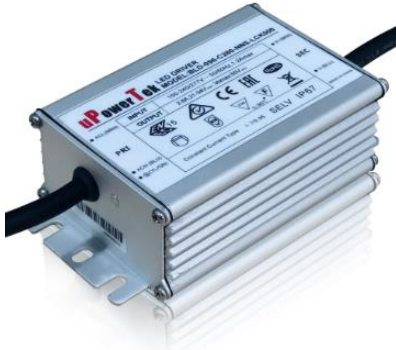


Product Datasheet



The global certified BLD-096-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/OCV with auto-recovery secure 24hour non-stop operation for luminaires.

- Street
- Tunnel
- Bay
- Shoe box
- Architectural



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96W, 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

■ Model List

Model Number	Input Voltage Range	Output Power	Output Voltage	Full Power Settable Current Min	Full Power Settable Current Max	Certification
BLD-096-C105-XYZ	90 ~ 305 Vac	96 W	Refer to Output Operation Range Section	700mA	1050mA	UL/FCC/CB/ENEC/CCC/BIS/RCM/PSE
BLD-096-C140-XYZ	90 ~ 305 Vac	96 W		1050mA	1400mA	
BLD-096-C210-XYZ	90 ~ 305 Vac	96 W		1400mA	2100mA	
BLD-096-C280-XYZ	90 ~ 305 Vac	96 W		2100mA	2800mA	

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 S, VDE cable/Class I D, VDE cable/Class II

96W, Isolated Dimming, NFC Programmable LED Driver
■ 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	0.95Amax@120Vac & Full-Load, 0.48Amax@220Vac & Full-Load
Inrush Current	See Inrush Current Section in the datasheet
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 $T_c \geq 110 \pm 5^\circ\text{C}$; Auto Recovery When $T_c \leq 70 \pm 5^\circ\text{C}$
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), 4.92x2.66x1.51 by inch (endcaps included) 99.0x68.0x38.5 by mm (body), 125.0x68.0x38.5 by mm (endcaps included)
Net Weight	380g
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.

