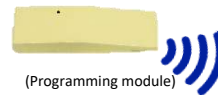


■ **Features**

- Power Rating: 150W
- Input Voltage: 120-277Vac
- Constant current design
- Output current settable(350mA-6300mA)
- +/-2% Output Current Accuracy (Programmable Mode)
- 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
- Tc = 90°C
- IP67
- 5+ year warranty
- Surge Immunity 10kV



*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
LWA150-C050-XYZ	120-277 Vac	150W	180-429Vdc	350mA	500mA	TBD	UL/cUL
LWA150-C070-XYZ	120-277 Vac	150W	129-300Vdc	500mA	700mA	TBD	UL/cUL
LWA150-C105-XYZ	120-277 Vac	150W	86-214Vdc	700mA	1050mA	89.5% @ 120Vac 92% @ 277Vac	UL/cUL
LWA150-C140-XYZ	120-277 Vac	150W	64-143Vdc	1050mA	1400mA	89% @ 120Vac 91.5% @ 277Vac	UL/cUL
LWA150-C210-XYZ	120-277 Vac	150W	43-107Vdc	1400mA	2100mA	88.5% @ 120Vac 91% @ 277Vac	UL/cUL
LWA150-C380-XYZ	120-277 Vac	150W	24-58Vdc	2600mA	3800mA	88% @ 120Vac 90.5% @ 277Vac	UL/cUL
LWA150-C630-XYZ	120-277 Vac	150W	14-38Vdc	4000mA	6300mA	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	√	√	√

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150W, 120-277Vac Input, Constant Current Programmable LED Driver

Ordering Options	XY=	Dimming Method	Programmable	12Vaux	Dim-off
	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	LWA040-C070-XYZ-THR			

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	1.4Amax@120Vac & Full-Load, 0.75Amax@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, UL8750,0.75mAmx @220Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto-restart
Input Over Voltage	*Optional: Shutdown @320Vac
Surge Protection	Line to line 4kV, line to ground 10kV, IEC 61000-4-5
Current Accuracy	±5%lo
Ripple Current	Ip-p:5%lo max
Setup Time	1.2s max
Overshoot	10% lo 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	6.34x2.66x1.32 by inch (body), 7.40x2.66x1.32 by inch (endcaps included) 161.0x67.5x33.5 by mm (body), 188.0x67.5x33.5 by mm (endcaps included)
Net Weight	800g
Packing	25pcs/Carton/21kg, 490x370x230mm

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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■ 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

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		
DALI Interface Standard		IEC62386	
DA1,DA2 High Level	9.5	16	22.5
DA1,DA2 Low Level	-6.5	0	6.5
DA1,DA2 Current	0		2mA

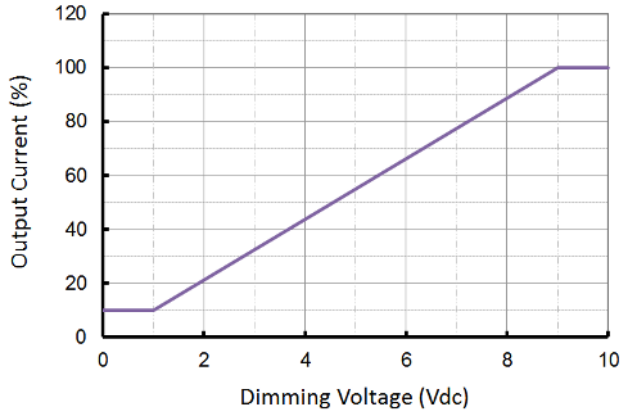
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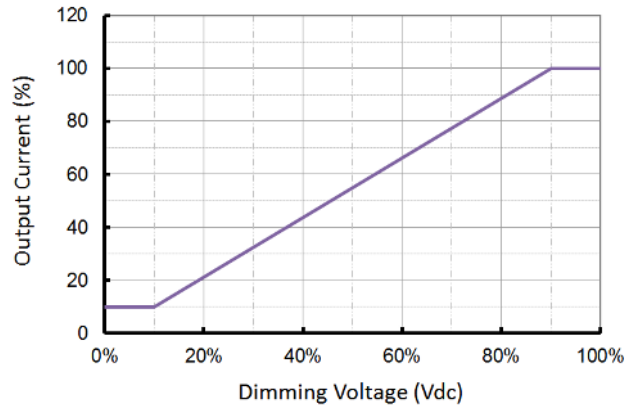
■ **Dimming Curve**

