

40W, Isolated Dimming, NFC Programmable LED Driver

■ 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 (Set by NFC)
- 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

Model Number	Input Voltage Range	Output Power	Output Voltage	Full Power Settable Current Min	Full Power Settable Current Max	Certification
BLD-040-C070-XYZ	90 ~ 305 Vac	40 W	Refer to Appendix Last Page	500mA	700mA	UL/FCC/CB/ENEC/CCC/RCM/PSE
BLD-040-C105-XYZ	90 ~ 305 Vac	40 W		700mA	1050mA	
BLD-040-C140-XYZ	90 ~ 305 Vac	40 W		1050mA	1400mA	

XYZ Suffix	Dimming Method	NFC Programmable	12Vaux	Dim-off (Can be Enabled by Factory Set or NFC Programming)
NNZ-B00000	-	-	-	-
DNZ-B00000	0-10V Isolated	-	-	-
TRZ-B00000	Time	√	-	-
DRZ-B00000	0-10V Isolated /Time	√	-	-

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

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■ 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	0.58Amax@120Vac & Full-Load, 0.31Amax@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-recovery
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 $T_c \leq 70 \pm 10^\circ\text{C}$
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. T_c curve
Case Temperature	90°C max, marked in the T_c point of label
Dimensions	3.86x2.66x1.32 by inch (body), 4.92x2.66x1.32 by inch (endcaps included) 98.0x68.0x33.5 by mm (body), 125.0x68.0x33.5 by mm (endcaps included)
Net Weight	480g
Packing	25pcs/Carton/16.3kg, 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.

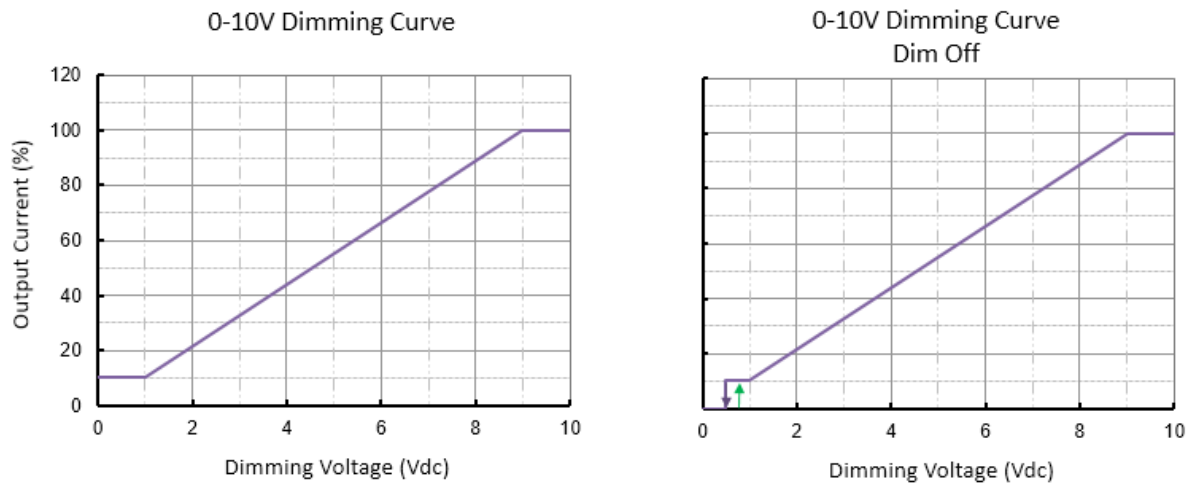
■ Safety/EMC Compliance

Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012/1310	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 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

