

Product Datasheet



The global certified BLD-240-C series is a high cost performance LED driver. 10kV surge protection level, 80khour long life and 5-year warranty provide high confidence to luminaire designers and users. All around protections including digital OTP, SCP and OVP/OCP with auto-recovery secure 24hour non-stop operation for luminaires.

- Street
- Tunnel
- Bay
- Shoe box
- Architectural



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■ Features

- Supply Voltage: 90~305Vac 380Vac for 2 hours
- Great Surge Immunity 10kV
- 80,000Hour Life @ Tc=75°C
- 5 Year Warranty
- Airset™ NFC Programmability
- 0-10V Isolated
- 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

■ Model List

Model Number	Input Voltage Range	Output Power	Output Voltage	Full Power Settable Current Min	Full Power Settable Current Max	Certification
BLD-240-C140-XYZ	90 ~ 305 Vac	250 W	Refer to Output Operation Range Section	1050mA	1400mA	UL/FCC/CB/ENEC/CCC/RCM/EAC
BLD-240-C210-XYZ	90 ~ 305 Vac	250 W		1400mA	2100mA	
BLD-240-C280-XYZ	90 ~ 305 Vac	250 W		2100mA	2800mA	
BLD-240-C420-XYZ	90 ~ 305 Vac	250 W		2800mA	4200mA	

XYZ Suffix	Dimming Method	NFC Programmable	12Vaux	Dim-off
NNZ-B00000	-	-	-	-
DNZ-B00000	0-10V Isolated	-	-	-
TRZ-B00000	Time	√	-	-
DRZ-B00000	0-10V Isolated /Time	√	-	-

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

250W, 120-277Vac Input, High Quality Cost Performance LED Driver
■ Technical Data

Input Voltage	90~305Vac or 127V-420Vdc, 380Vac for 2 hours
Input Frequency	47~63Hz
Power Factor	>0.95@60-100%load, refer to PF vs. Load curve
THD	<15%@60-100%load, refer to THD vs. Load curve
Input Current	2.2Amax@120Vac & Full-Load, 1.1Amax@220Vac & Full-Load
Inrush Current	See Inrush Current Section in the datasheet
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% 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)	-
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	6.85x2.66x1.32 by inch (body), 7.91x2.66x1.32 by inch (endcaps included) 174.0x68.0x33.5 by mm (body), 201.0x68.0x33.5 by mm (endcaps included)
Net Weight	800g
Packing	See Package Information Section in the datasheet

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

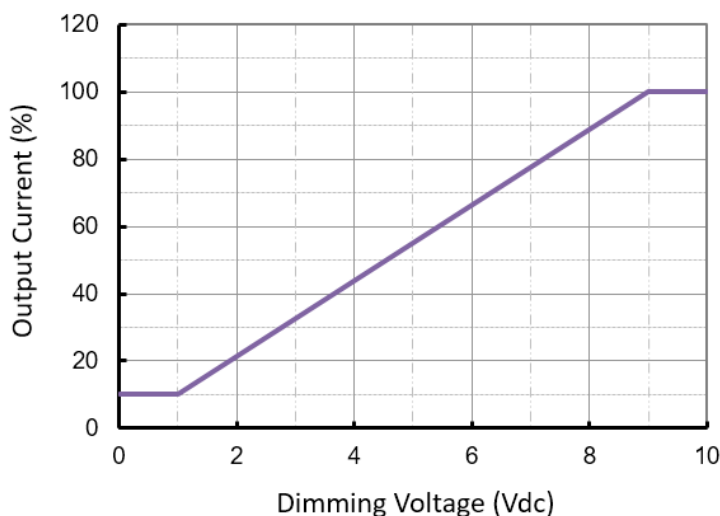
Safety Standard	Description
UL8750	Light emitting diode(LED) equipment for use in lighting products
UL1012	Power units other than class 2
IEC 61347-1	Lamp control gear Part 1: general and safety requirements
IEC 61347-2-13	Lamp control gear Part 2-13: particular requirement for d.c. or a.c. supplied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

