NON-isolated LED Driver

1200W | 200-400Vac Input

Features

- Absolute Supply Voltage: 180-440Vac
- 97% Efficiency Max.
- **Non-isolated Design**
- **Output Cable with Ground Wire (Optional)**
- Low Inrush Current
- 100,000Hour Life @ Tc=75℃
- Airset™ NFC Programmability
- +/-2% Output Current Accuracy
- Dimmable
- **Glow-free Dim Off**
- 12V 300mA Auxiliary Power to Power Controllers and Fans
- UL Class P, ENEC/CB/RCM
- Safety according to UL8750, EN 61347-1, 61347-2-13, 62384

Model List

Model Number	Input Voltage Range	Output Power	Output Voltage	Full Power Settable Current Min	Full Power Settable Current Max	Certification
SLK-1K2-C340-XYZ	180-440Vac	1200 W	212-500Vdc	2.4A	3.4A	UL/ENEC/CB/RCM/ EAC/CE/RoHs

XY=	Dimming Method	Programmable	12Vaux	Dim-off
EN	0-10V/PWM/Time/Resistor	Cable	300mA	√
ER	0-10V/PWM/Time/Resistor	NFC Wireless	300mA	√
AR	DALI2.0	NFC Wireless	-	√
MR	RDM or DMX	NFC Wireless	-	√

Z = **U**, UL cable with input ground wire (green) **V**, UL cable with both input and output ground wire (green)

S, VDE cable/Class I **D**, VDE cable/Class II

Note: See the **Output Operation Range Section** for programmable model details

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Technical Data

Input Voltage	180-440Vac
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	6.5Amax@208Vac & Full-Load, 6Amax@220Vac & Full-Load 4.5Amax@277Vac & Full-Load, 4Amax@380Vac & Full-Load
Inrush Current	See Inrush Current Section in the datasheet
Leakage Current	1mA max @277Vac 60Hz, UL8750,0.75mA max @220Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto-restart
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Current Accuracy	±2%Io
Ripple Current	Ip-p:5%Io max
Setup Time	1.2s max
Overshoot	10% Io max & LED Load
Output Over Voltage	110% 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	Case Temperature Tc=-40℃~+90℃ ； 10%RH～100%RH
Storage Temperature	-40℃～+85℃； 5%RH～100%RH
MTBF	≥320,000 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
Dimension	267 x 125 x 49 by mm (body), 292 x 125 x 49 by mm (endcaps included)
Net Weight	2940g
Packing	See Package Information Section in the datasheet

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

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Safety/EMC Compliance

Safety Standard	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 d.c. or a.c. 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	100uA	150uA	200uA
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	3.8V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		
DALI Interface Standard	IEC62386, part 101,102,207		
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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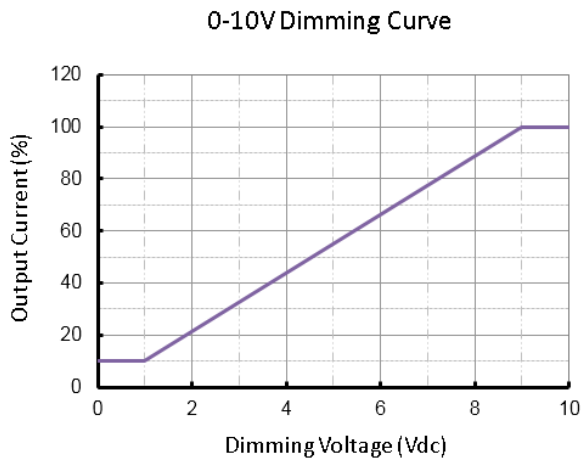
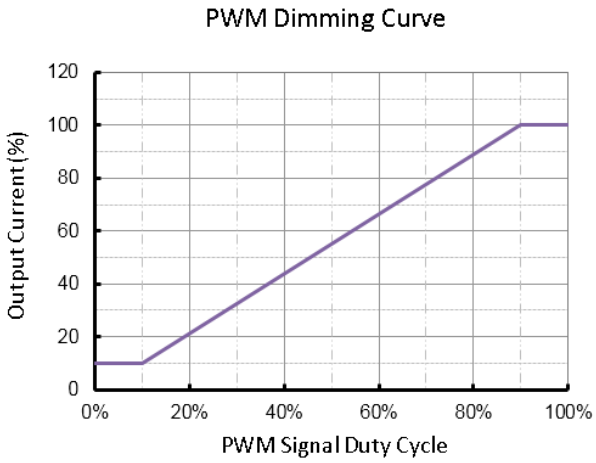
SLK-1K2-C Series

