

NFC Programmable LED Driver

60W | 100-277Vac Input

- Supply Voltage: 90-305Vac or 127-420Vdc
- Great Surge Immunity 10kV
- -55 Cold Ambient Startup (Optional)
- 100,000Hour Life @ Tc=75
- Airset™ NFC Programmability
- +/-2% Output Current Accuracy (Programmable Model)
- 0-10V/PWM/Time/DALI/DMX Dimmable (Model Depending)
- Dim Off with 0.5W Standby Power (Model Depending)
- 12V 300mA Auxiliary Power to Power Controllers and Fans (Model Depending)
- Input Over Voltage Protection (Optional)
- 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-060-C105-XYZ	90 ~ 305 Vac	60W	34-86Vdc	700mA	1050mA	UL/FCC/CB/ENEC/CCC
BLD-060-C140-XYZ	90 ~ 305 Vac	60W	26-57Vdc	1050mA	1400mA	UL/FCC/CB/ENEC/CCC
BLD-060-C210-XYZ	90 ~ 305 Vac	60W	17-43Vdc	1400mA	2100mA	UL/FCC/CB/ENEC/CCC

XY	Dimming Method	Programmable	12Vaux	Dim-off
NN	-	-	-	-
DN	0-10V	-	-	-
TR	Time	✓	-	-
DR	0-10V/PWM/Time	✓	-	-
ER	0-10V/PWM/Time	✓	✓	✓
AN	DALI	-	-	✓
MR	DMX512	✓	-	✓

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
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 @240Vac 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%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 $T_c \leq 70 \pm 10^\circ\text{C}$
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	≥65,000 hours, 50 case temperature, refer to life vs. Tc curve
Case Temperature	90°C max, marked in the Tc point of label
Dimensions	5.16x2.66x1.32 by inch (body), 6.22x2.66x1.32 by inch (endcaps included)
	131.0x67.5x33.5 by mm (body), 158.0x67.5x33.5 by mm (endcaps included)
Net Weight	600g
Packing	25pcs/Carton/17.3kg, 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

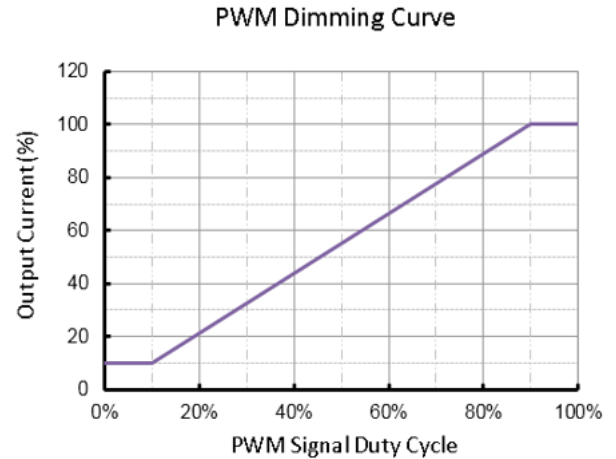
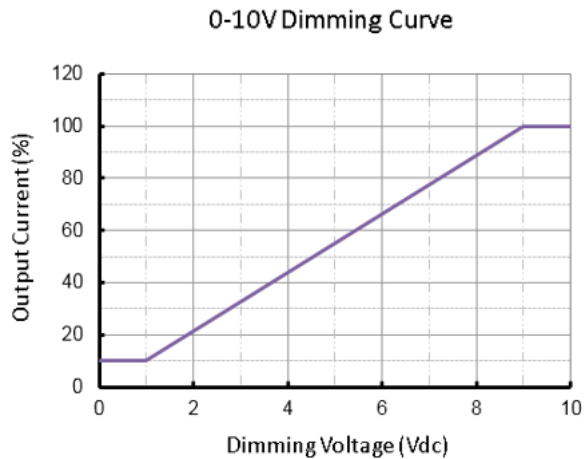
Dimming

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	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