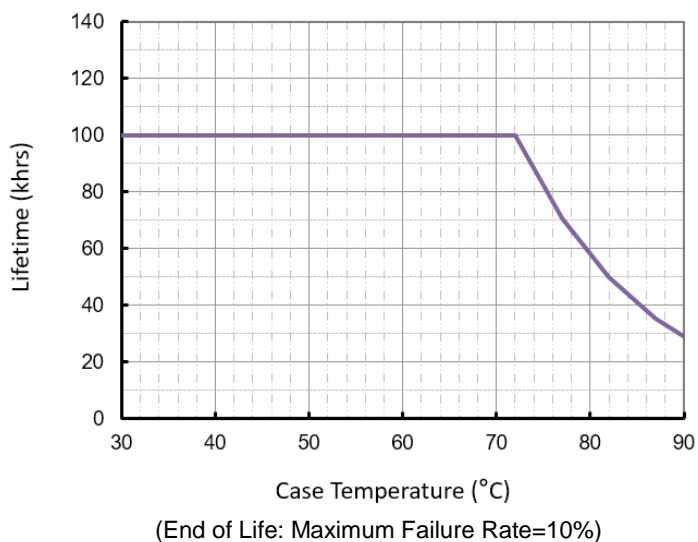
- Dimming Curve

0-10V Dimming Curve

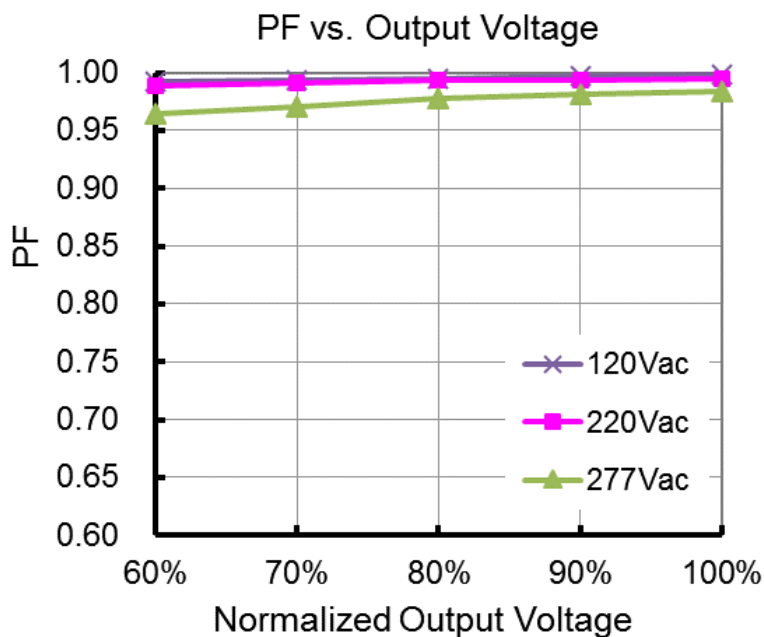


■ Lifetime vs. Case Temperature

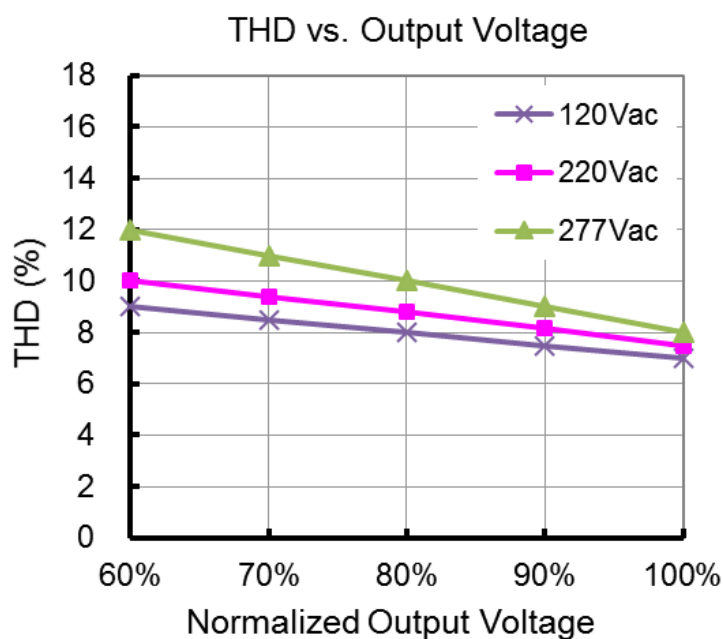
