



## Product Datasheet

The global certified BLD-800-V series is a dual stage high efficiency LED driver. 100khour long life and 7-year warranty provide high confidence to luminaire users. All around protections including digital OTP, SCP and OCP with auto-recovery secure 24hour non-stop operation for luminaires.

- Strip
- Light box
- Signage
- Bath
- Swimming



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### 800W, 120-277Vac Input, Constant Voltage Drivers

#### ■ Features

- Absolute Supply Voltage: 100-305Vac
- Great Surge Immunity 10kV
- 95% Efficiency
- Low Inrush Current
- 100,000Hour Life @ Tc=75°C
- 7 Year Warranty @ Tc<=75°C
- UL Class P, ENEC/CB/RCM SELV Output
- Safety according to EN 61347-1, 61347-2-3, 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
BLD-800-V054- NNU/S	180-305Vac 100-180Vac	800 W 600 W	54Vdc	0A	14.8A	UL/FCC/CB/ENEC/ RCM/EAC
BLD-800-V048- NNU/S			48Vdc	0A	16.6A	
BLD-800-V024- NNU/S			24Vdc	0A	33.3A	

#### ■ Technical Data

Input Voltage	100-305Vac
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	3.3Amax@277Vac & Full-Load, 4.1Amax@220Vac & 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
Input Over Voltage	*Optional: Shutdown @320Vac
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5
Voltage Accuracy	±5%Vo
Voltage Ripple	Vp-p:5%Vo 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.

**800W, 120-277Vac Input, Constant Voltage Drivers**

Over Temperature	Lower the output current when $T_c \geq 105 \pm 10^\circ\text{C}$ ; Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$
Operating Temperature	Case Temperature $T_c = -40^\circ\text{C} \sim +90^\circ\text{C}$ ; 10%RH ~ 100%RH
Storage Temperature	$-40^\circ\text{C} \sim +85^\circ\text{C}$ ; 5%RH ~ 100%RH
MTBF	$\geq 280,000$ hours, $75^\circ\text{C}$ case temperature (MIL-HDBK-217F)
Lifetime	$\geq 100,000$ hours, $75^\circ\text{C}$ case temperature, refer to life vs. $T_c$ curve
Case Temperature	$90^\circ\text{C}$ max, marked in the $T_c$ point of label
Dimensions	9.33x4.92x1.69 by inch (body), 10.3x4.92x1.69 by inch (endcaps included) 237 x 125 x 43 by mm (body), 262 x 125 x 43 by mm (endcaps included)
Net Weight	2600g
Packing	See Package Information Section in the datasheet

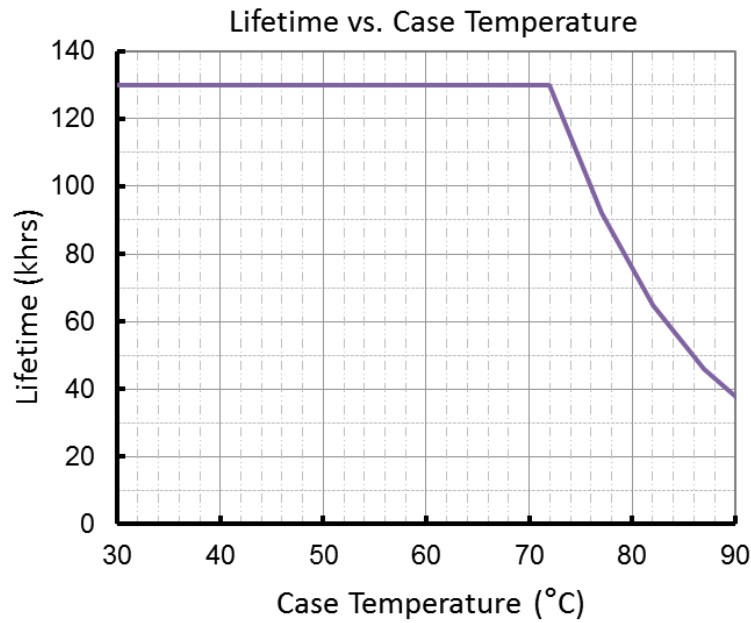
Notes: Unless specified, all the test results are measured in  $25^\circ\text{C}$  room temperature.