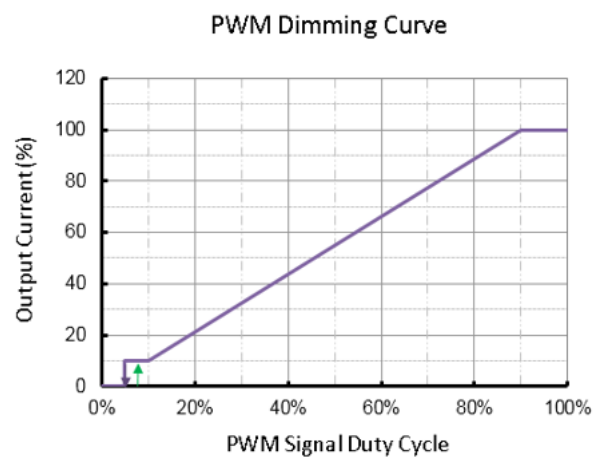
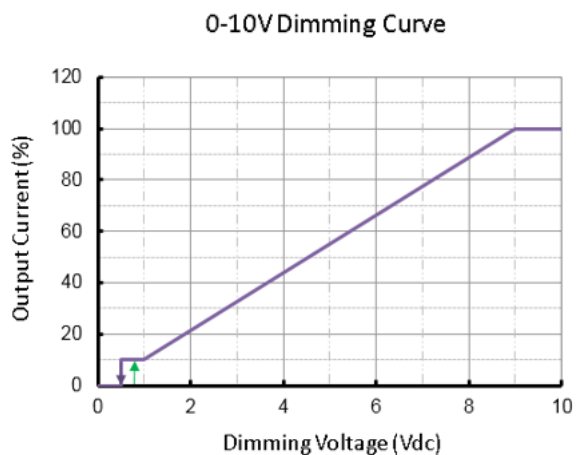
The default DALI model is programmable, contact sales for non-programmable and cost effective models.