Lifetime vs. Case Temperature



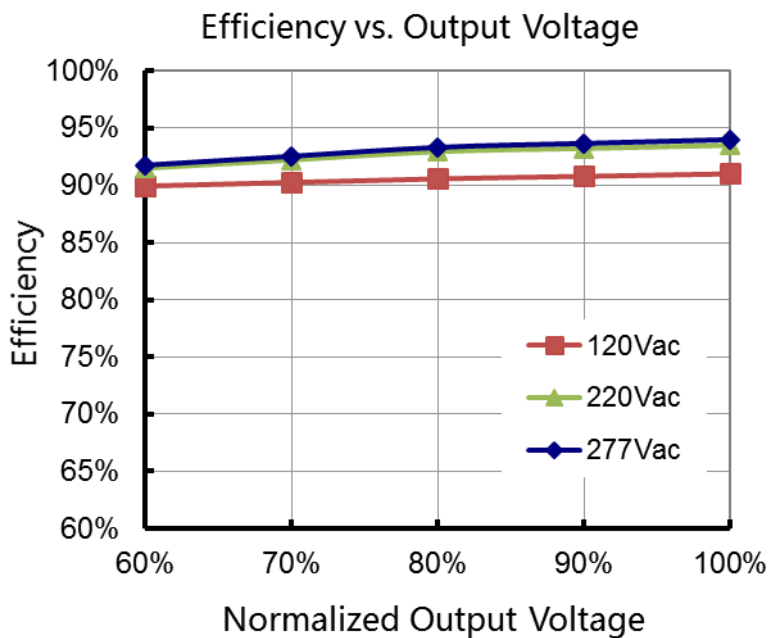
■ Power Factor vs. Load



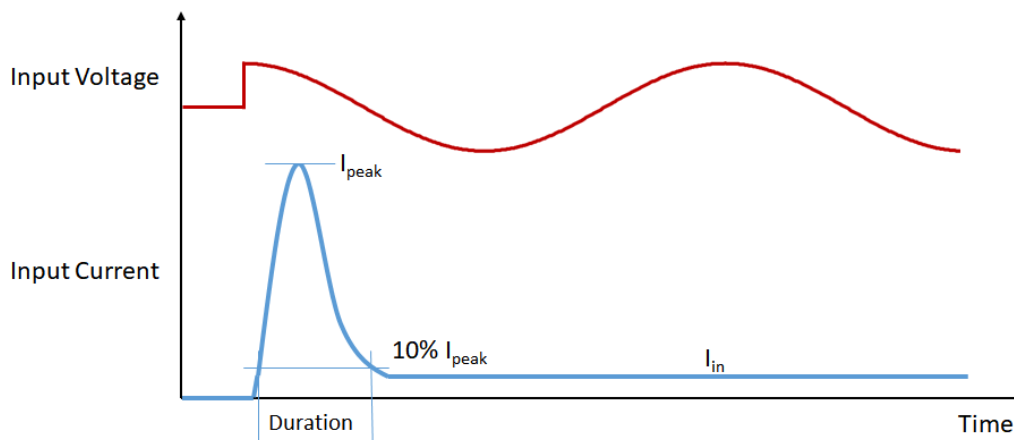
■ THD vs. Load



■ Efficiency vs. Load (1.4A Model)



