

## ■ Features

- Supply Voltage: 90~305Vac or 127-420Vdc, 380Vac for 2 hours
- Great Surge Immunity 10kV
- 80,000Hour Life @ Tc=75°C
- 5 Year Warranty
- Airset™ NFC Programmability
- 0-10V Isolated
- Dim Off
- Class II Model Available
- UL Class P, Class 2
- ENEC/CB/CCC SELV Output
- Safety according to EN 61347-1, 61347-2-3, 61347-2-13, 62384



## ■ Application

- Bay lights, Street lights, Tunnel lights, Flood lights

## ■ Model List (See appendix for more details about the operation range)

Model Number	Input Voltage Range	Output Power	Output Voltage	Full Power Settable Current Min	Full Power Settable Current Max	Certification
BLD-120-C105-XYZ	90 ~ 305 Vac	120 W	Refer to Appendix Last Page	700mA	1050mA	UL/FCC/CB/ENEC/CCC/RCM/PSE
BLD-120-C140-XYZ	90 ~ 305 Vac	120 W		1050mA	1400mA	
BLD-120-C280-XYZ	90 ~ 305 Vac	120 W		2100mA	2800mA	

XYZ Suffix	Dimming Method	NFC Programmable	12Vaux	Dim-off
NNZ-LCK000	-	-	-	-
DNZ-LCK000	0-10V Isolated	-	-	√
TRZ-LCK000	Time	√	-	-
DRZ-LCK000	0-10V Isolated /Time	√	-	√

Z = U, UL cable with ground wire    S, VDE cable/Class I    D, VDE cable/Class II

### ■ Technical Data

Input Voltage	90~305Vac or 127V-420Vdc, 380Vac for 2 hours
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	1.2 Amax@120Vac & Full-Load, 0.6Amax@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 $T_c \leq 70 \pm 10^\circ\text{C}$
Auxiliary Power (Vaux)	12V+/-5%, 300mA max
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	$\geq 300,000$ hours, 75°C case temperature (MIL-HDBK-217F)
Lifetime	$\geq 80,000$ hours, 75°C case temperature, refer to life vs. Tc curve
Case Temperature	90°C max, marked in the Tc point of label
Dimension	5.19x2.66x1.52 by inch (body), 6.22x2.66x1.52 by inch (endcaps included) 132.0x68.0x38.5 by mm (body), 158.0x68.0x38.5 by mm (endcaps included)
Net Weight	650g
Packing	25pcs, 21kg per carton, carton size: 490x370x230mm

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

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

## ■ Safety/EMC Compliance

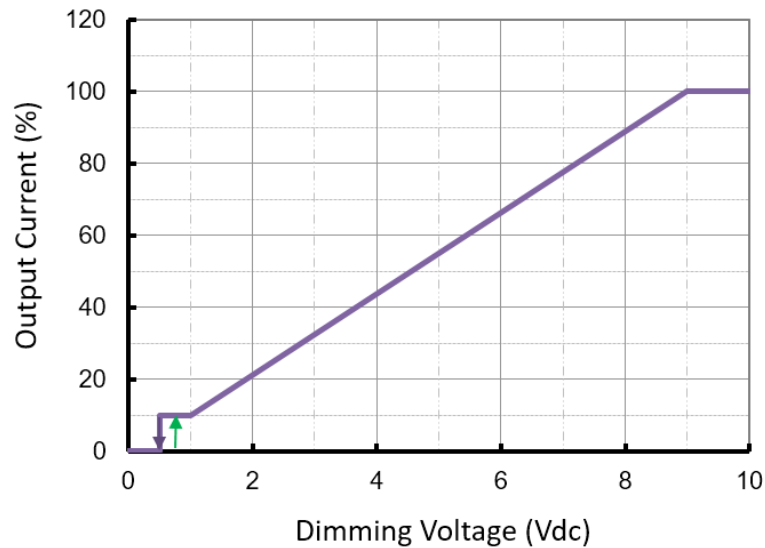
Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012	Power units other than class 2
IEC 61347-1	Lamp control gear Part 1: general and safety requirements
IEC 61347-2-13	Lamp control gear Part 2-13: particular requirement for d.c. or a.c. supplied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