Dimming Curve

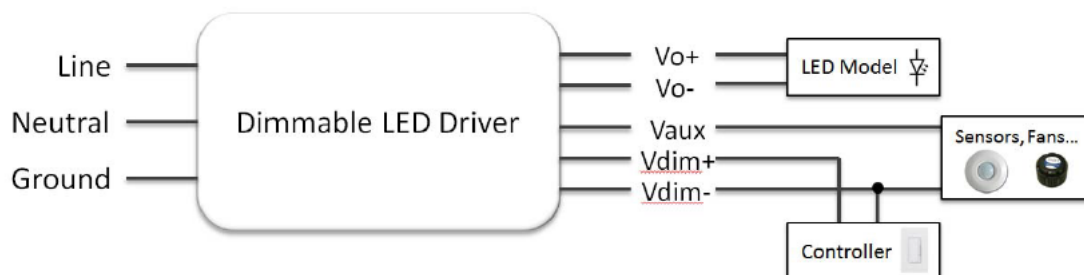
a. Without dim-off



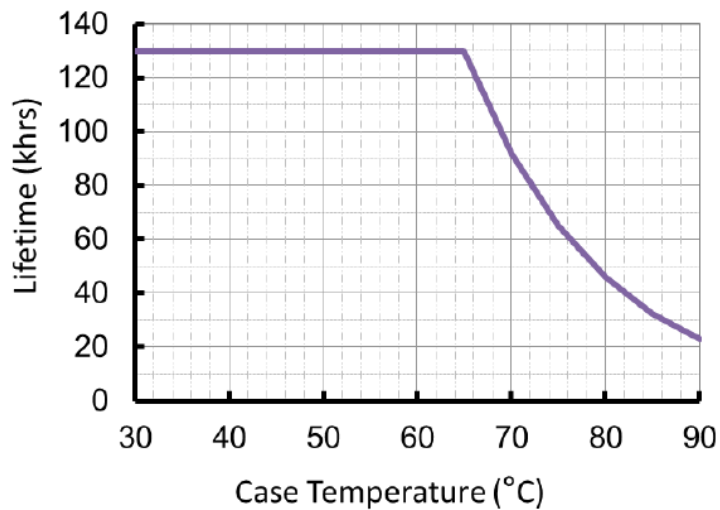
b. With dim-off



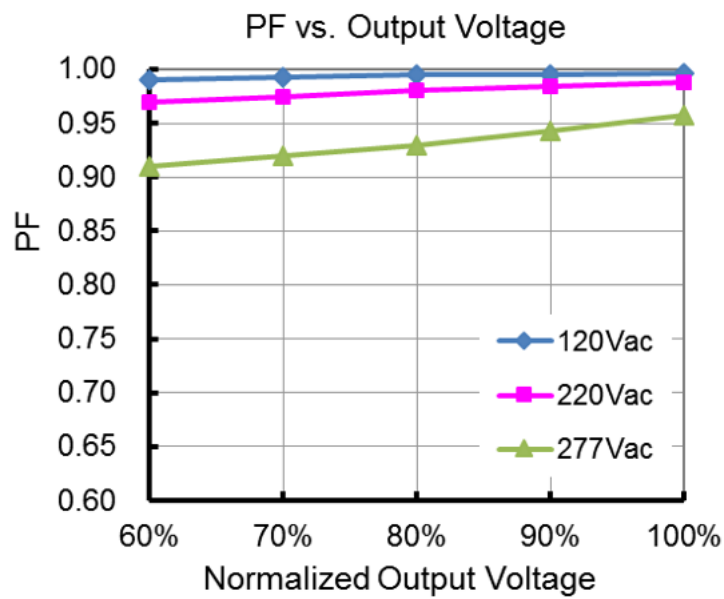
Dimming Wiring

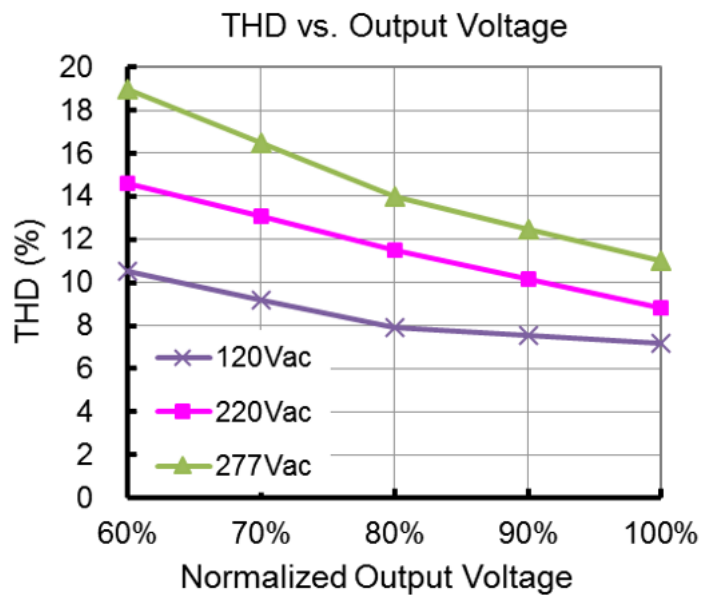
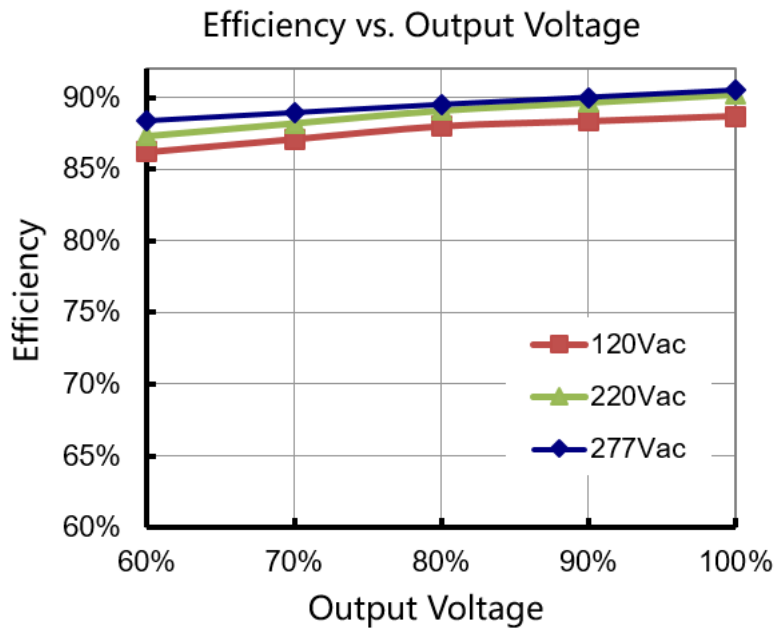