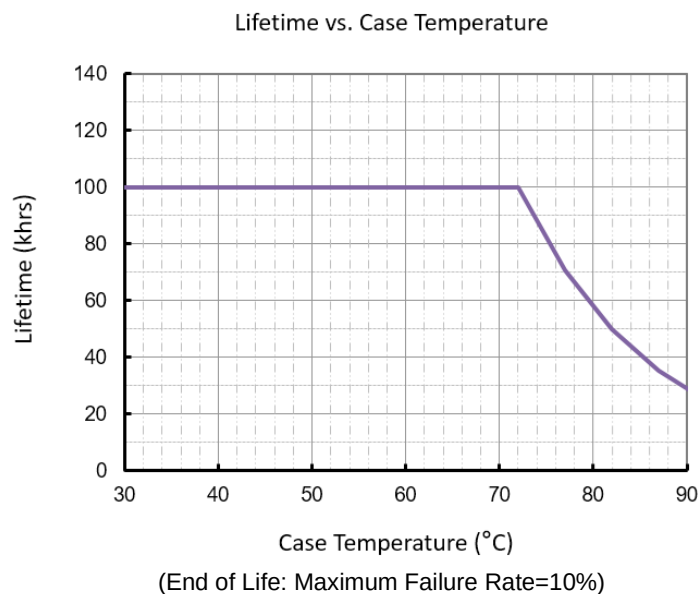
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	50uA	100uA	200uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
Dim off threshold	0.4V	0.5V	0.6V
Dim on threshold	0.6V	0.7V	0.8V

- Dimming Curve

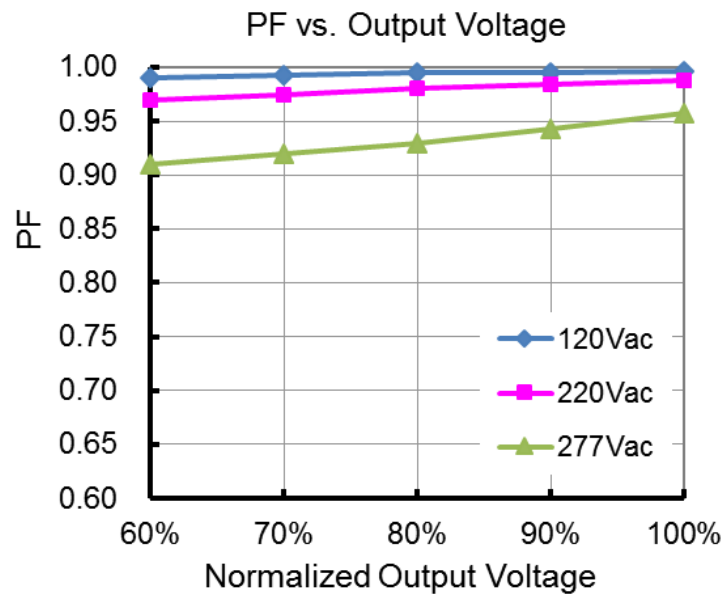


Default Model is without Dim to Off Function. Contact Sales for Dim to Off Models.