a. **Without dim-off**

0-10V Dimming Curve

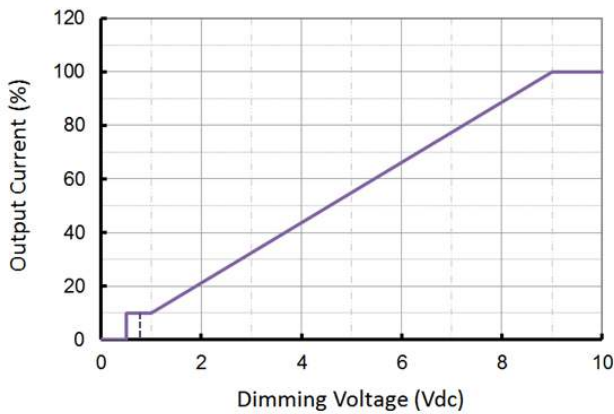


PWM Dimming Curve

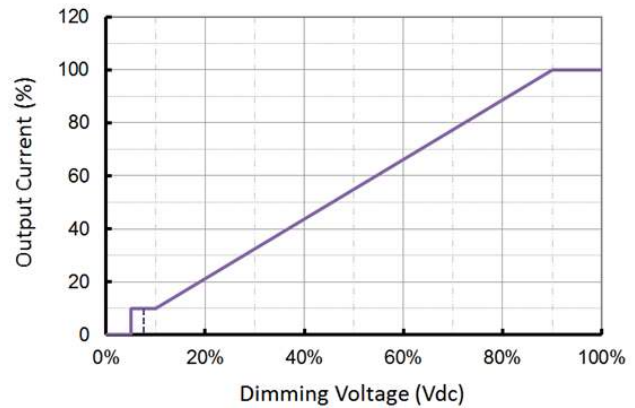


b. **With dim-off**

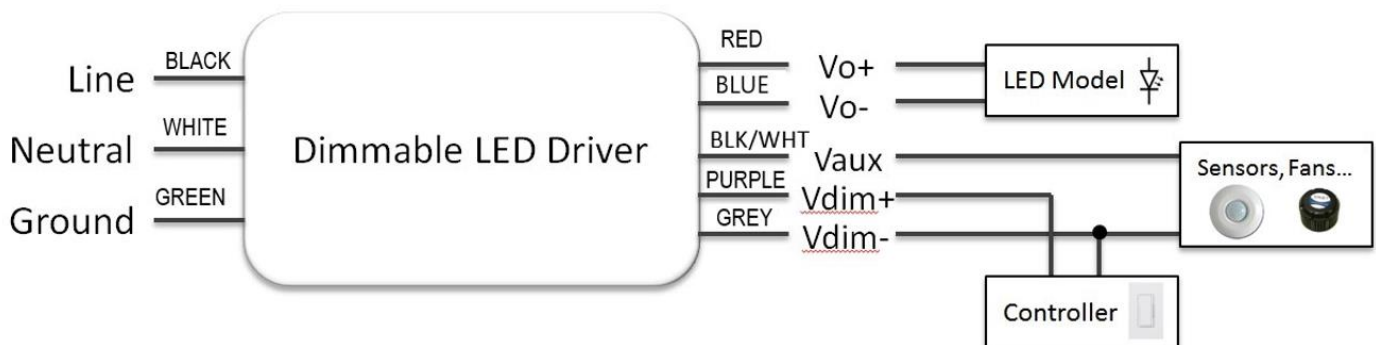
0-10V Dimming Curve



PWM Dimming Curve



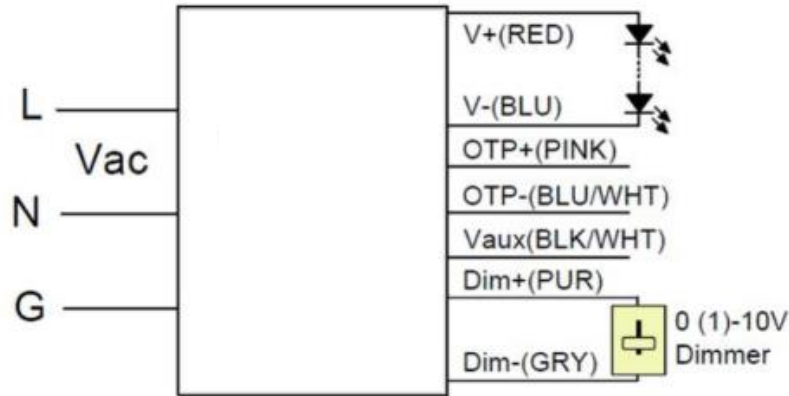
■ **Wiring Diagram**



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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 > I _{omin} (default setting is 60%)
I _{omin}		60%loset	100%loset	10%loset ≤ I _{omin} (default setting is 60%)	

