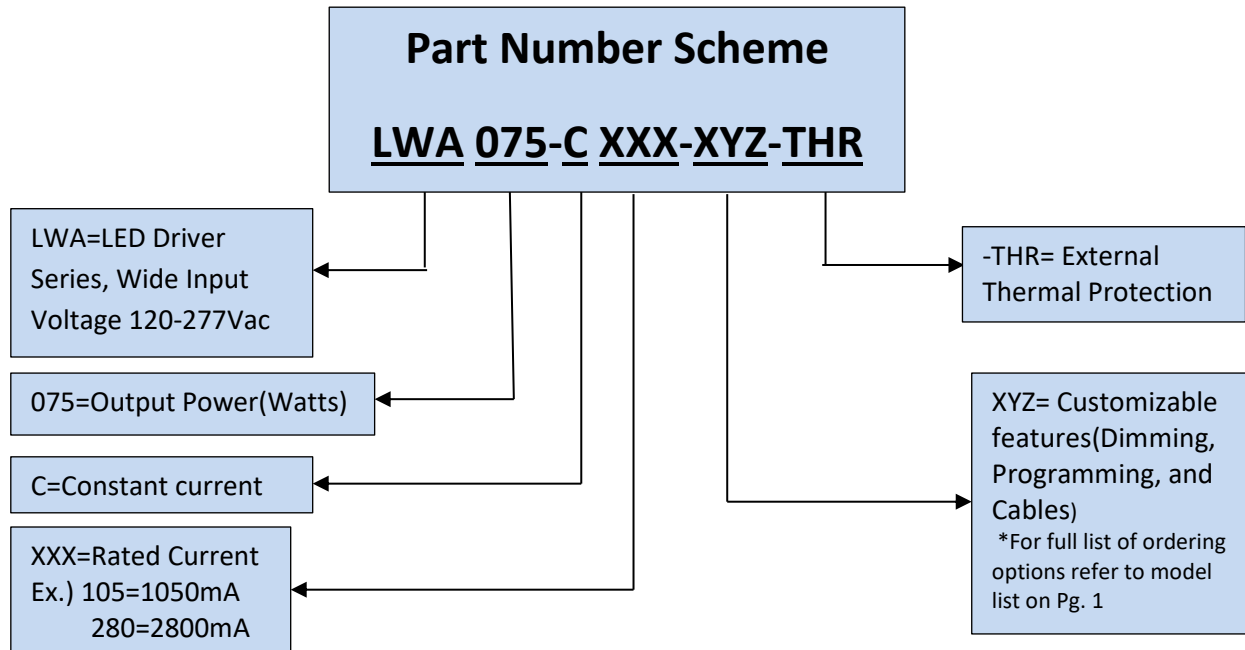
Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C210	2100	75	21	36	210
	2000	75	23	38	200
	1900	75	24	39	190
	1800	75	25	42	180
	1700	75	26	44	170
	1600	75	28	47	160
	1500	75	30	50	150
	1400	75	32	54	140
	1300	70	32	54	140
	1200	64	32	54	140
	1100	59	32	54	140
	1000	54	32	54	140

	140	8	32	54	140

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA075-C280	2800	75	16	27	280
	2700	75	17	28	270
	2600	75	17	29	260
	2500	75	18	30	250
	2400	75	19	31	240
	2300	75	20	33	230
	2200	75	20	34	220
	2100	75	21	36	210
	2000	71	21	36	210
	1900	68	21	36	210
	1800	64	21	36	210
	1700	61	21	36	210

	210	61	21	36	210





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

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