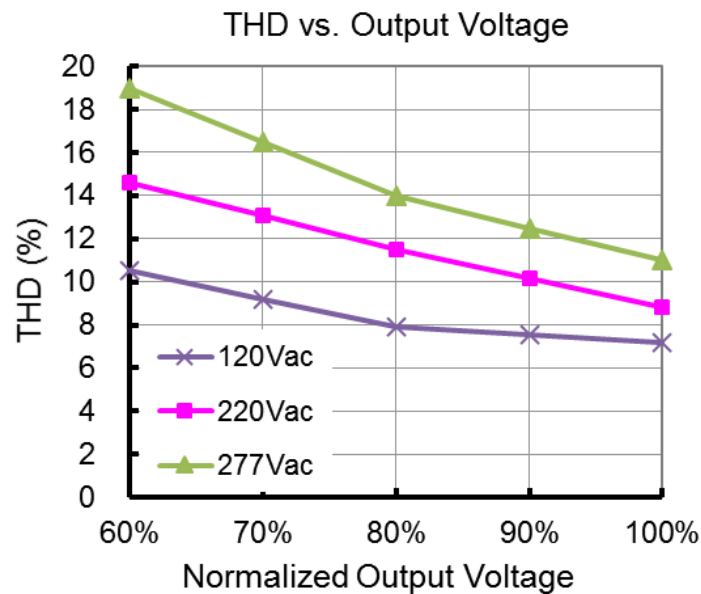
■ Lifetime vs. Case Temperature



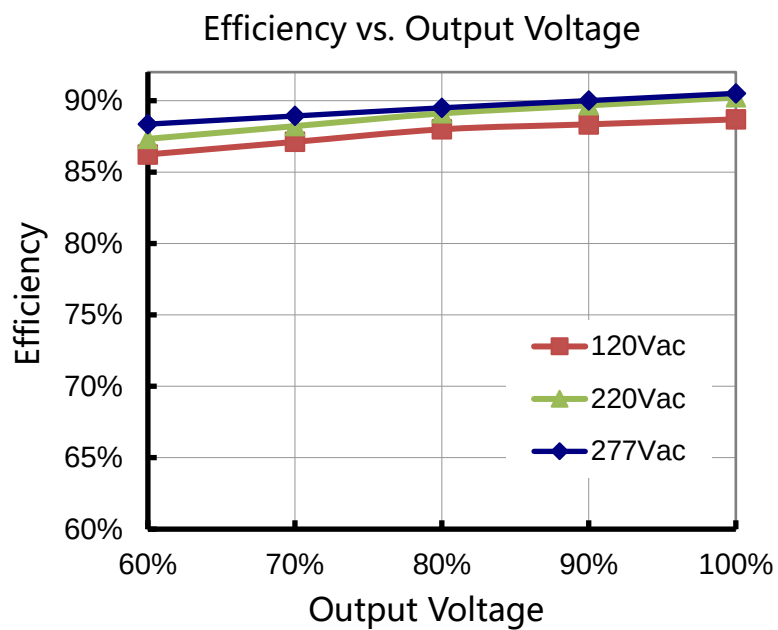
■ Power Factor vs. Load



■ THD vs. Load



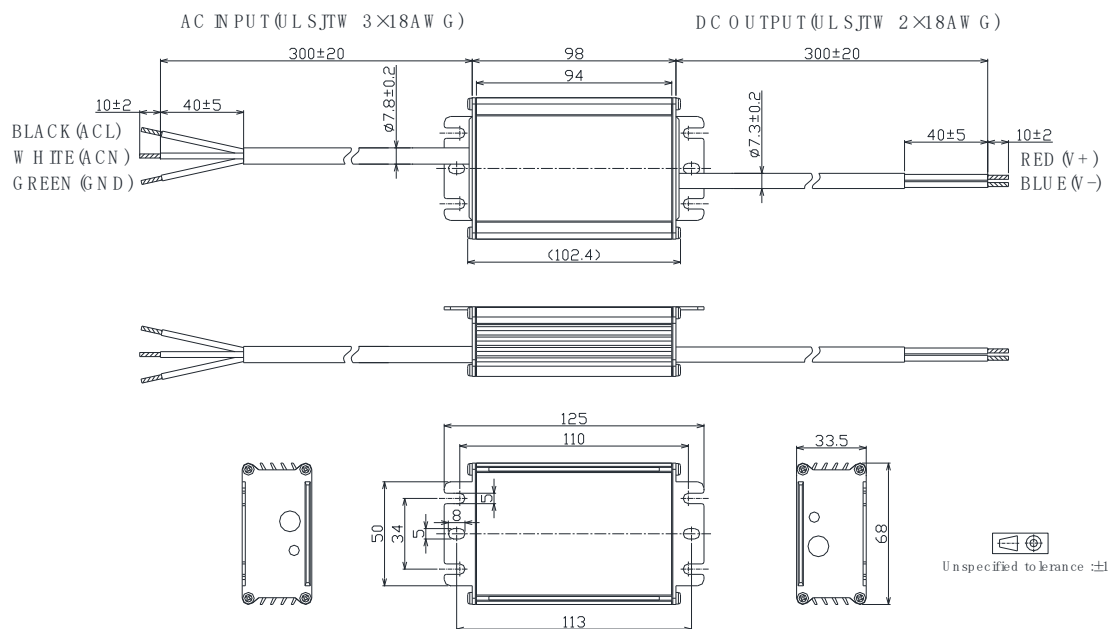
■ Efficiency vs. Load (1.05A Model)