■ Near Field Communication Programmability

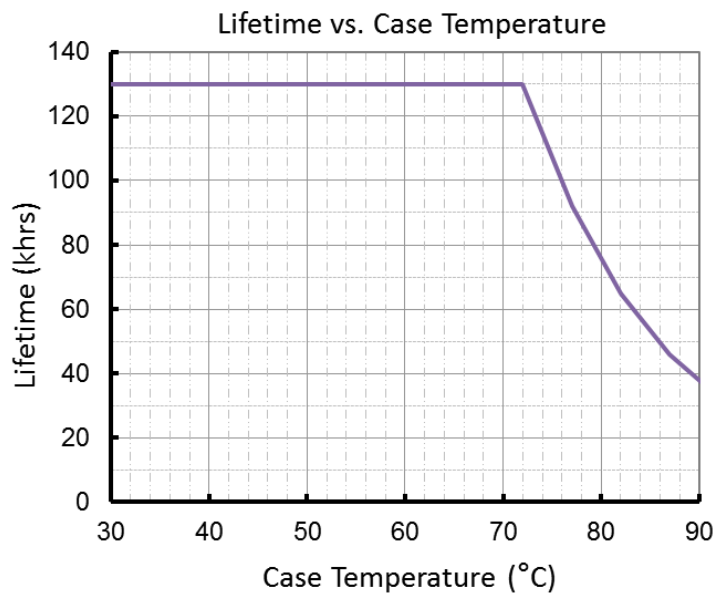


Programming Module
REF. Part# UPRG-NFC

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

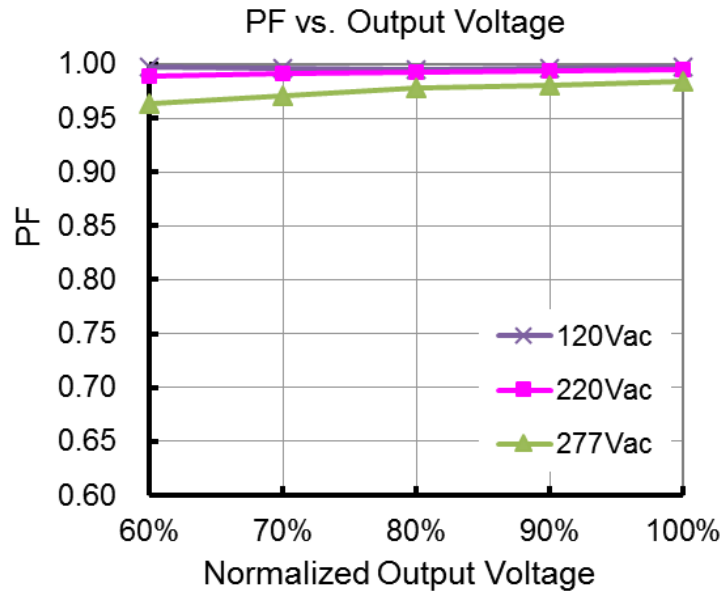


(End of Life: Maximum Failure Rate=10%)

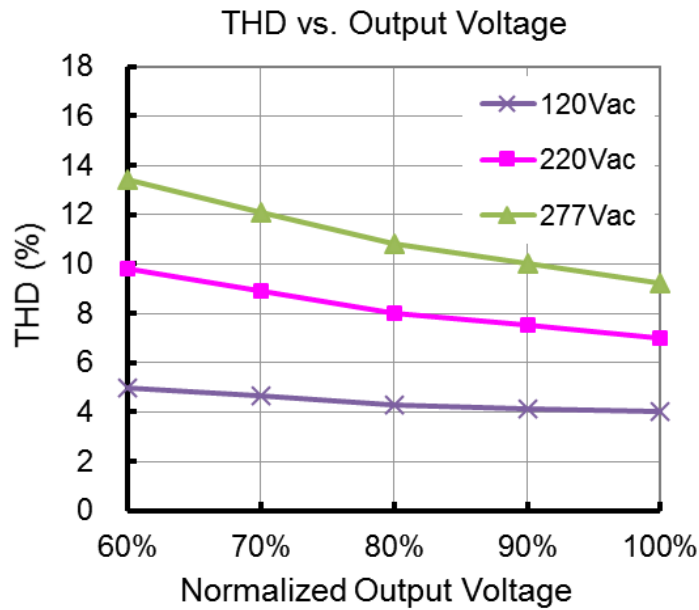
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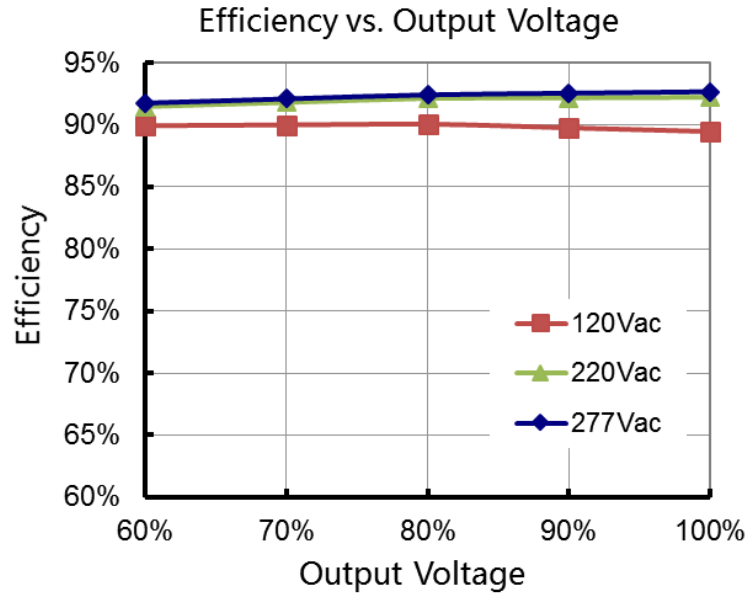
■ Power Factor vs. Load