Lifetime vs. Case Temperature

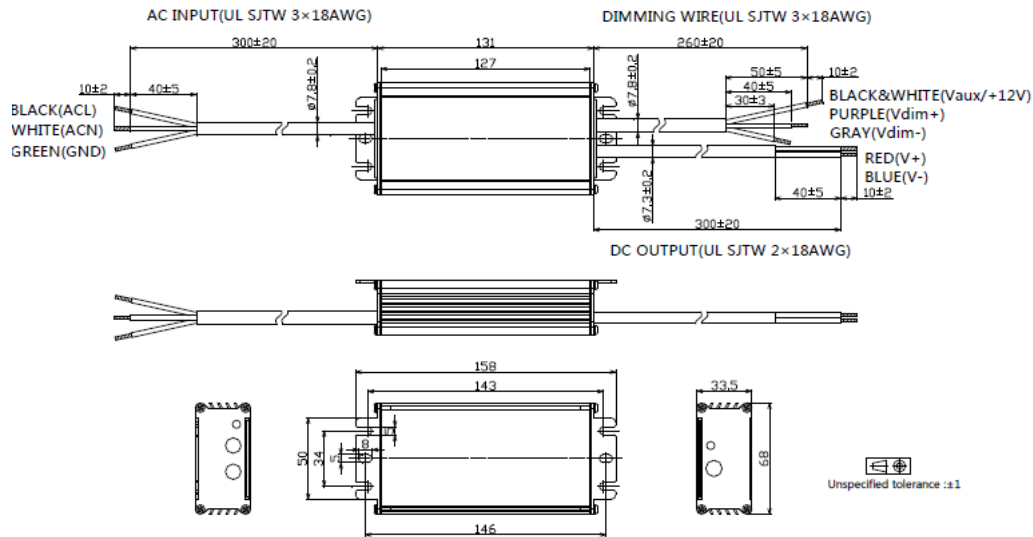


■ Power Factor vs. Load

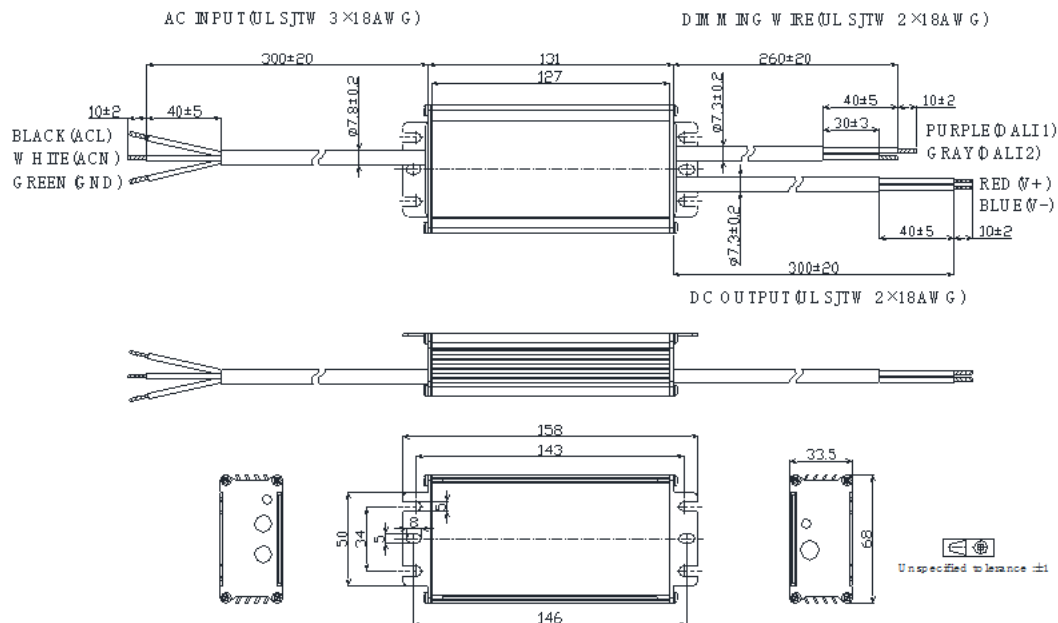


■ **THD vs. Load**■ **Efficiency vs. Load (1.05A Model)**