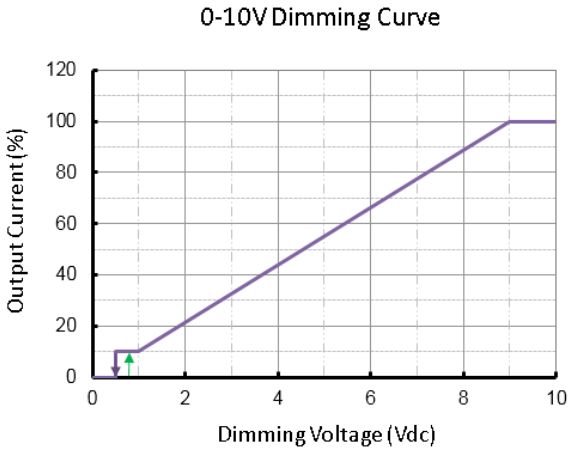
- Dimming Curve

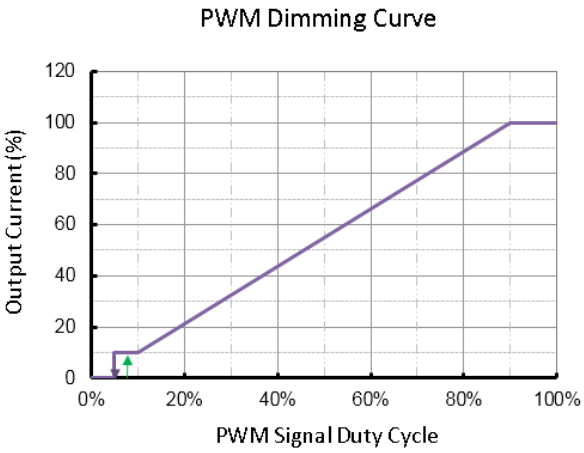
a. Without dim-off



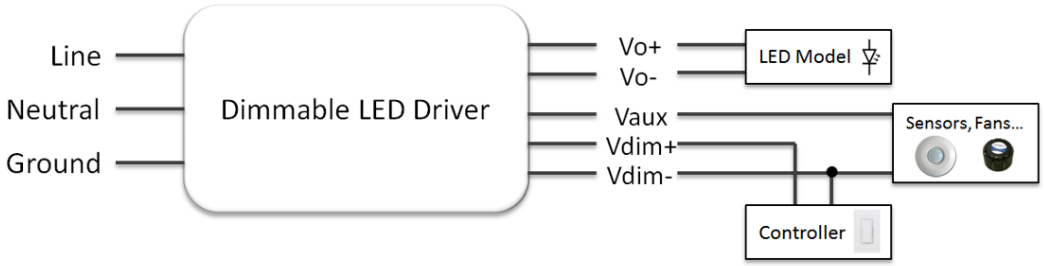


b. With dim-off





- Dimming Wiring



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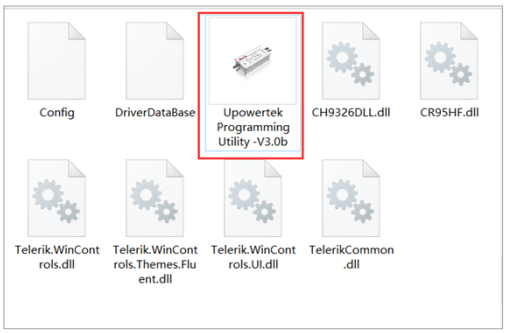
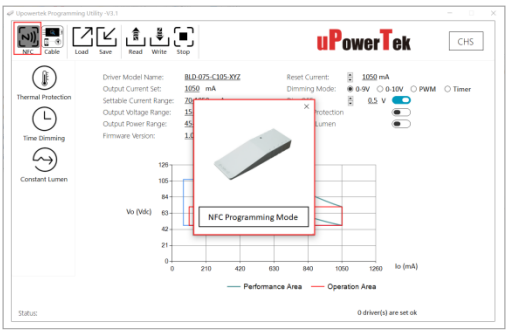
Programming

- **NFC Programming by PC/Laptop**

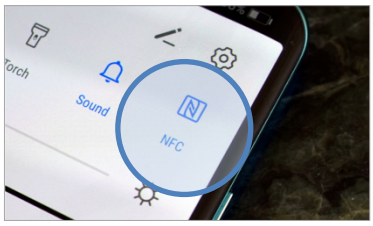
a. Download PC Software at https://www.upowertek.com/download-2/
b. Click Upowertek Programming Utility.exe
c. The GUI start and notify you the programming mode (cable programming or NFC programming)
d. Click “NFC” button if it’s not NFC programming mode.



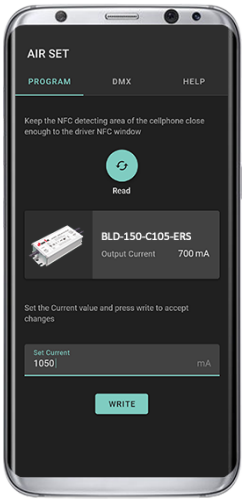


- **NFC Programming by Smartphone**

a. Download Android APP at https://www.upowertek.com/download-2/
b. Only available on Android cellphone (iPhone is not supported)
c. The cellphone should have NFC function and make sure it is enabled.



d. Turn on NFC switch of cellphone, then open the APP by icon below.