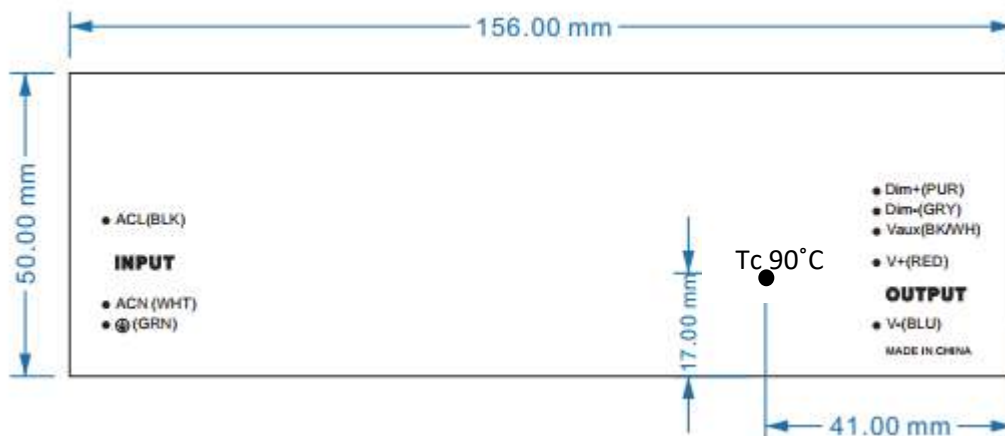
■ THD vs. Load



■ Efficiency vs. Load (1.05A Model)



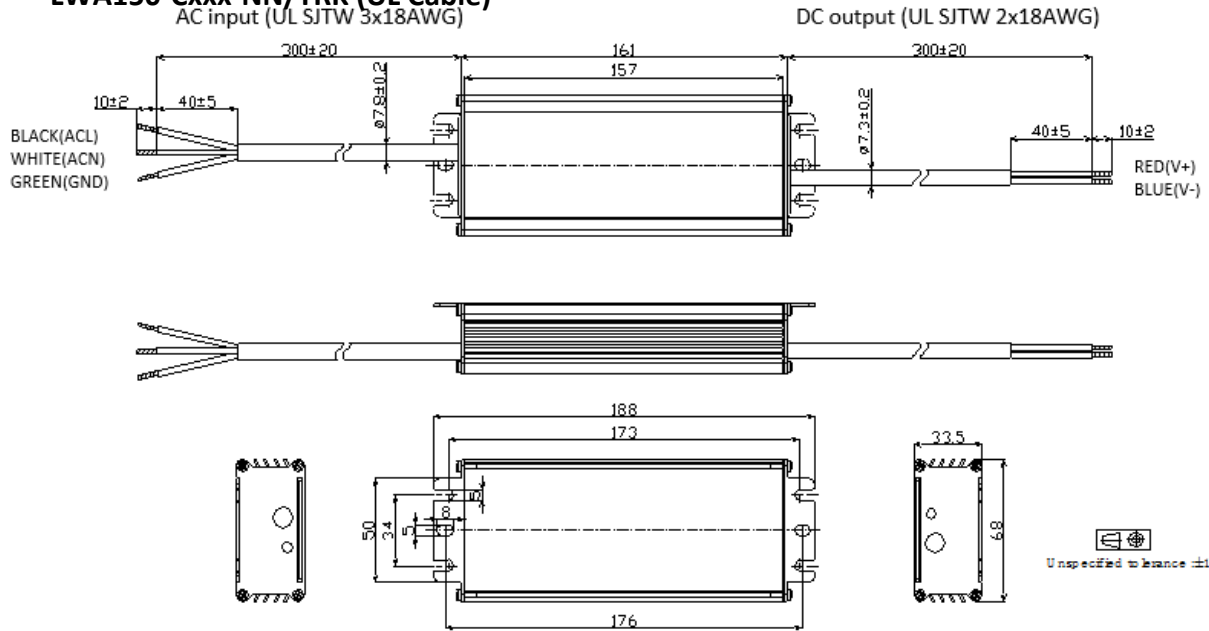
■ Tc Location(LED Driver Label)