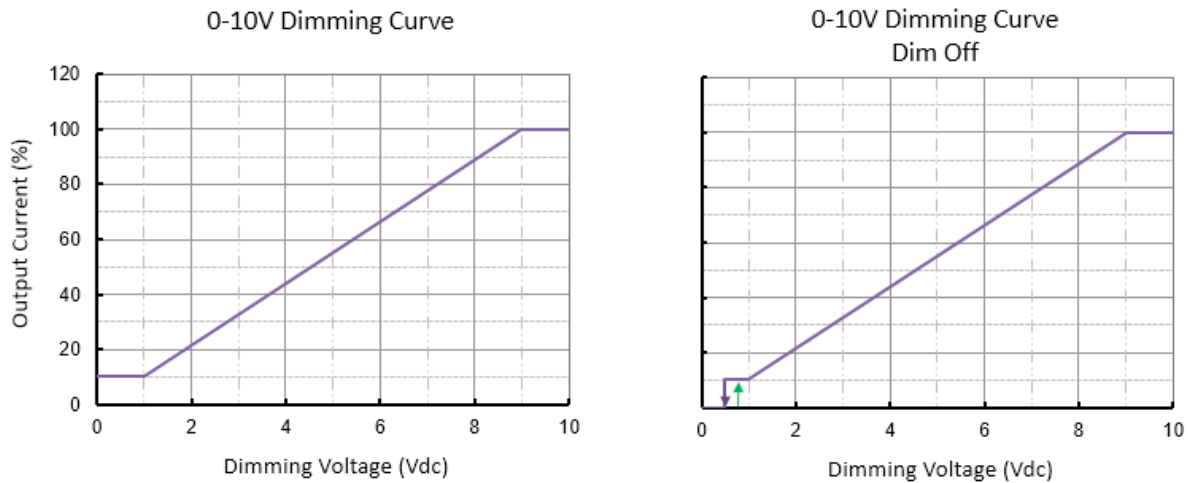
■ Safety/EMC Compliance

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

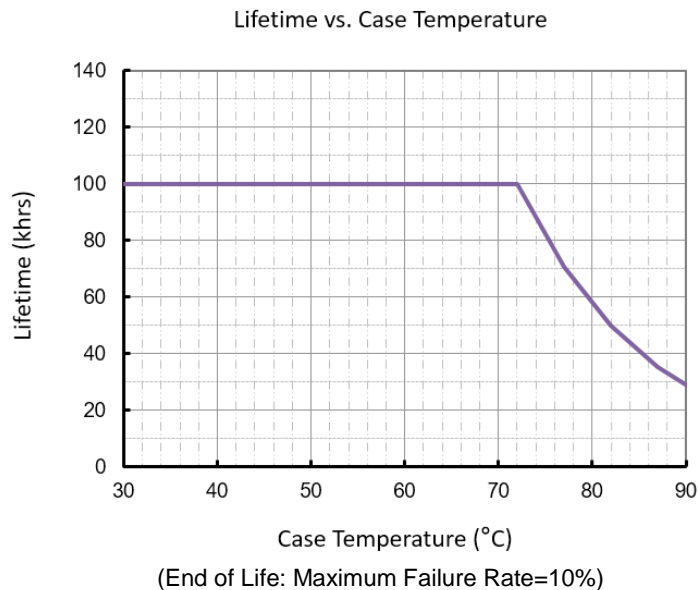
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	50uA	100uA	200uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
Dim off threshold	0.4V	0.5V	0.6V
Dim on threshold	0.6V	0.7V	0.8V

- Dimming Curve

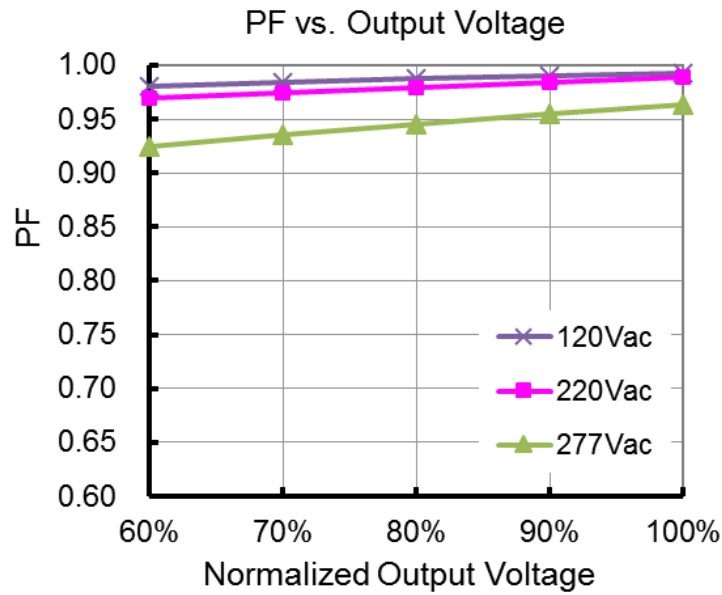


Default Model is without Dim to Off Function. Contact Sales for Dim to Off Models.