\* marked items are optional and contact with sales people to get the functions.

## ■ Safety/EMC Compliance

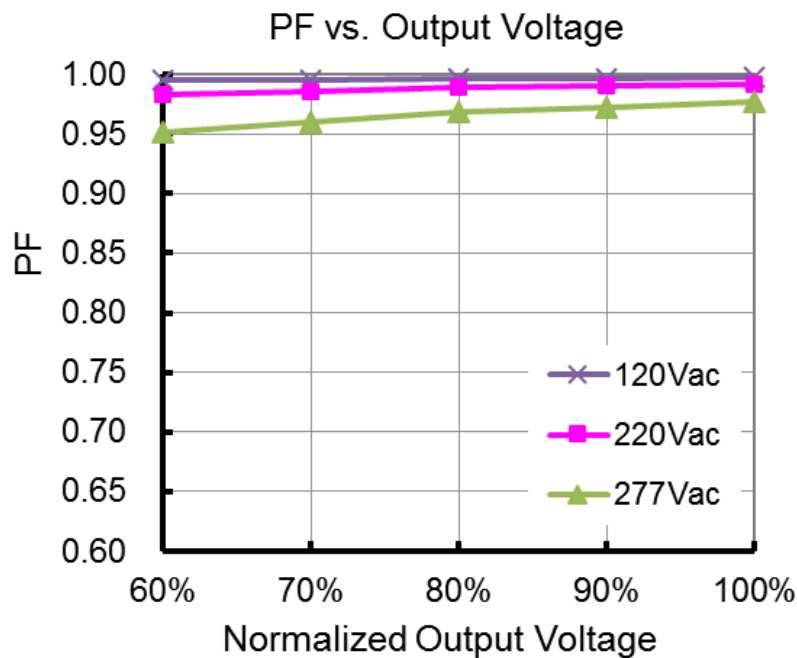
Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012	Power units other than class 2
IEC 61347-1	Lamp control gear Part 1: general and safety requirements
IEC 61347-2-13	Lamp control gear Part 2-13: particular requirement for d.c. or a.c. supplied 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

## ■ Lifetime vs. Case Temperature

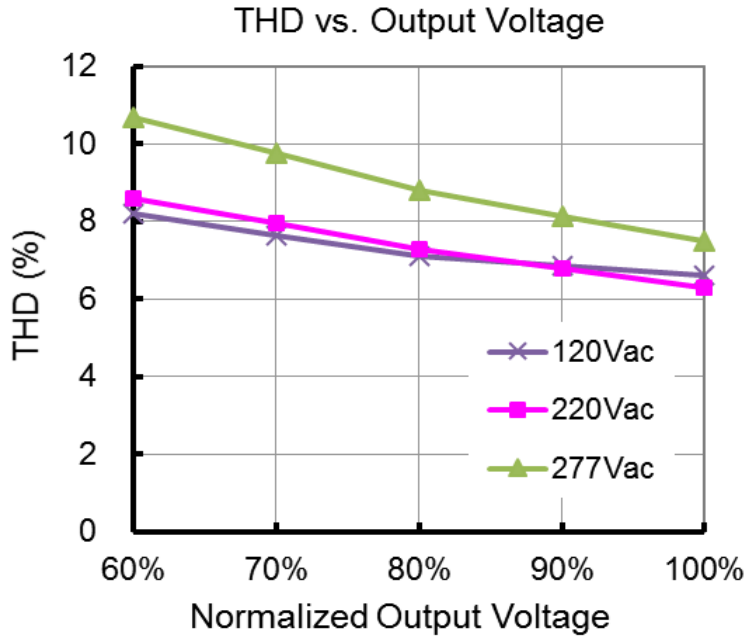


(End of Life: Maximum Failure Rate=10%)