■ Mechanical Design

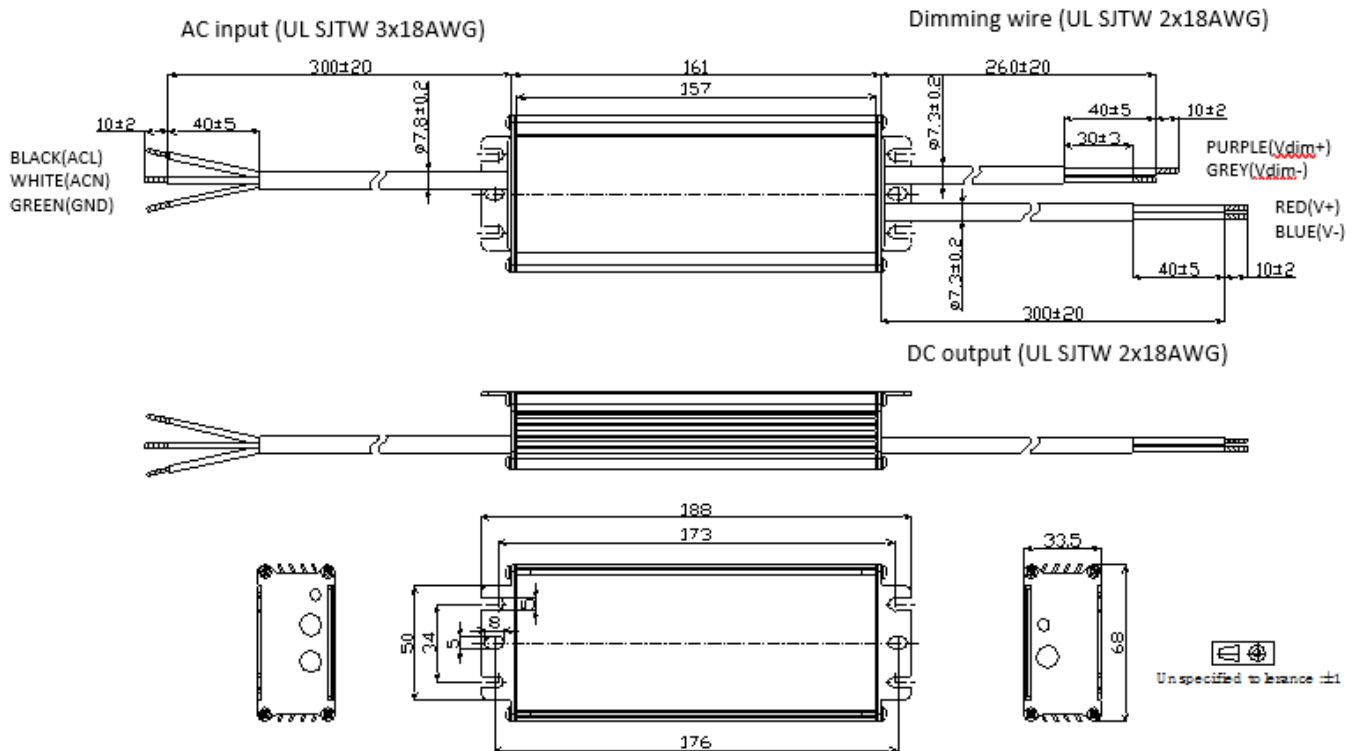
- LWA150-Cxxx-NN/TRK (UL Cable)

AC input (UL SJTW 3x18AWG)

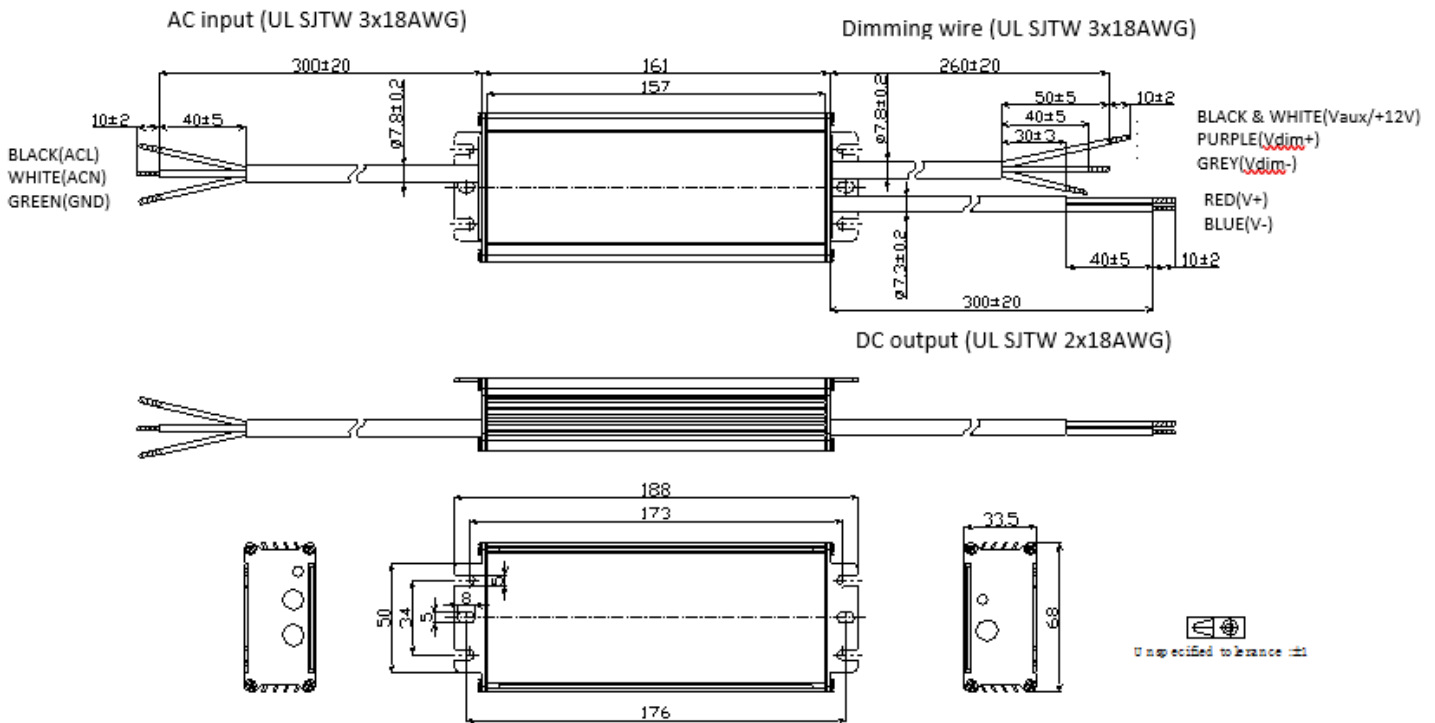


- LWA150-Cxxx-DN/DRK (UL Cable)