uPowerTek
Airset

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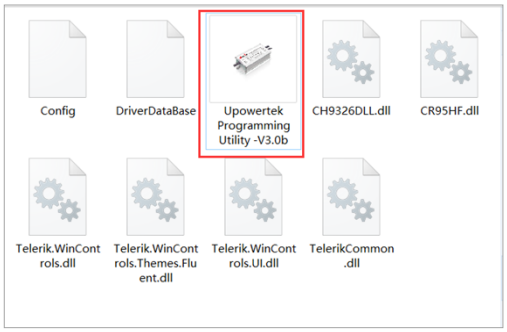
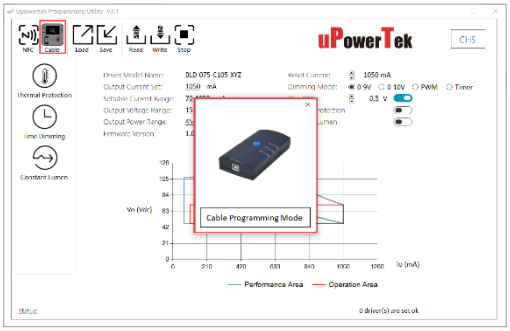
- **Cable Programming**

a. Download PC Software at https://www.upowertek.com/download-2/
b. Click Upowertek Programming Utility.exe
c. The GUI start and notify you the programming mode (cable programming or NFC programming)





d. Click “Cable” button if it’s not cable programming mode.
e. Connect the Vdim+ and Vdim- wires to the right ones (the same color) of the programmer.

- **Please contact with us for product user manual and more information such as:**
  a. Output Lumen Compensation
  b. Luminaire Thermal Protection by External NTC (with extra cable)
  c. Dimming Curve Customization (dim off threshold, minimum dimming level, maximum dimming voltage etc.)
  d. Adjustable Startup Time
  e. Time Dimming (adaptive mid-night, percentage, etc.)
  f. Customized Control Protocol

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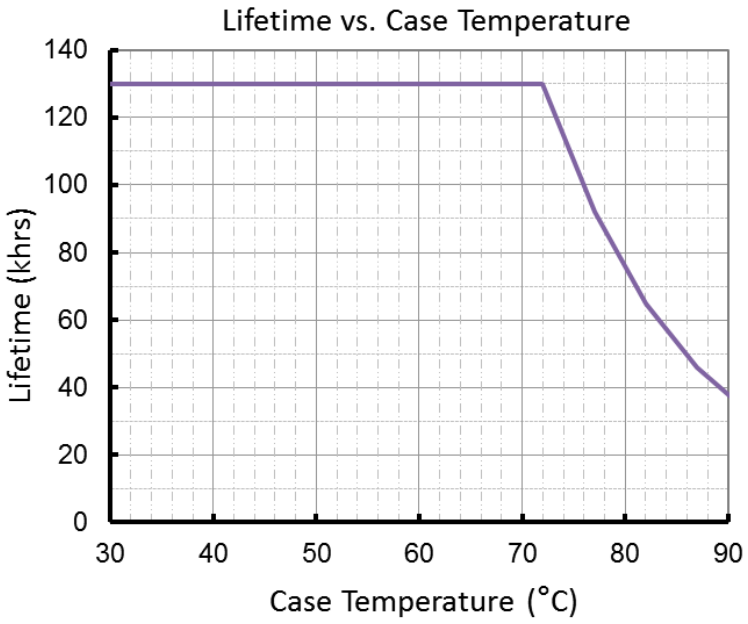
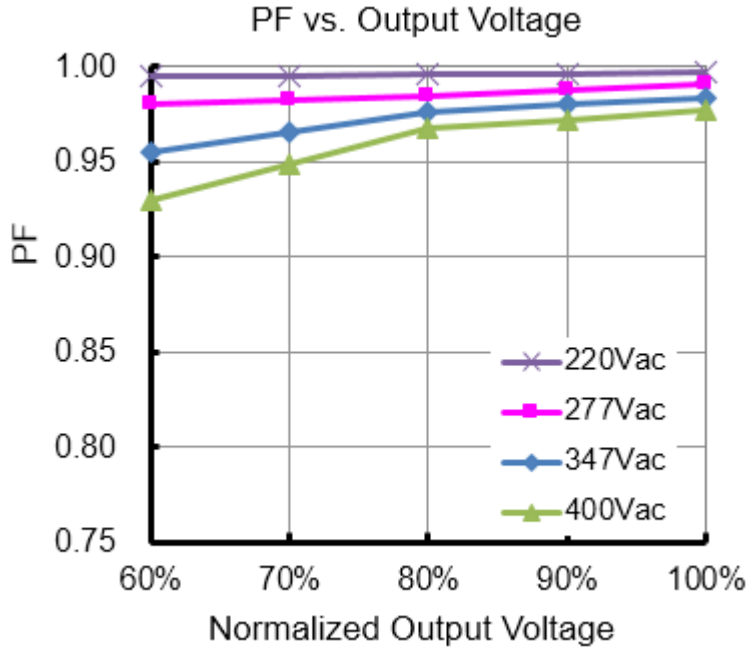
Lifetime vs. Case Temperature