## ■ Dimming

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current		-	
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
Dim off threshold	0.4V	0.5V	0.6V
Dim on threshold	0.6V	0.7V	0.8V

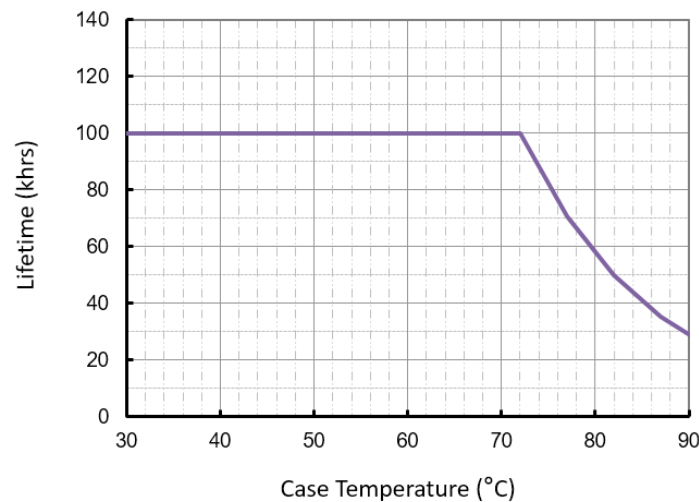
### - Dimming Curve

0-10V Dimming Curve



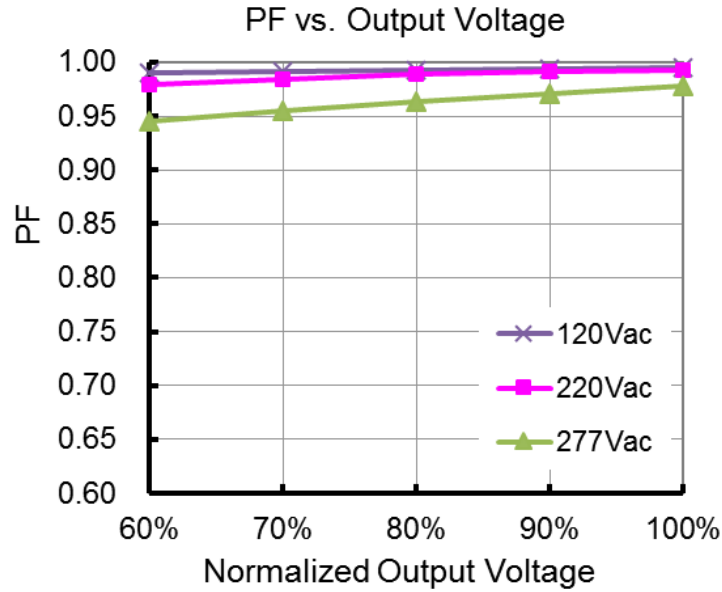
## ■ Lifetime vs. Case Temperature

Lifetime vs. Case Temperature

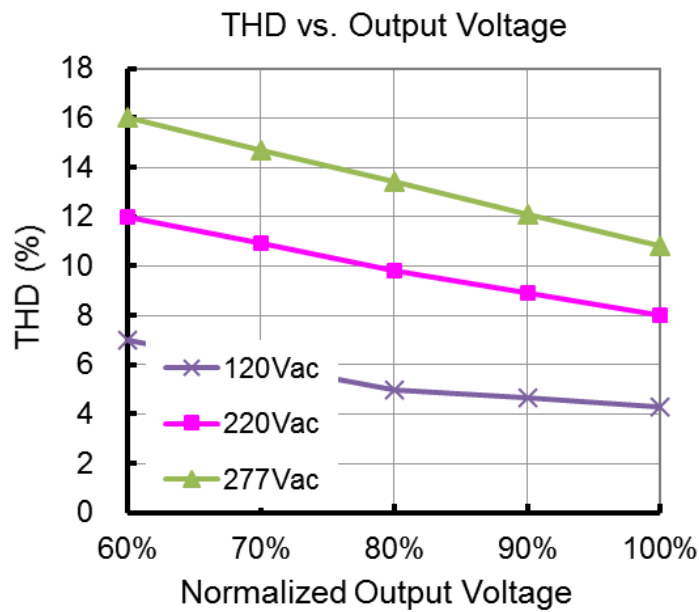


(End of Life: Maximum Failure Rate=10%)