■ Inrush Current



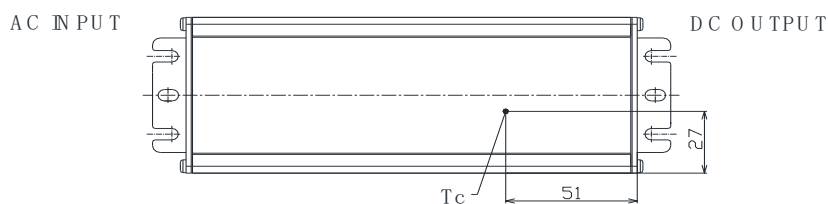
Input Voltage	I_{peak}	Duration
120Vac	33.4A	1.28mS
220Vac	66.0A	1.14mS
277Vac	80.8A	1.12mS

Please contact with us for MCB calculation and waveforms.

■ Dielectric Strength

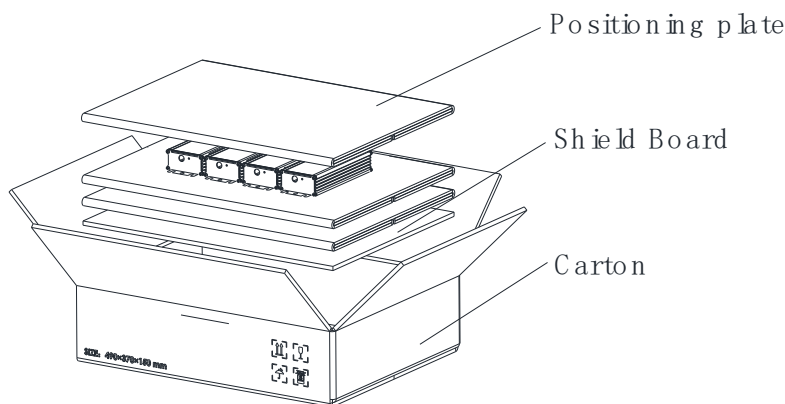
Unit: Vac	Input	Output	Dimming	Case
Input	-	3750	3750	1554
Output	3750	-	1554	1554
Dimming	3750	1554	-	1554
Case	1554	1554	1554	-