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

Power Factor vs. Load



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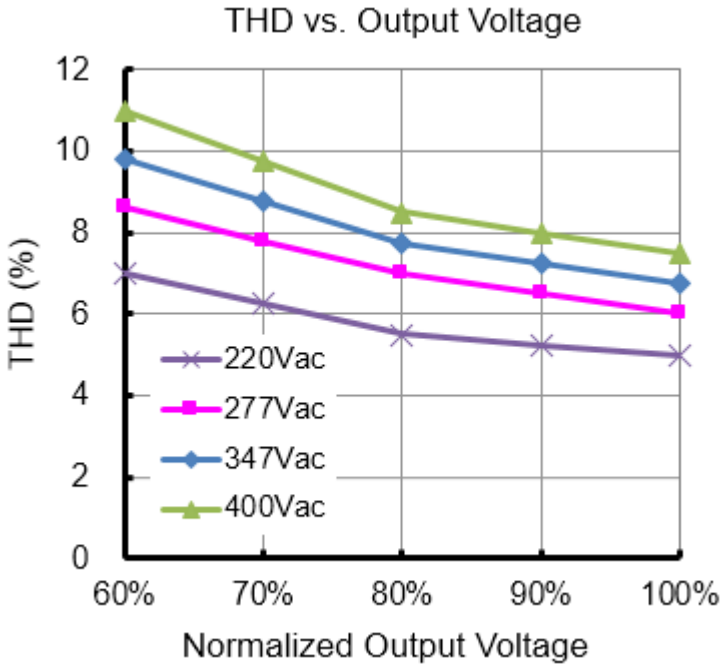
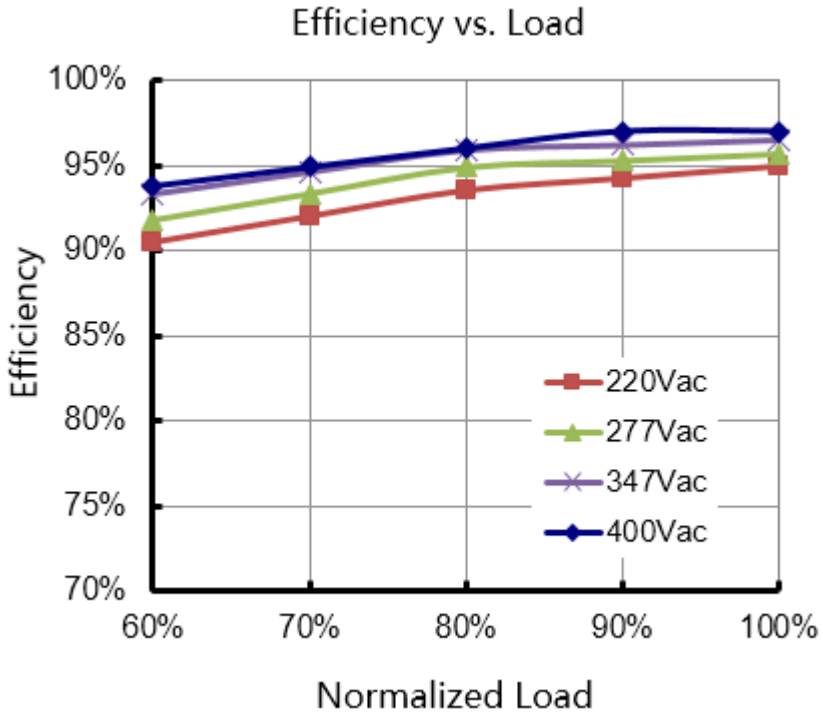
THD vs. Load



Efficiency vs. Load



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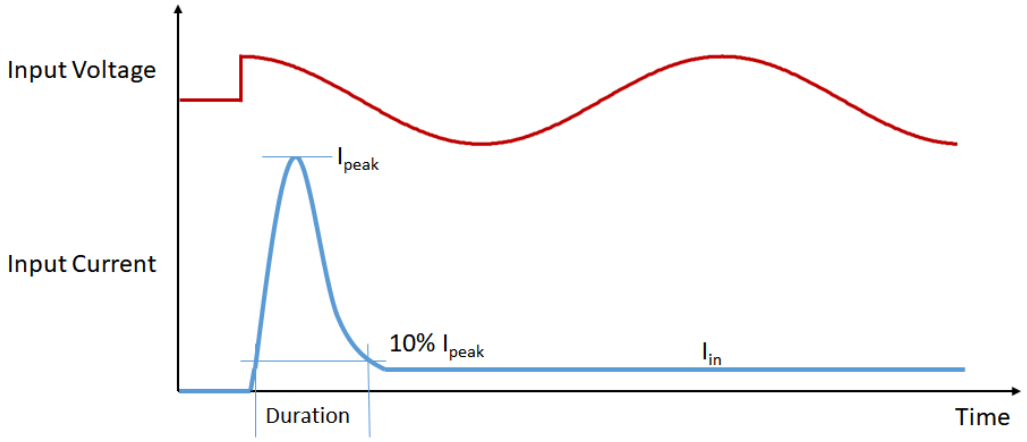
Inrush Current