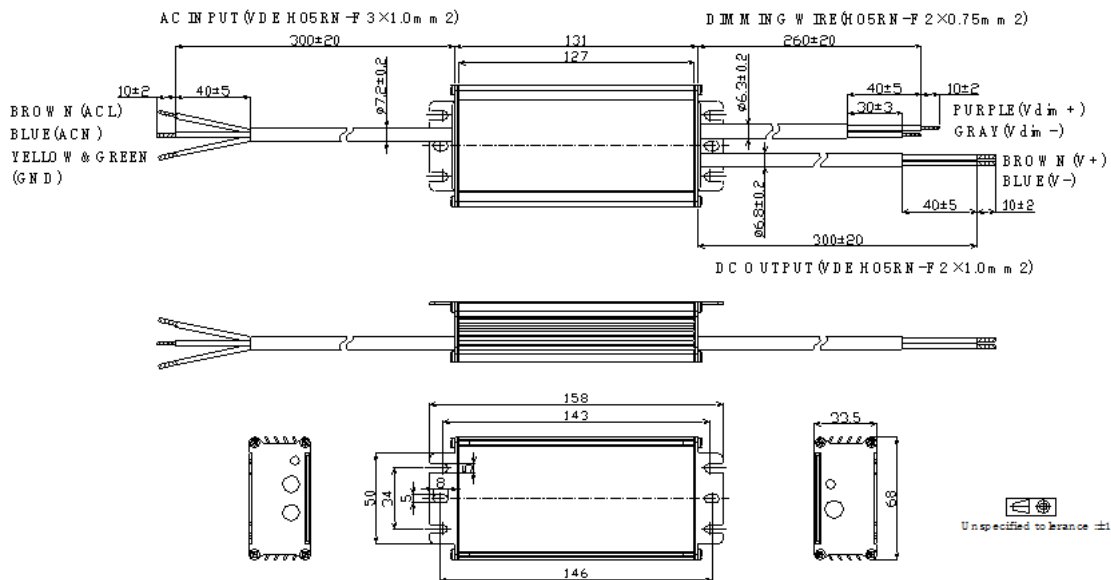
- BLD-060-Cxxx-ERU (UL Cable)



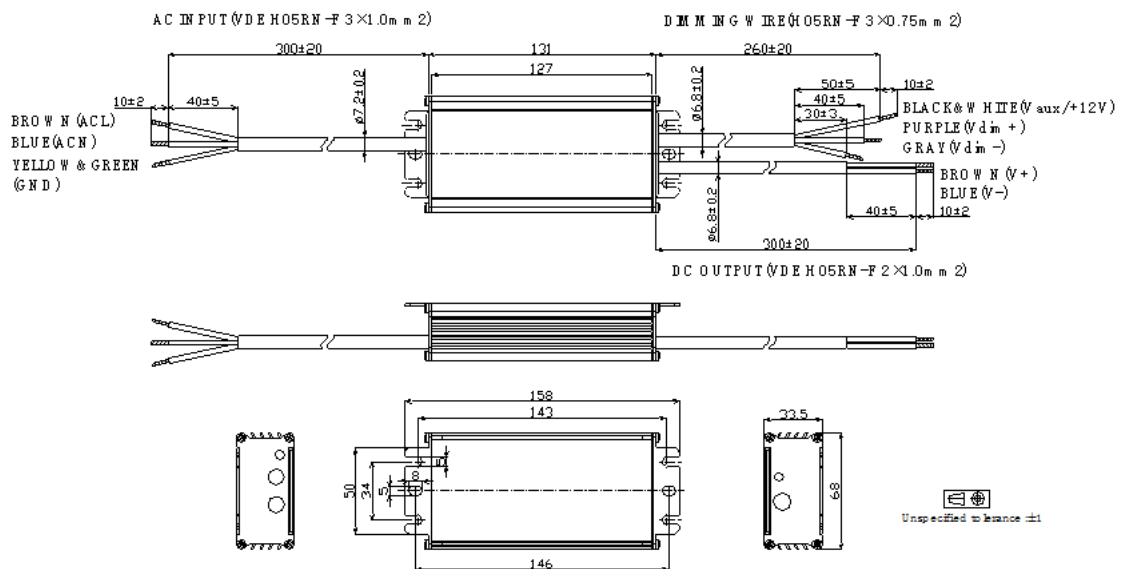
- BLD-060-Cxxx-ANU (UL Cable)



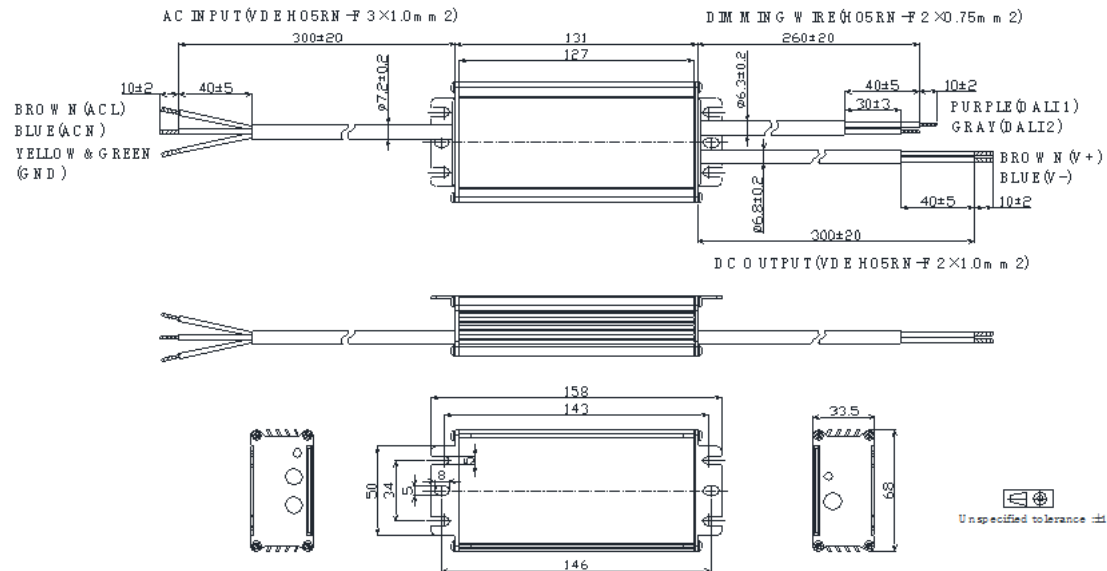
- BLD-060-Cxxx-DN/DRS (VDE Cable)