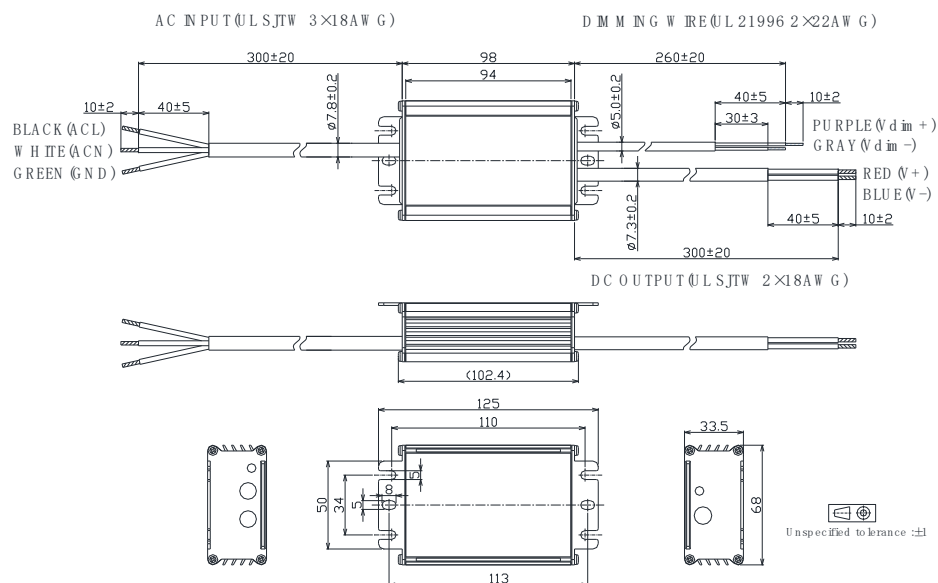
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■ Mechanical Design

- BLD-040-Cxxx-NN/TRU (UL Cable)