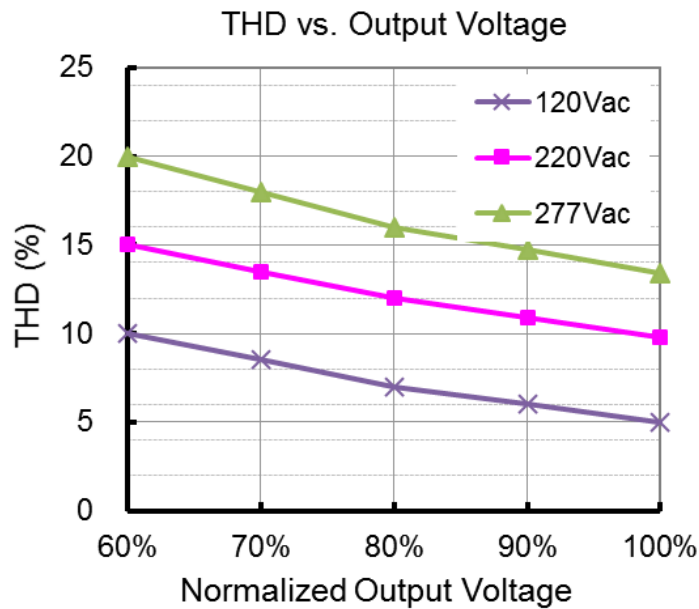
■ Lifetime vs. Case Temperature



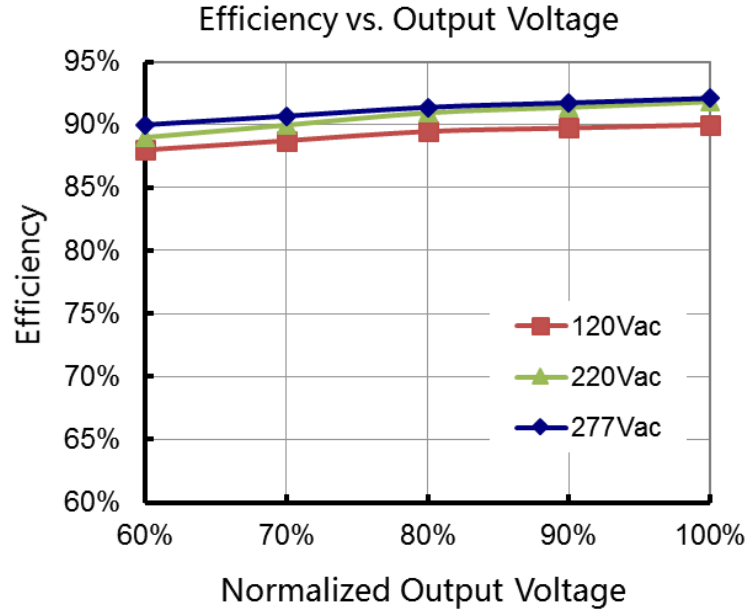
■ Power Factor vs. Load



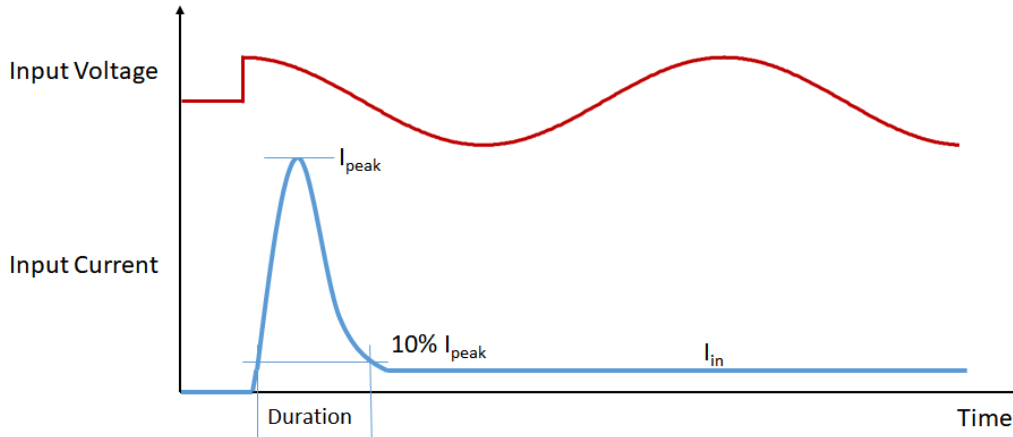
■ THD vs. Load



■ Efficiency vs. Load (1.05A Model)



■ Inrush Current



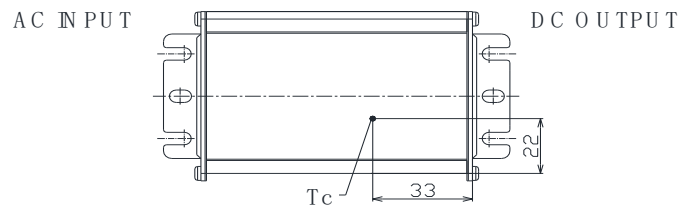
Input Voltage	I_{peak}	Duration
120Vac	37A	820us
220Vac	66A	820us
277Vac	90A	760us

Please contact with us for MCB calculation and waveforms.