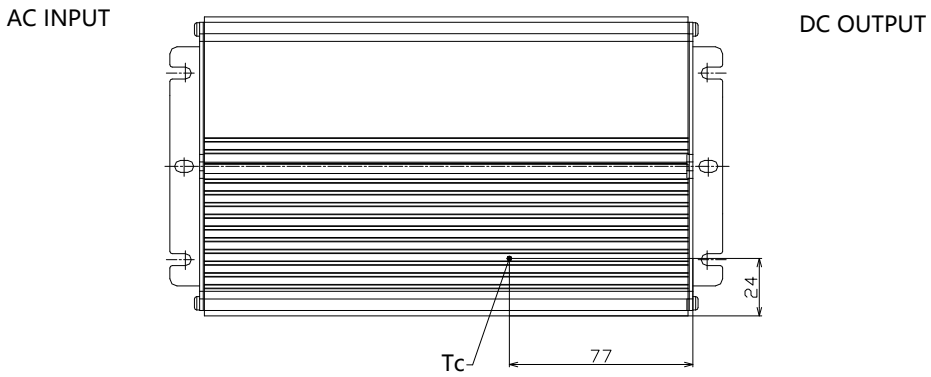
Input Voltage	I_{peak}	Duration
277Vac	7.1A	19.3mS
347Vac	10.5A	14.1mS
400Vac	13.3A	15.4mS

Please contact with us for MCB calculation and waveforms.

Dielectric Strength

Unit: Vac	Input	Output	Dimming	Case
Input	-	-	3920	1960
Output	-	-	1960	1960
Dimming	3920	1960	-	1960
Case	1960	1960	1960	-

Tc Point



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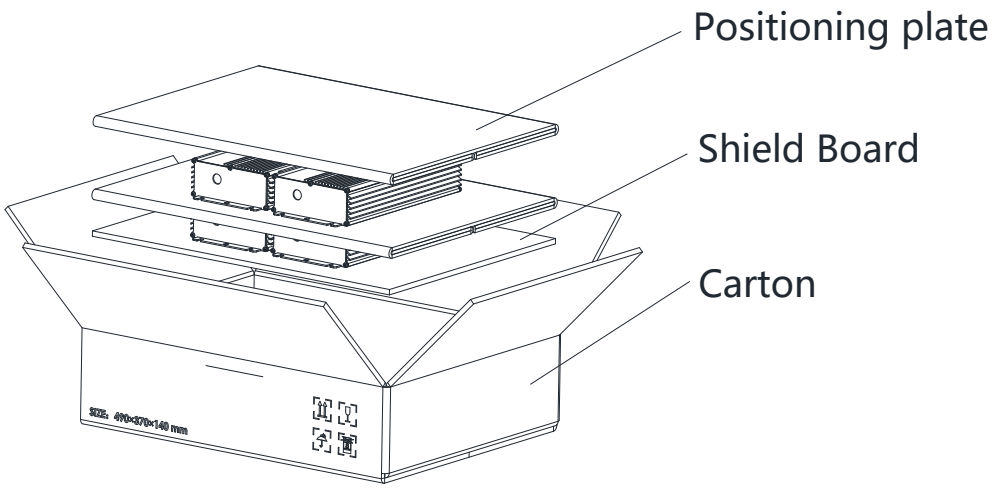
Packaging Information

Typical Carton Dimension(L×W×H)	490×370×140 mm
Positioning plate	2pcs/carton
Shield Board	1pcs/carton
LED Drivers	4pcs/carton
Net Weight	11.8kg/carton
Gross Weight	12.8kg/carton