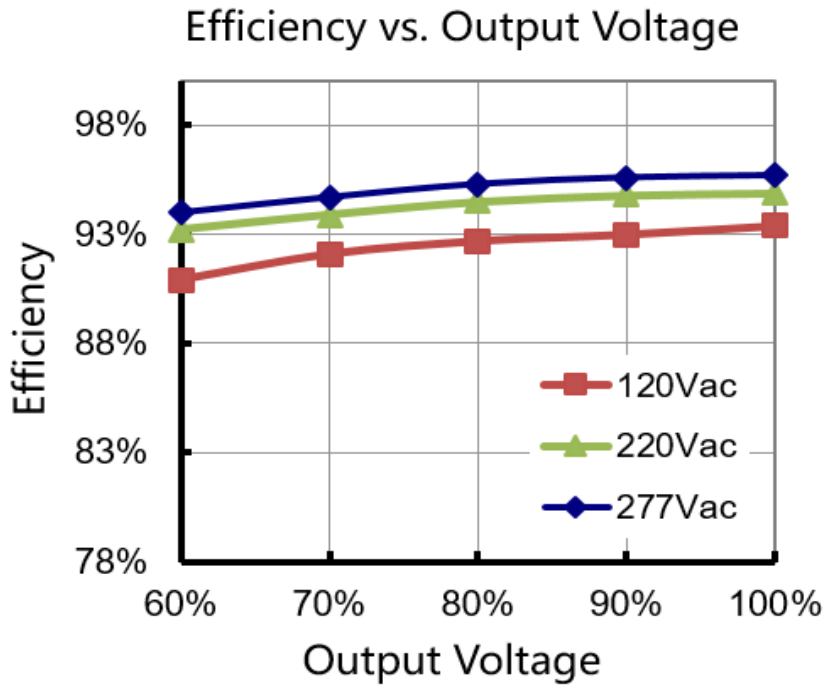
## ■ Power Factor vs. Load



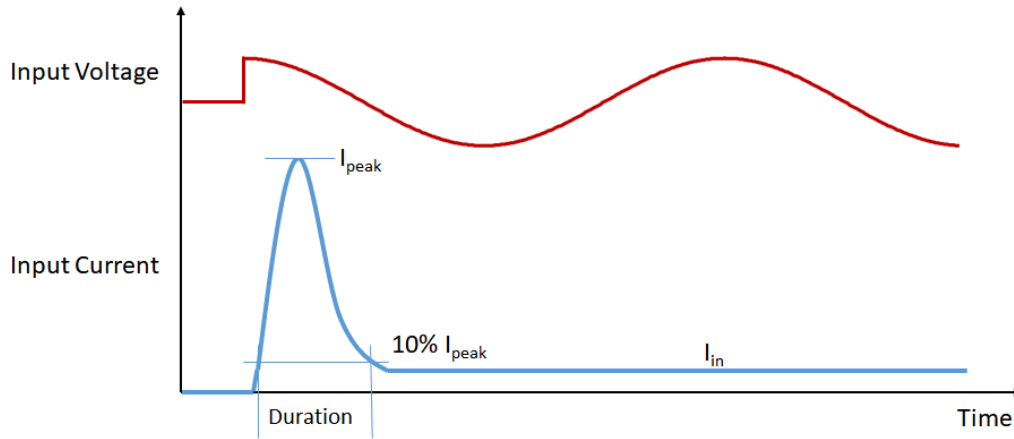
■ THD vs. Load



■ Efficiency vs. Load (54V Model)



## ■ Inrush Current



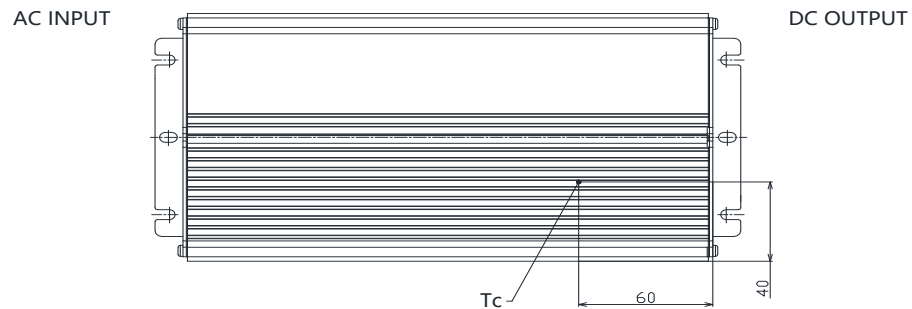
Input Voltage	$I_{peak}$	Duration
120Vac	3A	60mS
220Vac	5A	70mS
277Vac	8A	70mS

Please contact with us for MCB calculation and waveforms.