■ Dielectric Strength

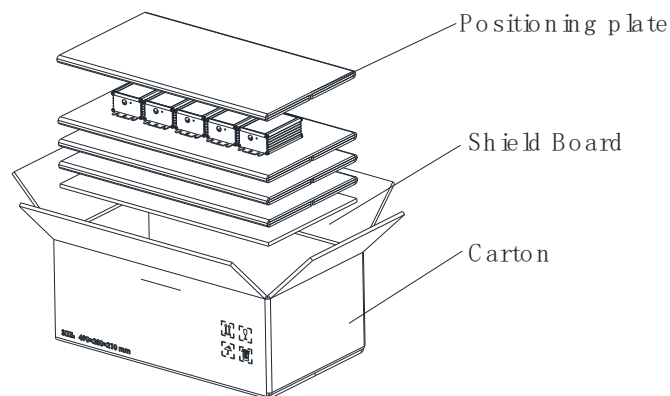
Unit: Vac	Input	Output	Dimming	Case
Input	-	3750	3750	1554
Output	3750	-	1554	1554
Dimming	3750	1554	-	1554
Case	1554	1554	1554	-

■ Tc Point



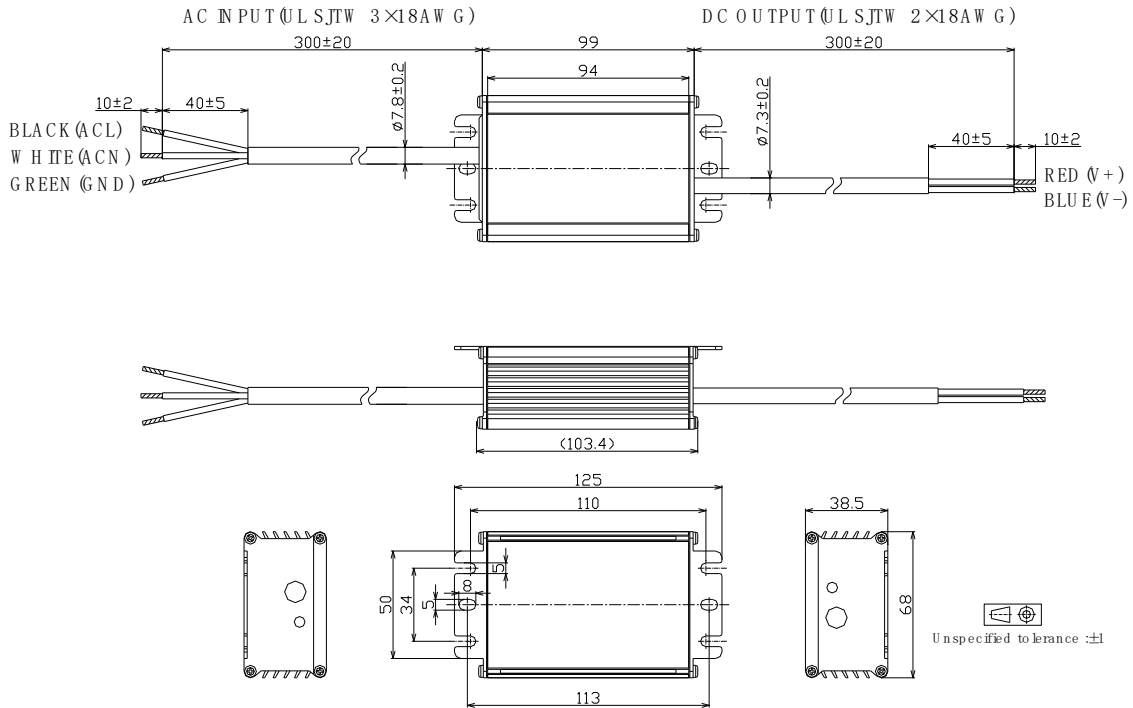
■ Packaging Information

Typical Carton Dimension(L×W×H)	490×280×210 mm
Positioning plate	4pcs/carton
Shield Board	1pcs/carton
LED Drivers	20pcs/carton