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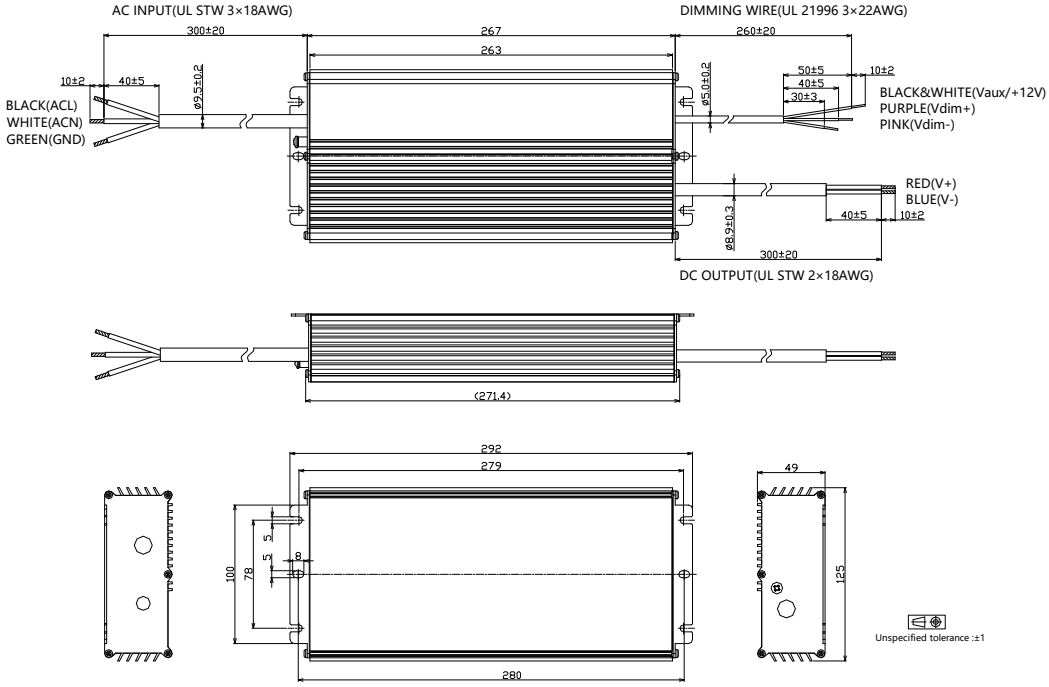
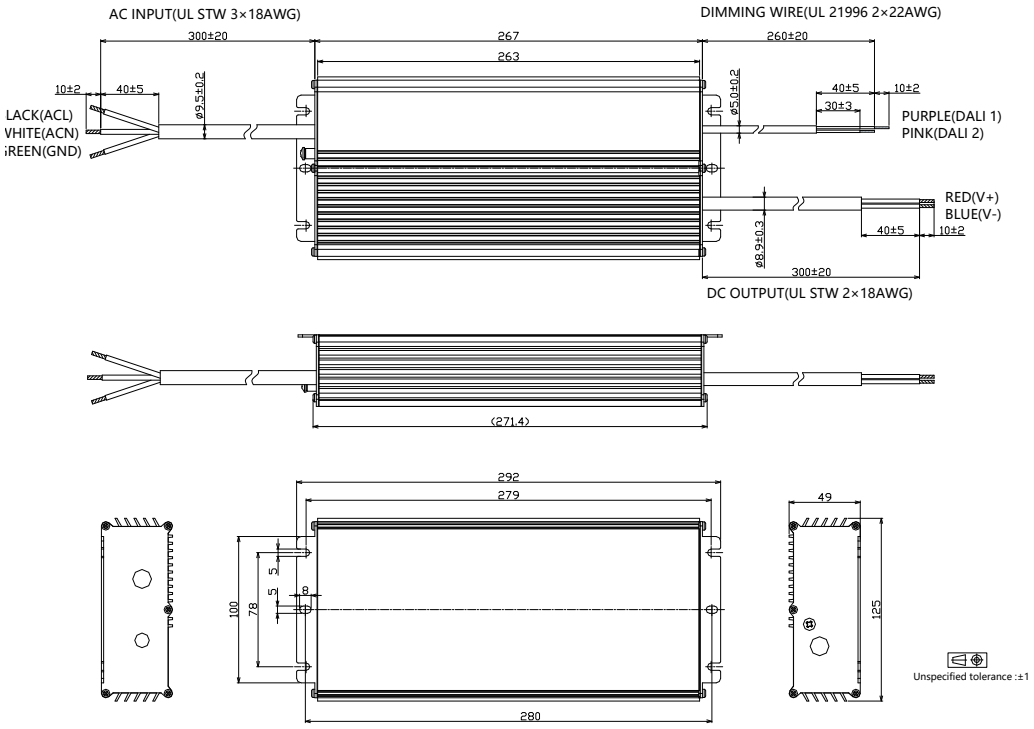
Mechanical Design