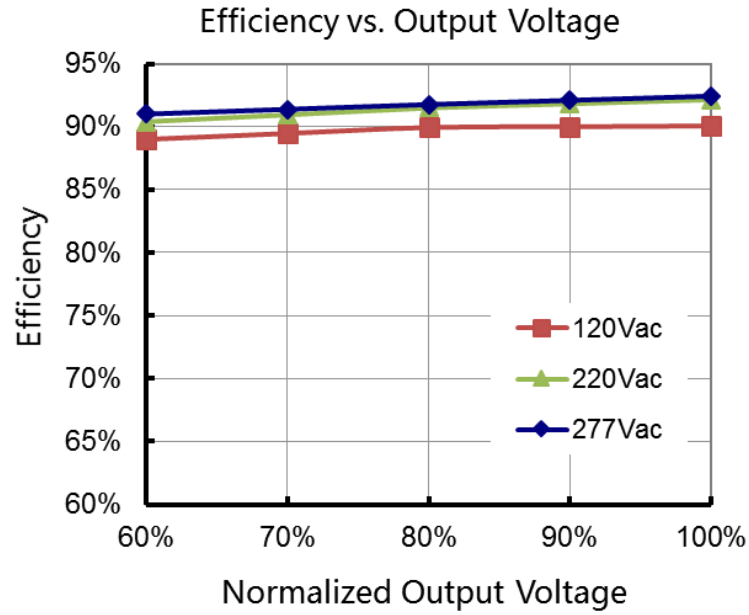
## ■ Power Factor vs. Load



## ■ THD vs. Load

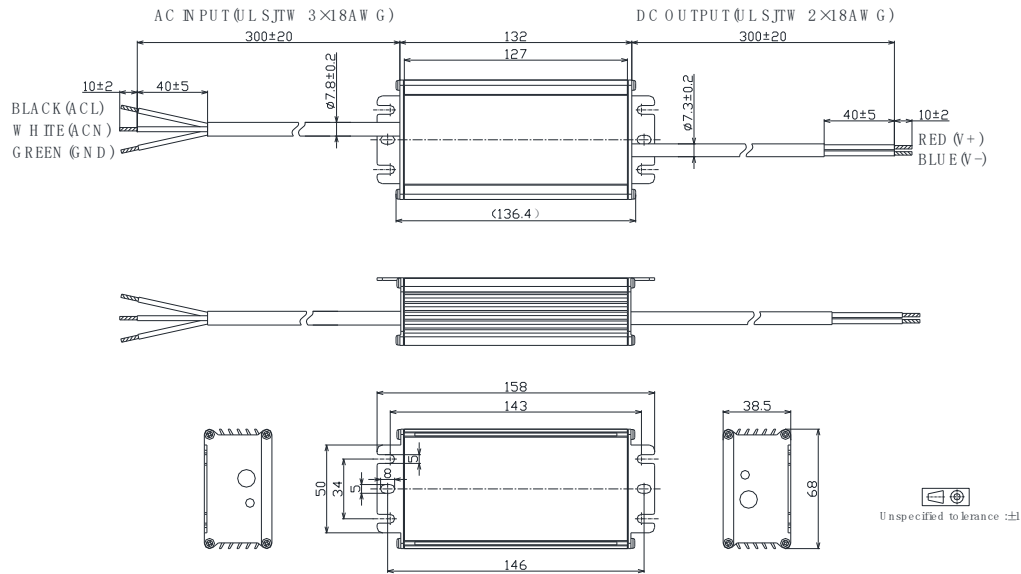


## ■ Efficiency vs. Load (1.05A Model)

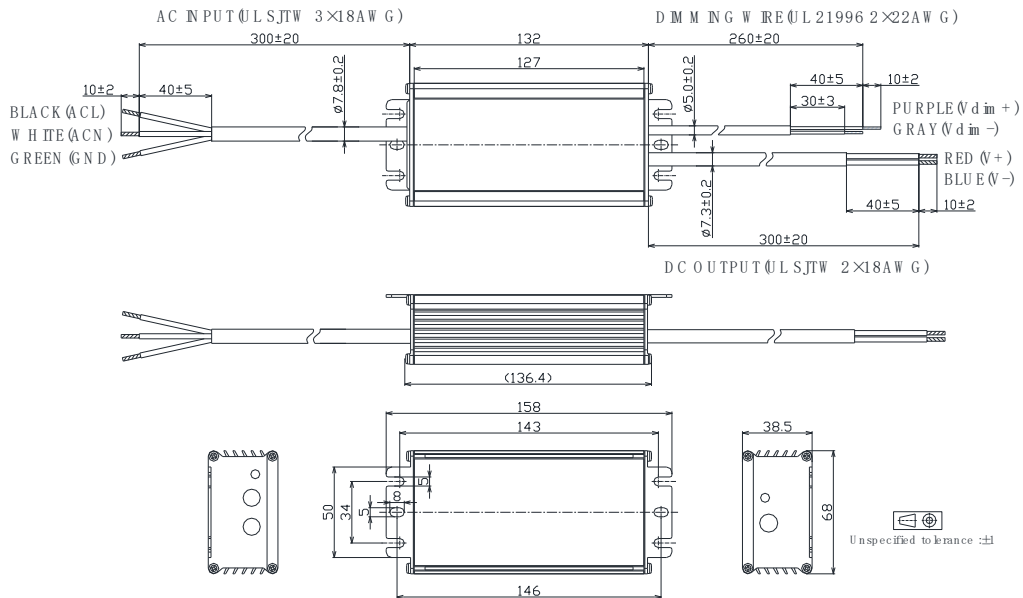


### ■ Mechanical Design

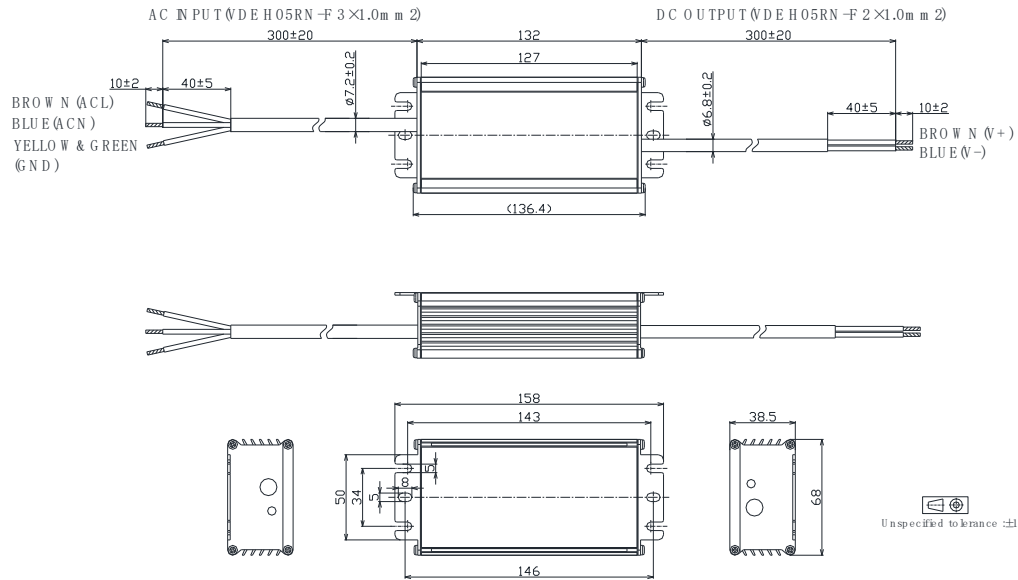
#### - BLD-120-Cxxx-NN/TRU (UL Cable)