## ■ Dielectric Strength

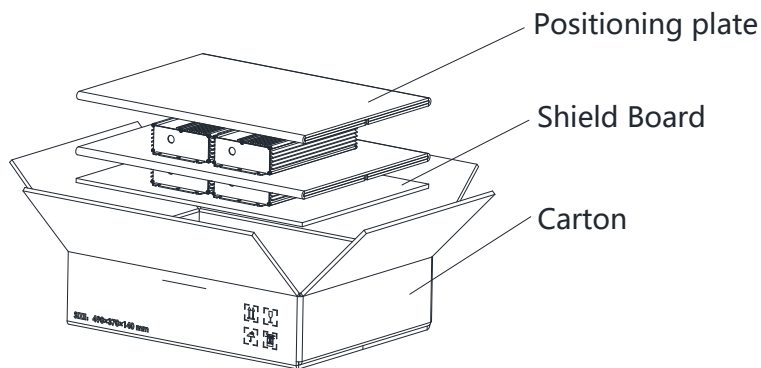
Unit: Vac	Input	Output	Dimming	Case
Input	-	3750	3750	1554
Output	3750	-	-	1554
Dimming	3750	-	-	1554
Case	1554	1554	1554	-

## ■ Tc Point



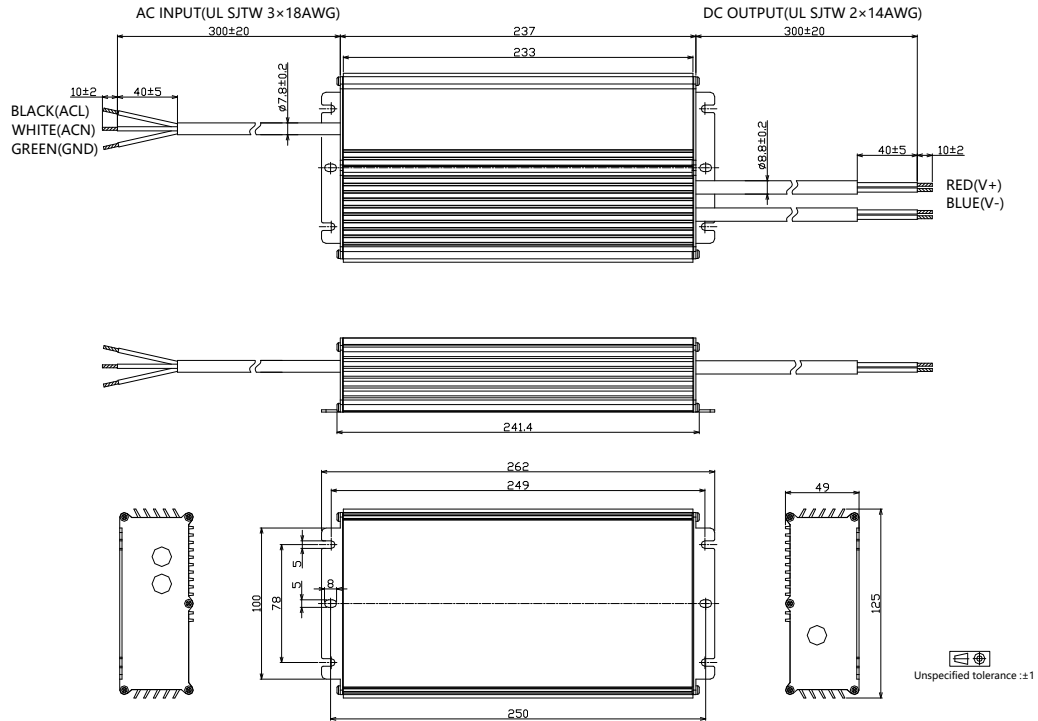
## ■ Packaging Information

<b>Typical Carton Dimension(L×W×H)</b>	<b>490×370×140 mm</b>
Positioning plate	2pcs/carton
Shield Board	1pcs/carton
LED Drivers	4pcs/carton