- **SLK-1K2-Cxxx-EN/ERU (UL Cable)**



- **SLK-1K2-Cxxx-ARU (UL Cable)**



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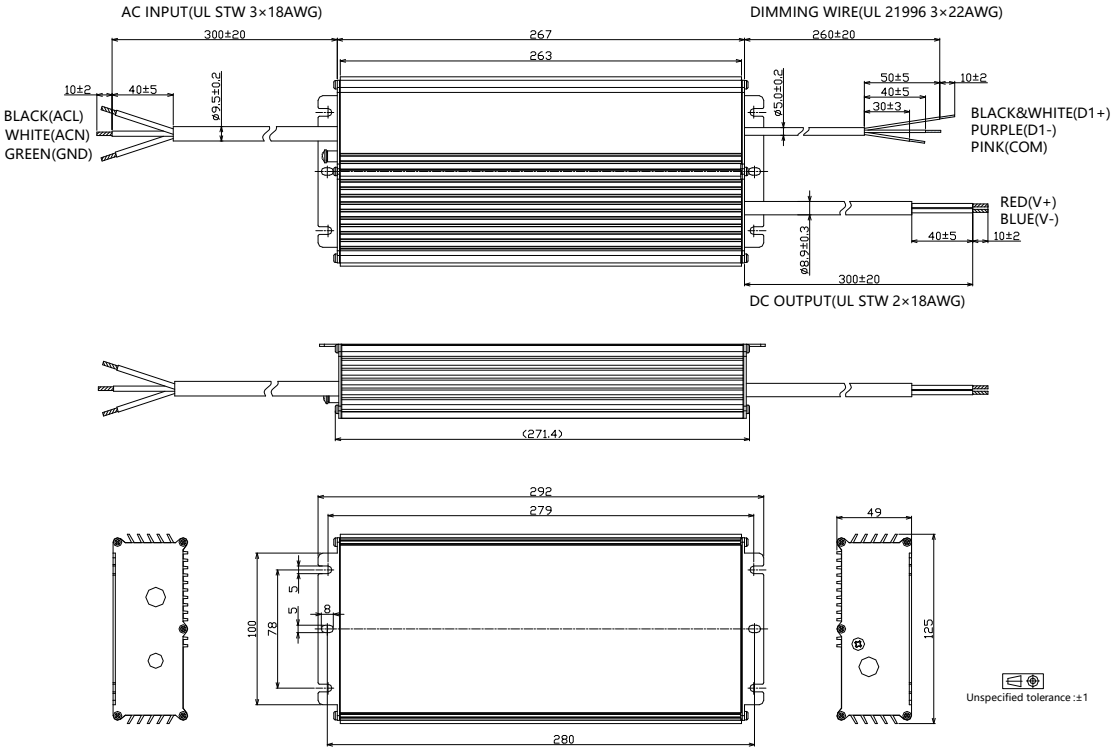
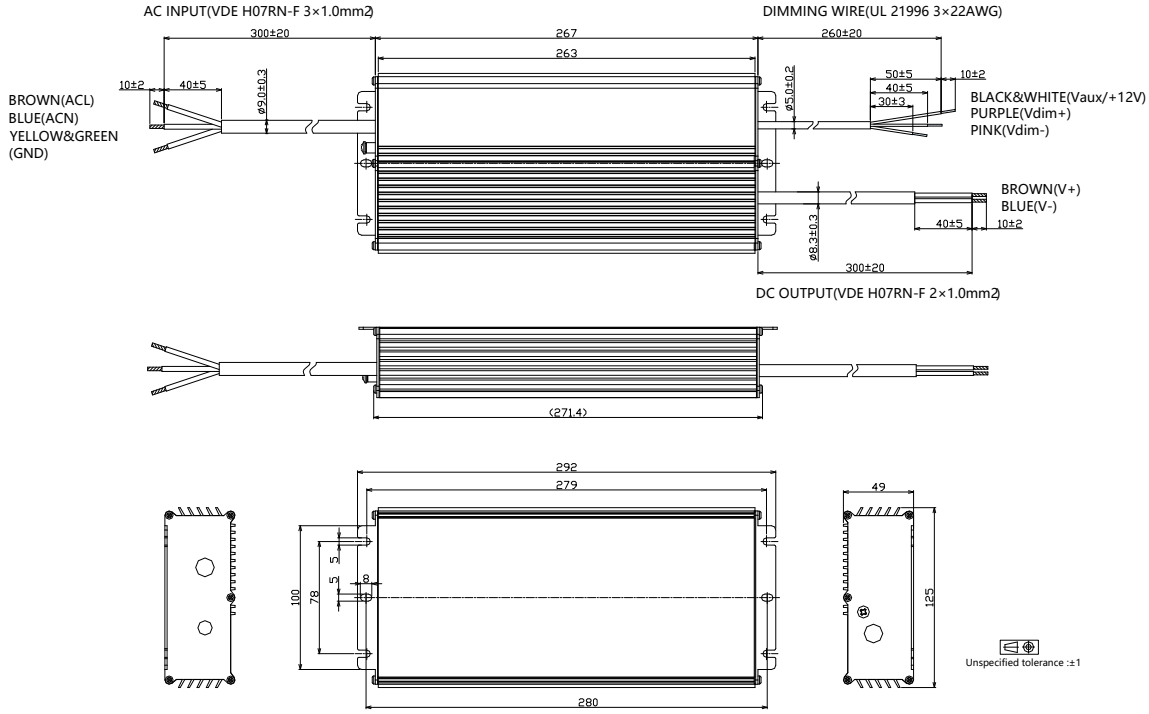
SLK-1K2-C Series

- SLK-1K2-Cxxx-MRU (UL Cable)



- SLK-1K2-Cxxx-EN/ERS (VDE Cable)