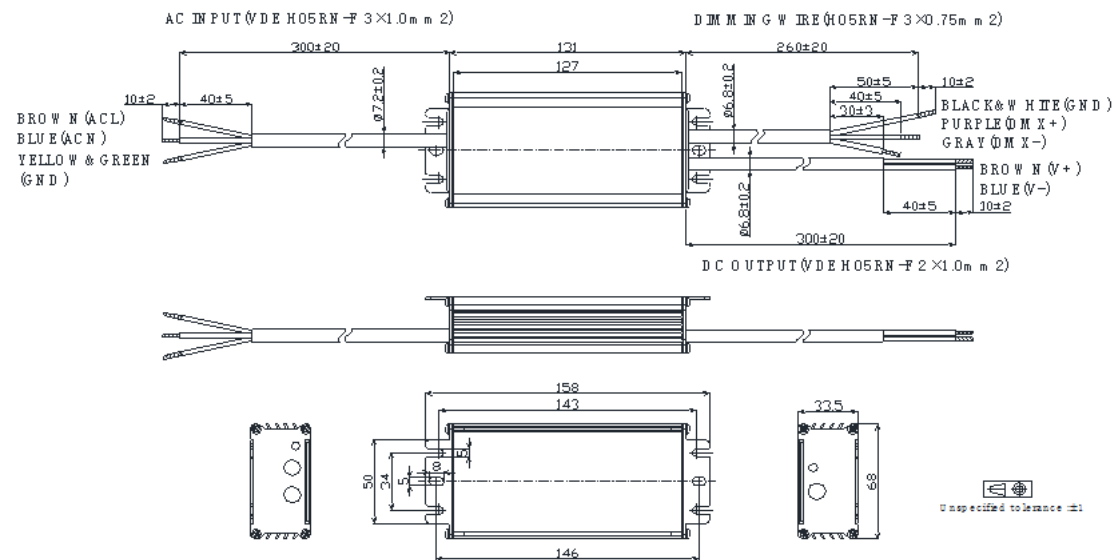
- BLD-060-Cxxx-ERS (VDE Cable)



- BLD-060-Cxxx-ANS (VDE Cable)



- BLD-060-Cxxx-MRS (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	60	34	57	105
	1000	60	36	60	100
	950	60	38	63	95
	900	60	40	67	90
	850	60	42	71	85
	800	60	45	75	80
	750	60	48	80	75
	700	60	51	86	70
	650	56	51	86	70
	600	51	51	86	70
	550	47	51	86	70
	500	43	51	86	70
	...	...	...	...	...
	70	6	51	86	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	60	6	43	140
	1300	60	28	46	130
	1200	60	30	50	120
	1100	60	33	55	110
	1050	60	34	57	105
	1000	57	34	57	105
	950	54	34	57	105
	900	51	34	57	105
	850	49	34	57	105
	800	46	34	57	105
	750	43	34	57	105
	700	40	34	57	105
	...	...	...	...	...
	105	6	34	57	105

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C210	2100	60	17	29	210
	2000	60	18	30	200
	1900	60	19	32	190
	1800	60	20	33	180
	1700	60	21	35	170
	1600	60	23	38	160
	1500	60	24	40	150
	1400	60	26	43	140
	1300	56	26	43	140
	1200	51	26	43	140
	1100	47	26	43	140
	1000	43	26	43	140
	...	...	...	...	...
	140	6	26	43	140