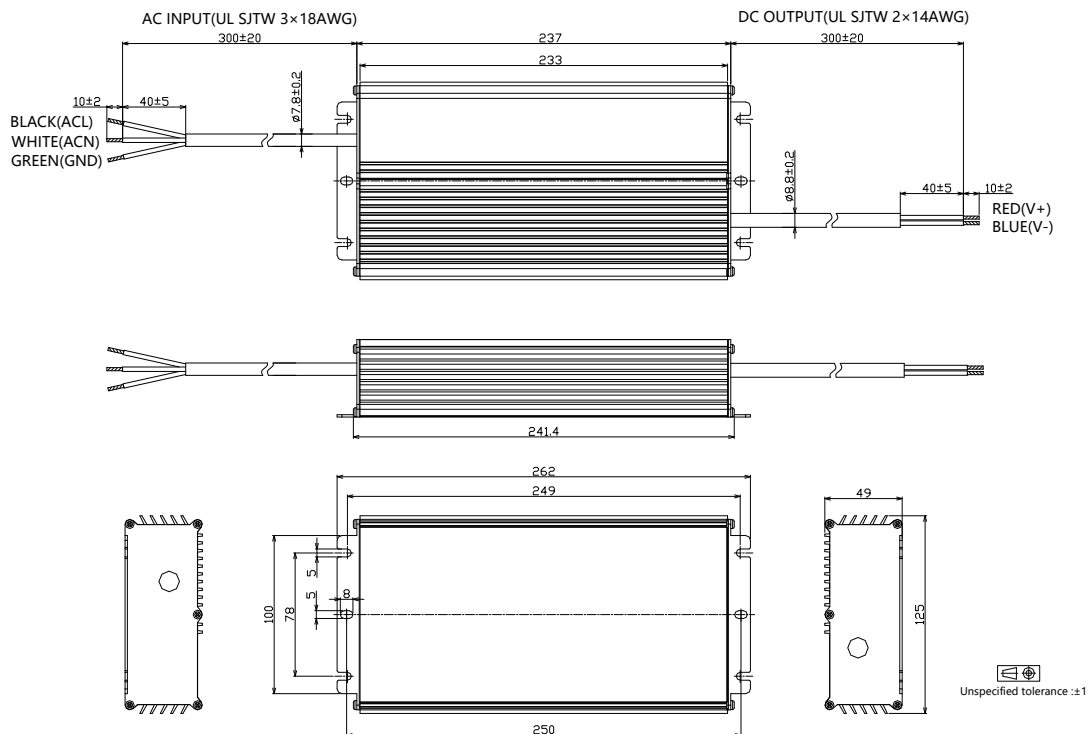


## Mechanical Design

### UL Cable Model (24V 36V Output Models)

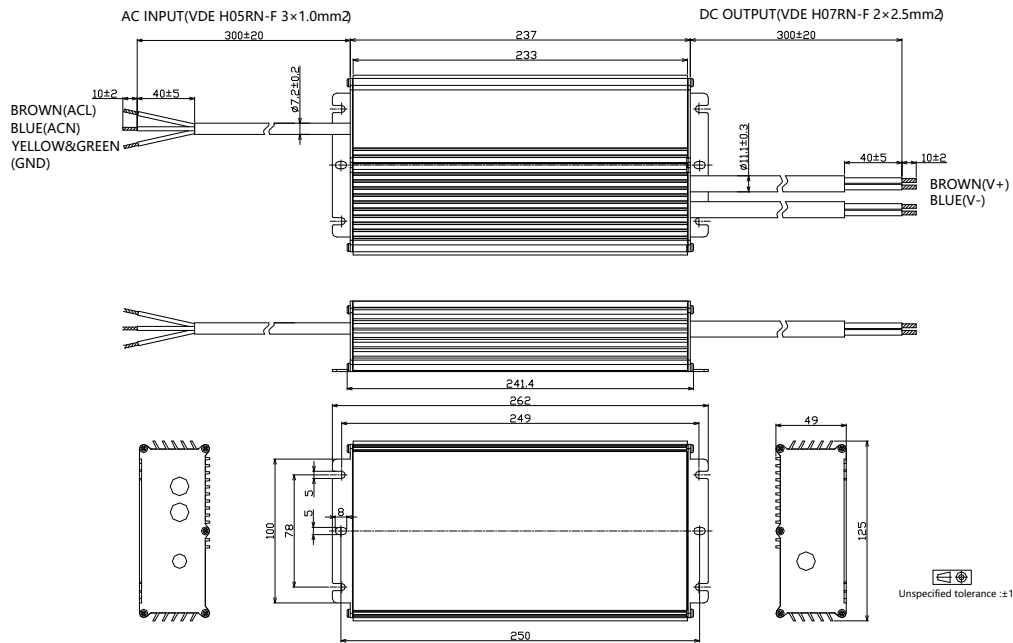


### UL Cable Model (48V, 54V Output Models)

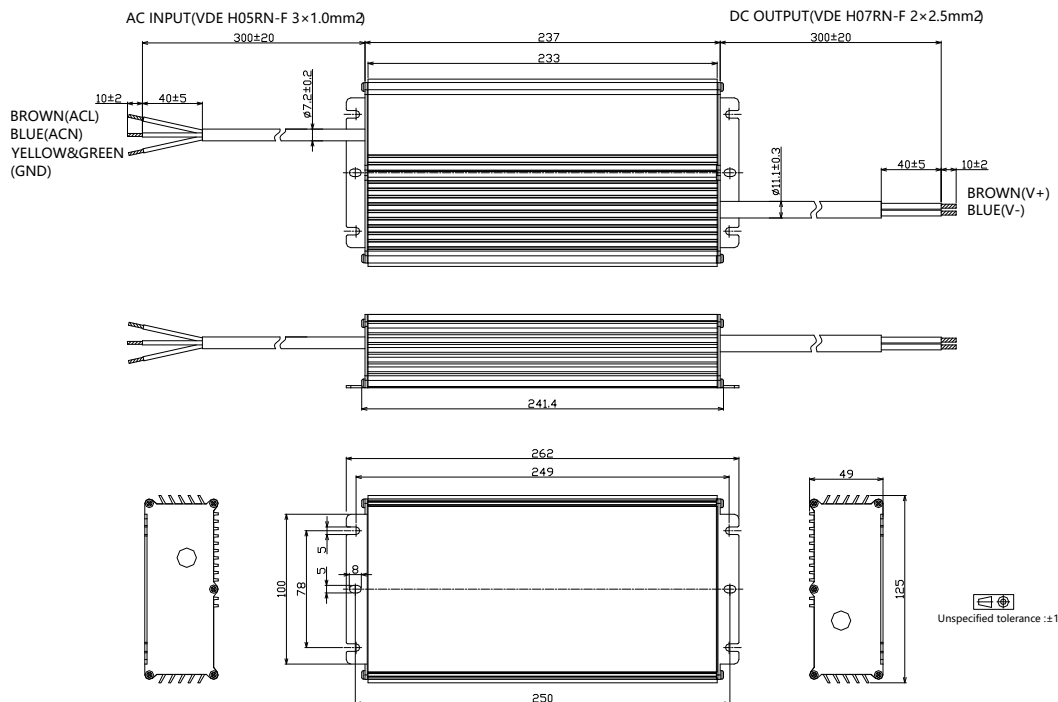




- VDE Cable Model (24V 36V Output Models)



- VDE Cable Model (48V, 54V Output Models)



**■ Revision History**

Revision	Date	Contents
B	2022-03-22	<ol style="list-style-type: none"><li>1. Index page added</li><li>2. Reduced dimming interface sourcing current</li><li>3. DALI 2.0 compatibility added</li><li>4. Programming instruction added</li><li>5. Inrush current data added</li><li>6. Tc point position indication added</li><li>7. Dielectric strength level added</li><li>8. Packaging information added</li><li>9. Mechanical design change with dimming cable color</li><li>10. Revision history added</li></ol>
C	2022-05-22	<ol style="list-style-type: none"><li>1. 36V model added</li></ol>