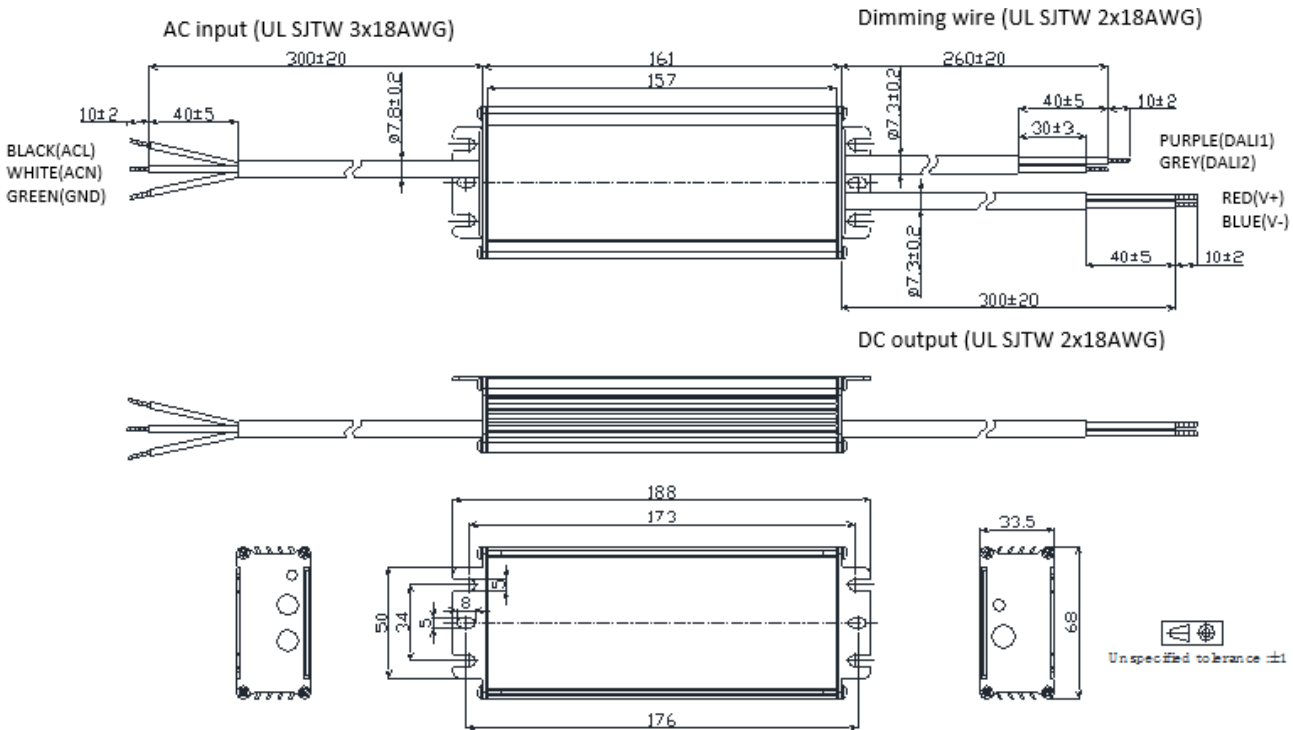
AC input (UL SJTW 3x18AWG)