■ Tc Point



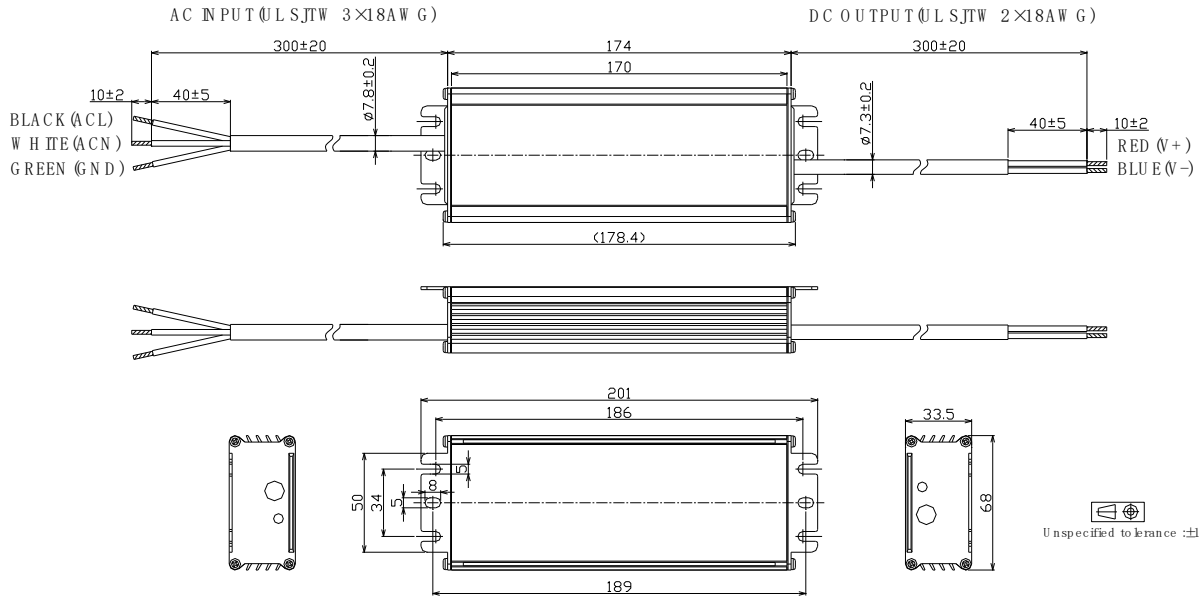
■ Packaging Information

Typical Carton Dimension(L×W×H)	490×370×150 mm
Positioning plate	3pcs/carton
Shield Board	1pcs/carton
LED Drivers	12pcs/carton

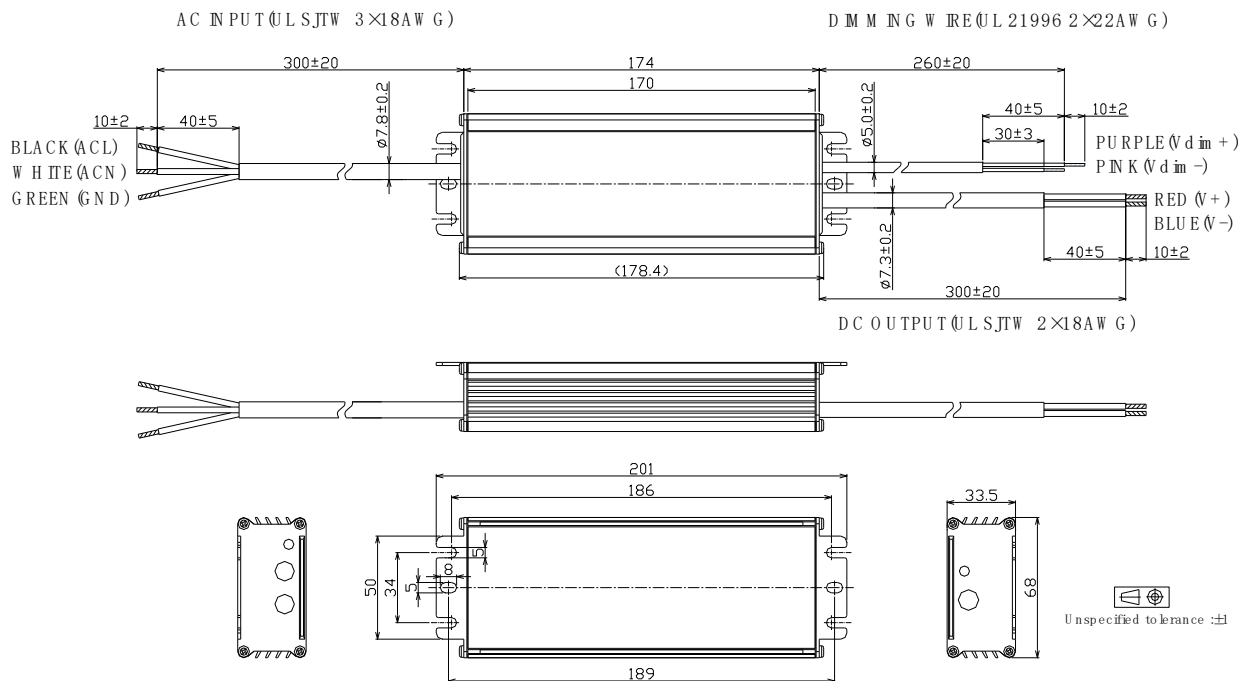


■ Mechanical Design

- BLD-240-Cxxx-NN/TRU (UL Cable)