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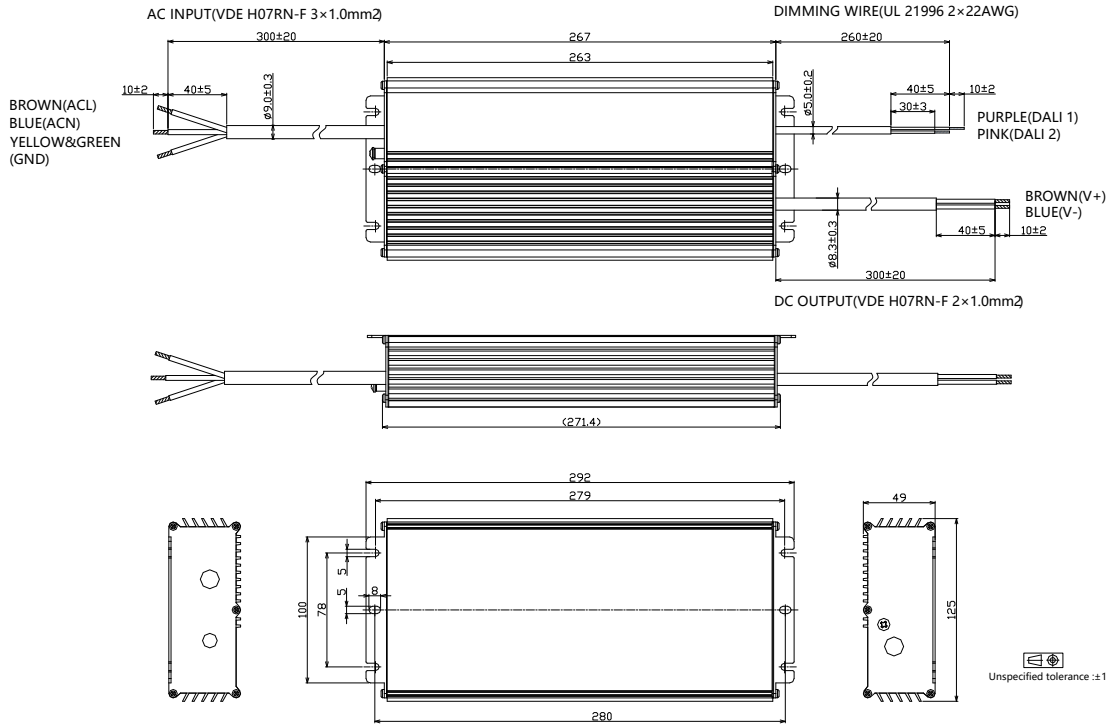
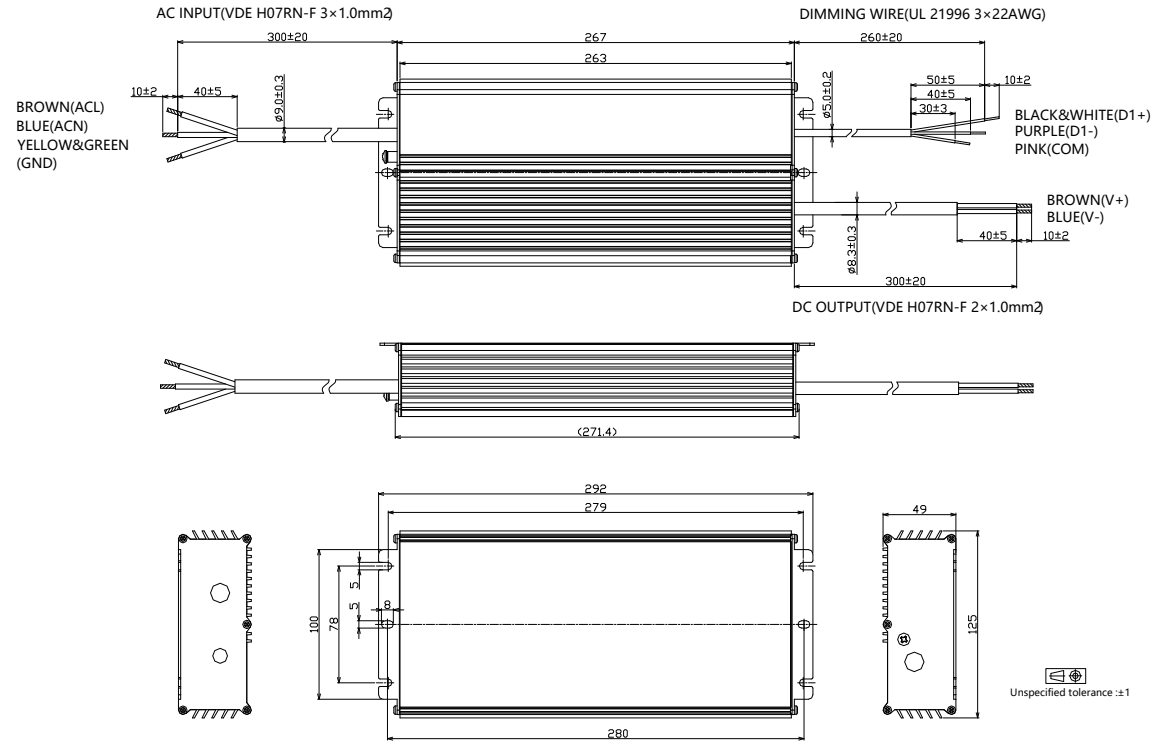
- SLK-1K2-Cxxx-ARS (VDE Cable)



- SLK-1K2-Cxxx-MRS (VDE Cable)



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Output Operation Range

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C340	3400	1200	212	353	340
	3300	1200	218	364	330
	3200	1200	225	375	320
	3100	1200	232	387	310
	3000	1200	240	400	300
	2900	1200	248	414	290
	2800	1200	257	429	280
	2700	1200	267	444	270
	2600	1200	277	462	260
	2500	1200	288	480	250
	2400	1200	300	500	240
	2300	1150	300	500	240
	2200	1100	300	500	240
	...	...	...	...	...
	240	120	300	500	240

Revision History

Revision	Date	Contents
A	2022-06-22	1. First Release
B	2022-10-14	1. Mechanical Design Data Updated
C	2022-11-04	1. Tc point, packaging information updated

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