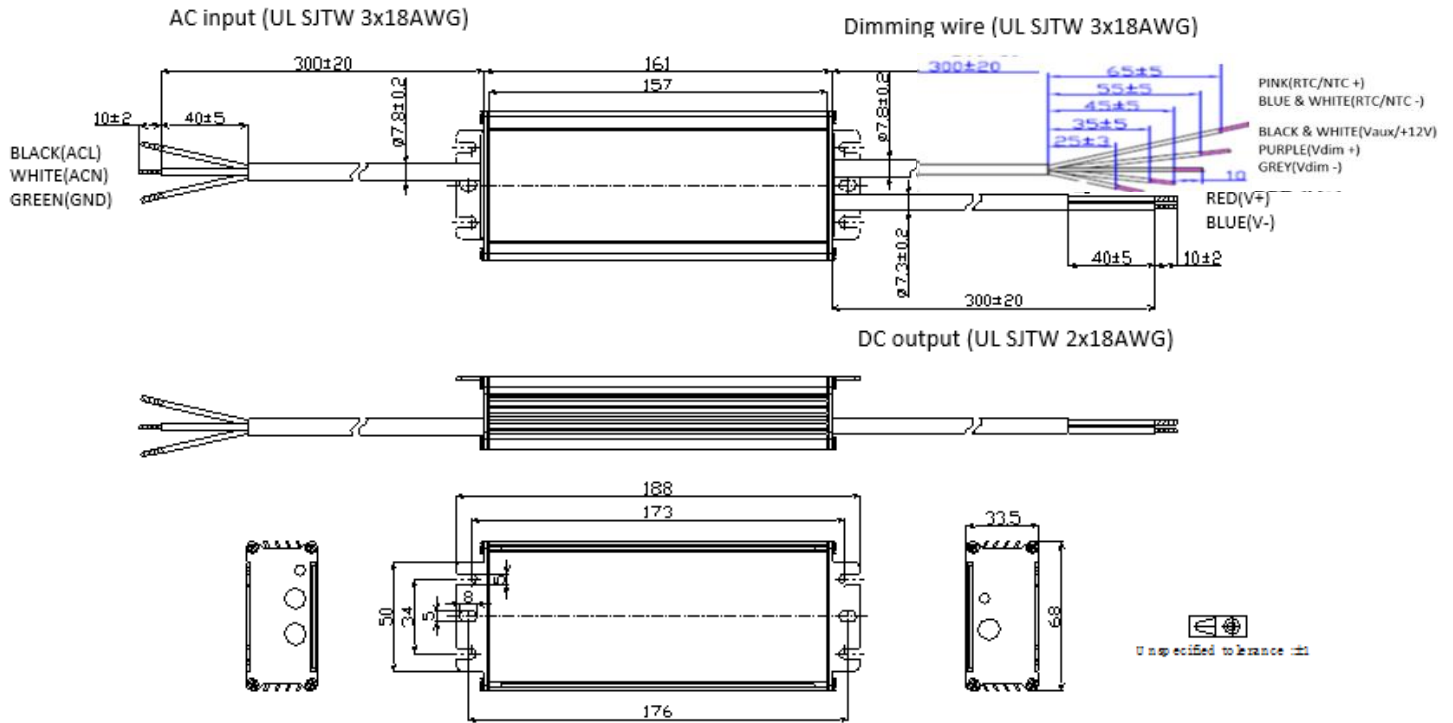
- **LWA150-Cxxx-ERK (UL Cable)**



- **LWA150-Cxxx-ANK (UL Cable)**



- **LWA150-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)
LWA150-C050	500	150	180	300	50
	450	150	200	333	45
	400	150	225	375	40
	350	150	257	429	35
	300	129	257	429	35
	250	107	257	429	35
	200	86	257	429	35
	150	64	257	429	35

	35	15	257	429	35

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150W, 120-277Vac Input, Constant Current Programmable LED Driver

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C070	700	150	129	214	70
	650	150	138	231	65
	600	150	150	250	60
	550	150	164	273	55
	500	150	180	300	50
	450	135	180	300	50
	400	120	180	300	50
	350	105	180	300	50

	50	15	180	300	50

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C105	1050	150	86	143	105
	1000	150	90	150	100
	950	150	95	158	95
	900	150	100	167	90
	850	150	106	176	85
	800	150	113	188	80
	750	150	120	200	75
	700	150	129	214	70
	650	139	129	214	70
	600	129	129	214	70
	550	118	129	214	70
	500	107	129	214	70

	70	15	129	214	70

150W, 120-277Vac Input, Constant Current Programmable LED Driver

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C140	1400	150	64	107	140
	1300	150	69	115	130
	1200	150	75	125	120
	1100	150	82	136	110
	1050	150	86	143	105
	1000	143	86	143	105
	950	136	86	143	105
	900	129	86	143	105
	850	121	86	143	105
	800	114	86	143	105
	750	107	86	143	105
	700	100	86	143	105

	105	15	86	143	105

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C210	2100	150	43	71	210
	2000	150	45	75	200
	1900	150	47	79	190
	1800	150	50	83	180
	1700	150	53	88	170
	1600	150	56	94	160
	1500	150	60	100	150
	1400	150	64	107	140
	1300	139	64	107	140
	1200	129	64	107	140
	1100	118	64	107	140
	1000	107	64	107	140

	140	15	64	107	140

150W, 120-277Vac Input, Constant Current Programmable LED Driver

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C380	3800	150	24	39	380
	3700	150	24	41	370
	3600	150	25	42	360
	3500	150	26	43	350
	3400	150	26	44	340
	3300	150	27	45	330
	3200	150	28	47	320
	3100	150	29	48	310
	3000	150	30	50	300
	2900	150	31	52	290
	2800	150	32	54	280
	2700	150	33	56	270
	2600	150	35	58	260
	2500	144	35	58	260
	2400	138	35	58	260
	2300	133	35	58	260
	2200	127	35	58	260