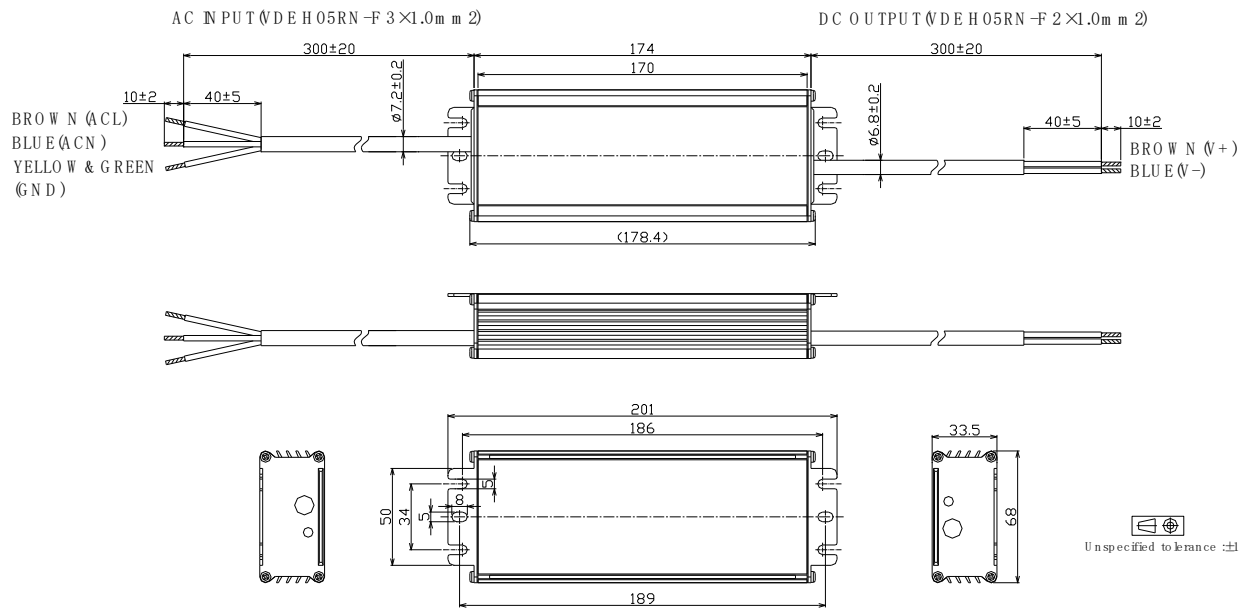


- BLD-240-Cxxx-DN/DRU (UL Cable)