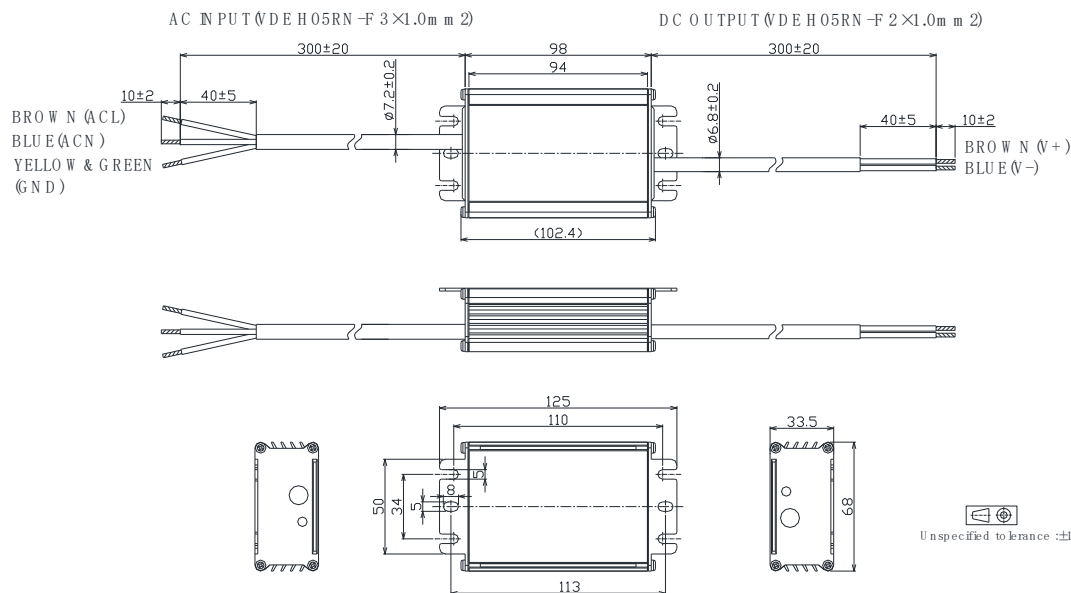


- BLD-040-Cxxx-DN/DRU (UL Cable)

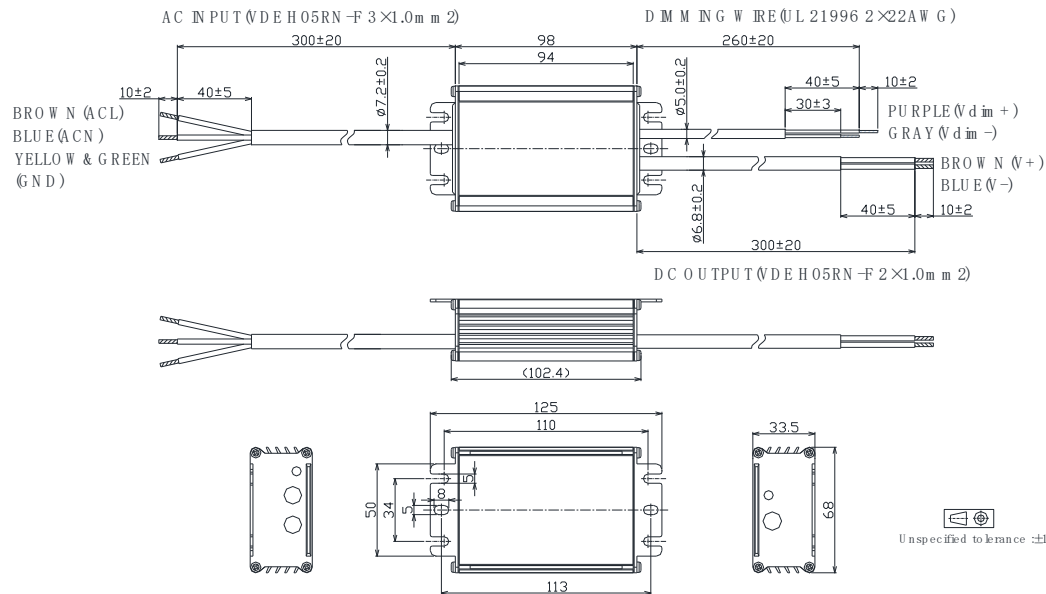


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- BLD-040-Cxxx-NN/TRS (VDE Cable)



- BLD-040-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)
-C070	700	40	34	57	70
	650	40	37	62	65
	600	40	40	67	60
	550	40	44	73	55
	500	40	48	80	50
	450	36	48	80	50
	400	32	48	80	50
	350	28	48	80	50
	...	...	...	...	...
	50	4	48	80	50

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C105	1050	40	23	38	105
	1000	40	24	40	100
	950	40	25	42	95
	900	40	27	44	90
	850	40	28	47	85
	800	40	30	50	80
	750	40	32	53	75
	700	40	34	57	70
	650	37	34	57	70
	600	34	34	57	70
	550	31	34	57	70
	500	29	34	57	70
	...	...	...	...	...
	70	4	34	57	70

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Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C140	1400	40	17	29	140
	1300	40	18	31	130
	1200	40	20	33	120
	1100	40	22	36	110
	1050	40	23	38	105
	1000	38	23	38	105
	950	36	23	38	105
	900	34	23	38	105
	850	32	23	38	105
	800	30	23	38	105
	750	29	23	38	105
	700	27	23	38	105
	...	...	...	...	...
	105	4	23	38	105