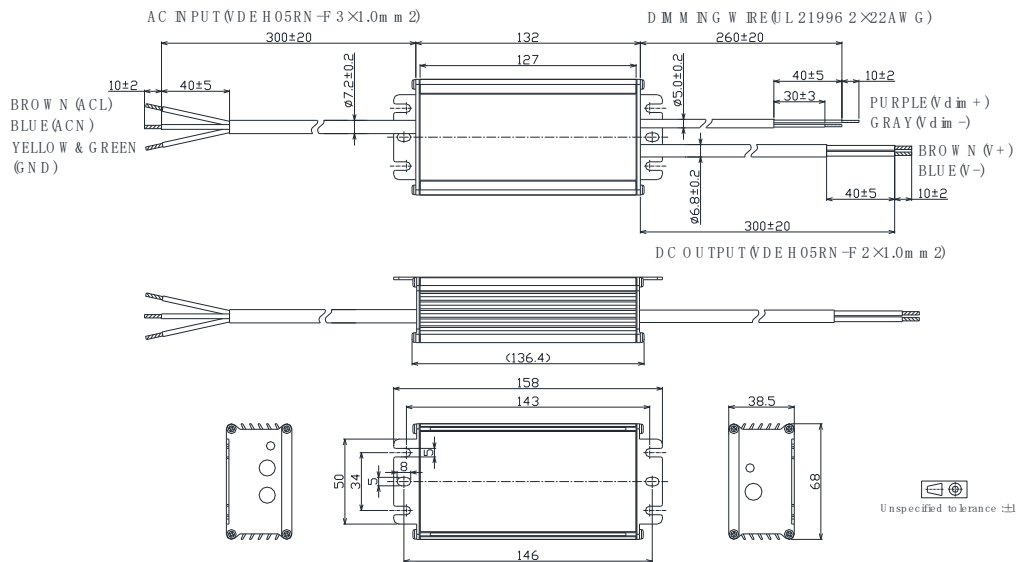
#### - BLD-120-Cxxx-DN/DRU (UL Cable)



- BLD-120-Cxxx-NN/TRS (VDE Cable)



- BLD-120-Cxxx-DN/DRS (VDE Cable)





### ■ Appendix – Operation Range

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C105	1050	120	69	114	105
	1000	120	72	120	100
	950	120	76	126	95
	900	120	80	133	90
	850	120	85	141	85
	800	120	90	150	80
	750	120	96	160	75
	700	120	103	171	70
	650	111	103	171	70
	600	103	103	171	70
	550	94	103	171	70
	500	86	103	171	70
	...	...	...	...	...
	70	12	103	171	70

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C140	1400	120	51	86	140
	1300	120	55	92	130
	1200	120	60	100	120
	1100	120	65	109	110
	1050	120	69	114	105
	1000	114	69	114	105
	950	109	69	114	105
	900	103	69	114	105
	850	97	69	114	105
	800	91	69	114	105
	750	86	69	114	105
	700	80	69	114	105
	...	...	...	...	...
	105	12	69	114	105

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C280	2800	120	26	43	280
	2700	120	27	44	270
	2600	120	28	46	260
	2500	120	29	48	250
	2400	120	30	50	240
	2300	120	31	52	230
	2200	120	33	55	220
	2100	120	34	57	210
	2000	114	34	57	210
	1900	109	34	57	210
	1800	103	34	57	210
	1700	97	34	57	210
	1600	91	34	57	210
	...	...	...	...	...
	210	12	34	57	210



Universal Science srl  
Via Adige, 30 – 20010 Pregnana Milanese (MI), Italy  
Tel. +39.02.94324511 – Fax: +39.02.92893130  
Email: info@universal-science.eu