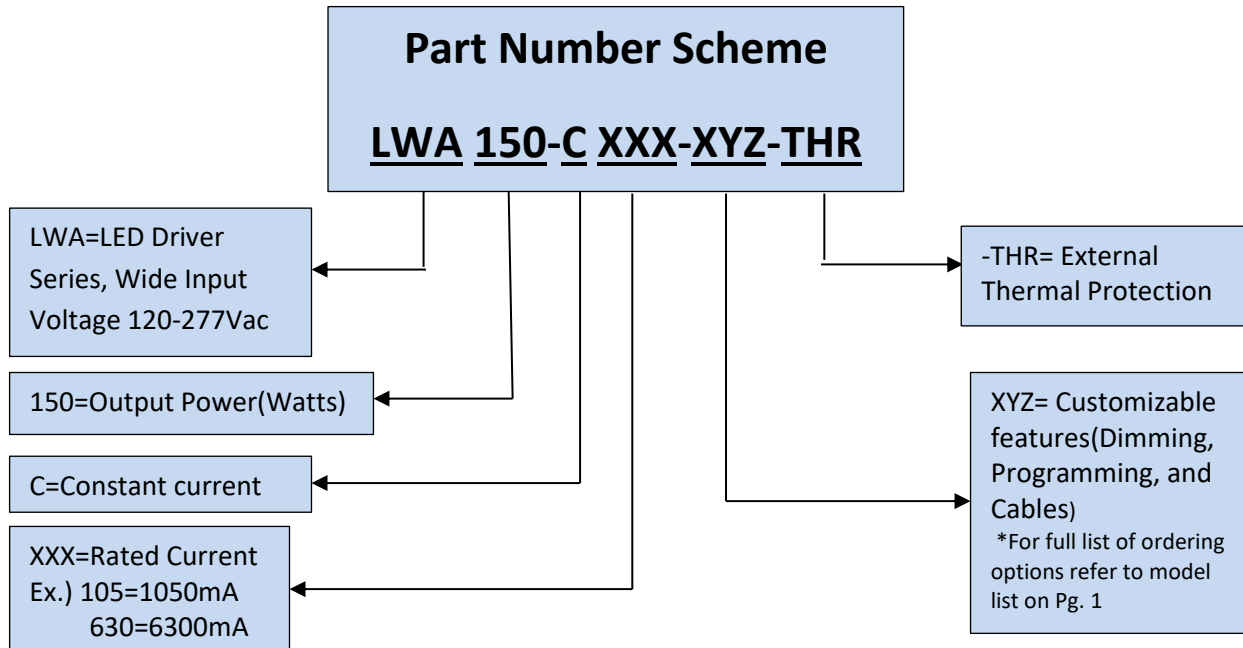
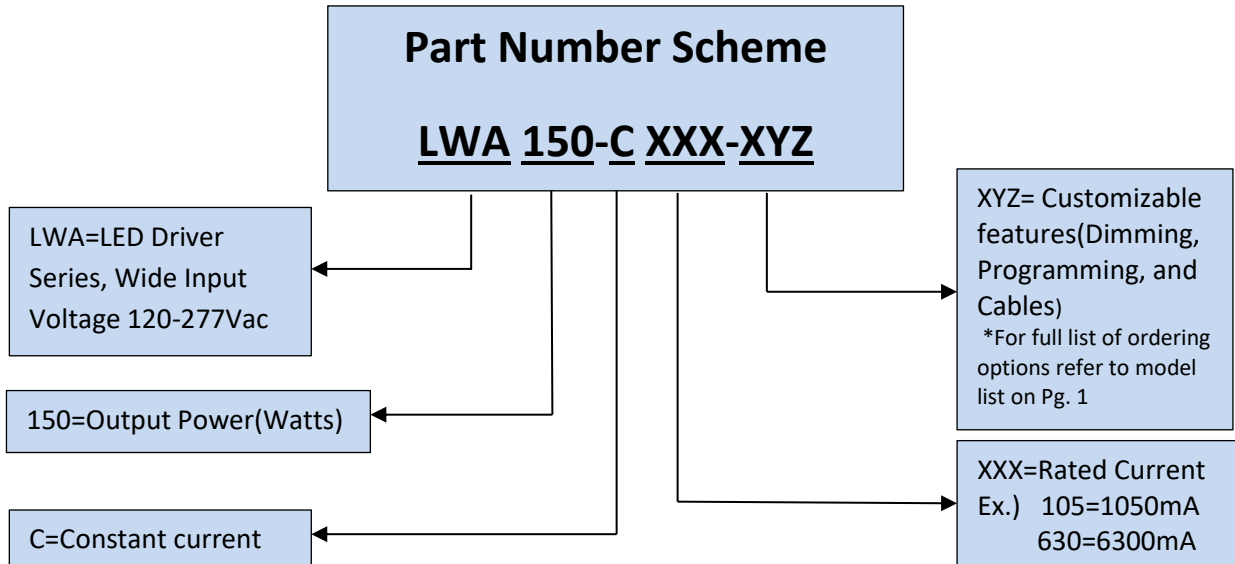
260	15	35	58	260	

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
LWA150-C630	6300	150	14	24	630
	6100	150	15	25	610
	5900	150	15	25	590
	5700	150	16	26	570
	5500	150	16	27	550
	5300	150	17	28	530
	5100	150	18	29	510
	4900	150	18	31	490
	4700	150	19	32	470
	4500	150	20	33	450
	4400	150	20	34	440
	4300	150	21	35	430
	4200	150	21	36	420
	4100	150	22	37	410
	4000	150	23	38	400
	3900	146	23	38	400
	3800	143	23	38	400

400	15	23	38	400	

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