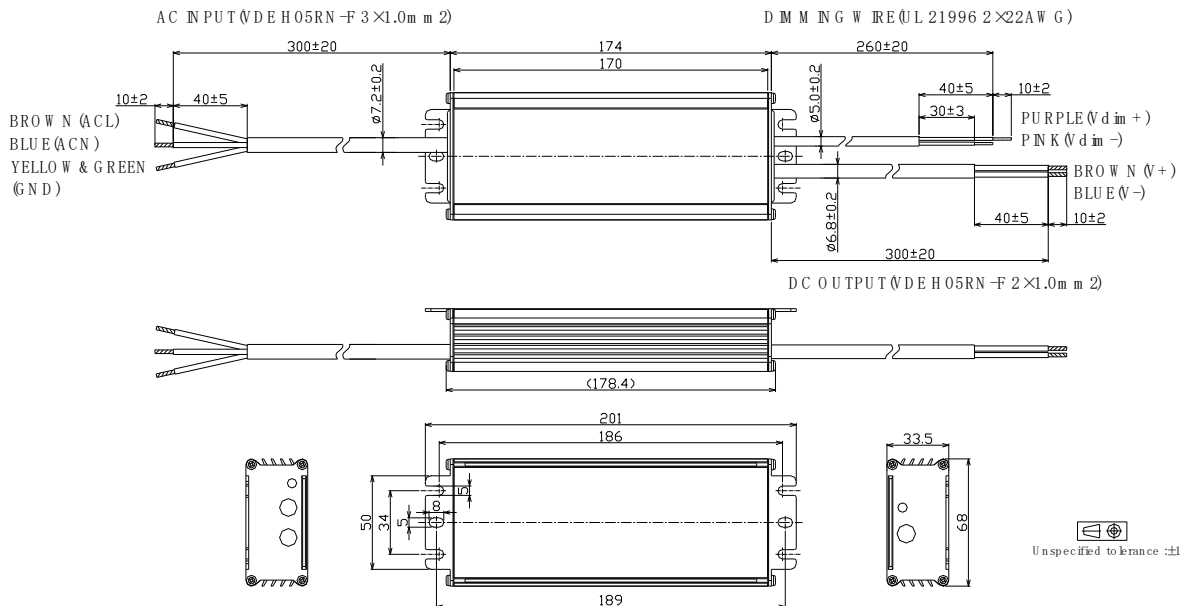


250W, 120-277Vac Input, High Quality Cost Performance LED Driver

- BLD-240-Cxxx-NN/TRS (VDE Cable)



- BLD-240-Cxxx-DN/DRS (VDE Cable)



250W, 120-277Vac Input, High Quality Cost Performance LED Driver
■ 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)
-C105	1050	250	143	238	105
	1000	250	150	250	100
	950	250	158	263	95
	900	250	167	278	90
	850	250	176	294	85
	800	250	188	313	80
	750	250	200	333	75
	700	250	214	357	70
	650	232	214	357	70
	600	214	214	357	70
	550	196	214	357	70
	500	179	214	357	70

	70	25	214	357	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	250	107	179	140
	1300	250	115	192	130
	1200	250	125	208	120
	1100	250	136	227	110
	1050	250	143	238	105
	1000	238	143	238	105
	950	226	143	238	105
	900	214	143	238	105
	850	202	143	238	105
	800	190	143	238	105
	750	179	143	238	105
	700	167	143	238	105

	105	25	143	238	105

250W, 120-277Vac Input, High Quality Cost Performance LED Driver

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C210	2100	250	71	119	210
	2000	250	75	125	200
	1900	250	79	132	190
	1800	250	83	139	180
	1700	250	88	147	170
	1600	250	94	156	160
	1500	250	100	167	150
	1400	250	107	179	140
	1300	232	107	179	140
	1200	214	107	179	140
	1100	196	107	179	140
	1000	179	107	179	140

	140	25	107	179	140

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C280	2800	250	54	89	280
	2700	250	56	93	270
	2600	250	58	96	260
	2500	250	60	100	250
	2400	250	63	104	240
	2300	250	65	109	230
	2200	250	68	114	220
	2100	250	71	119	210
	2000	238	71	119	210
	1900	226	71	119	210
	1800	214	71	119	210
	1700	202	71	119	210

	210	25	71	119	210

250W, 120-277Vac Input, High Quality Cost Performance LED Driver

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C420	4200	250	36	60	420
	4000	250	38	63	400
	3900	250	38	64	390
	3800	250	39	66	380
	3700	250	41	68	370
	3600	250	42	69	360
	3500	250	43	71	350
	3400	250	44	74	340
	3300	250	45	76	330
	3200	250	47	78	320
	3100	250	48	81	310
	3000	250	50	83	300
	2900	250	52	86	290
	2800	250	54	89	280
	2700	241	54	89	280

	280	25	54	89	280

■ Revision History

Revision	Date	Contents
C	2022-03-22	<ol style="list-style-type: none">1. Index page added2. Reduced dimming interface sourcing current3. Inrush current data added4. Tc point position indication added5. Dielectric strength level added6. Packaging information added7. Mechanical design change with dimming cable color8. Revision history added