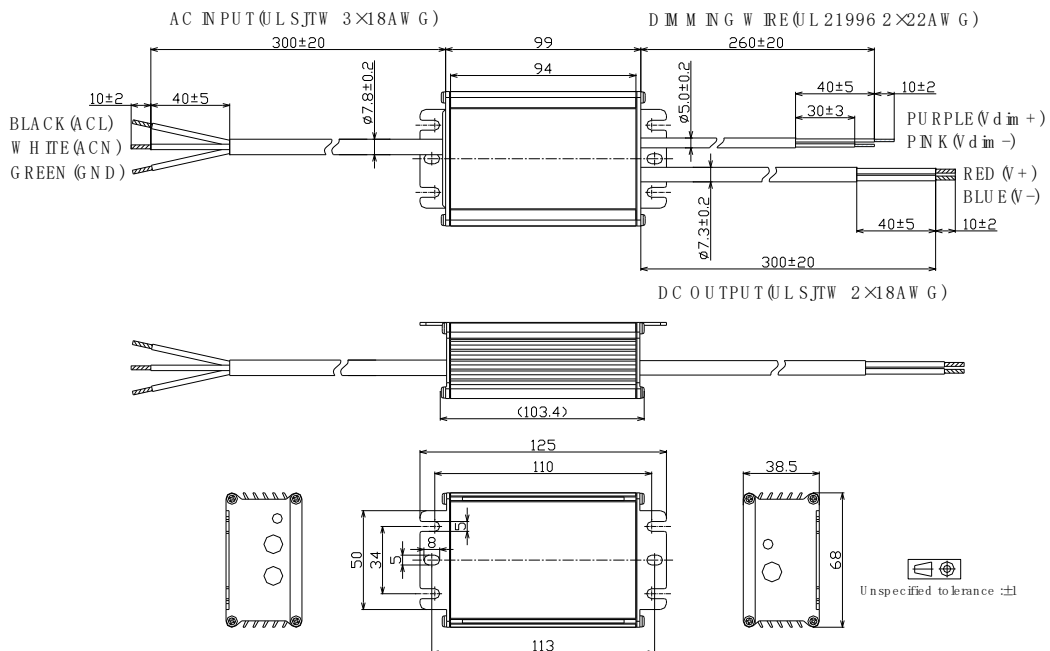


Mechanical Design

BLD-096-Cxxx-NN/TRU (UL Cable)

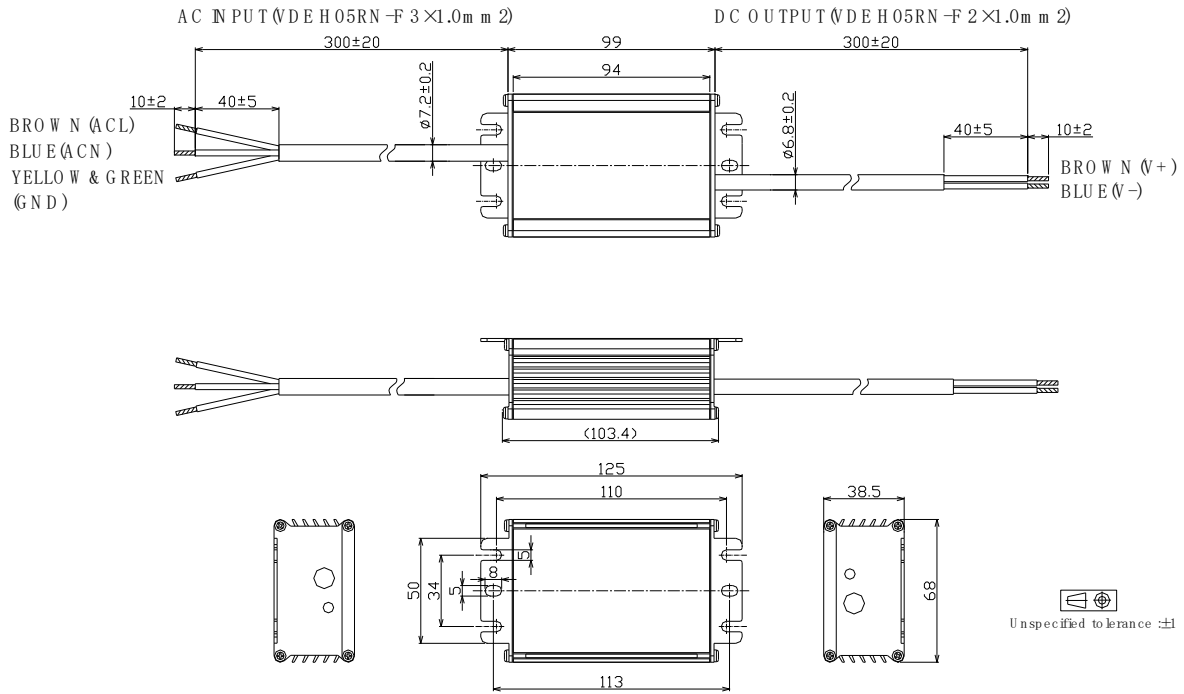


BLD-096-Cxxx-DN/DRU (UL Cable)

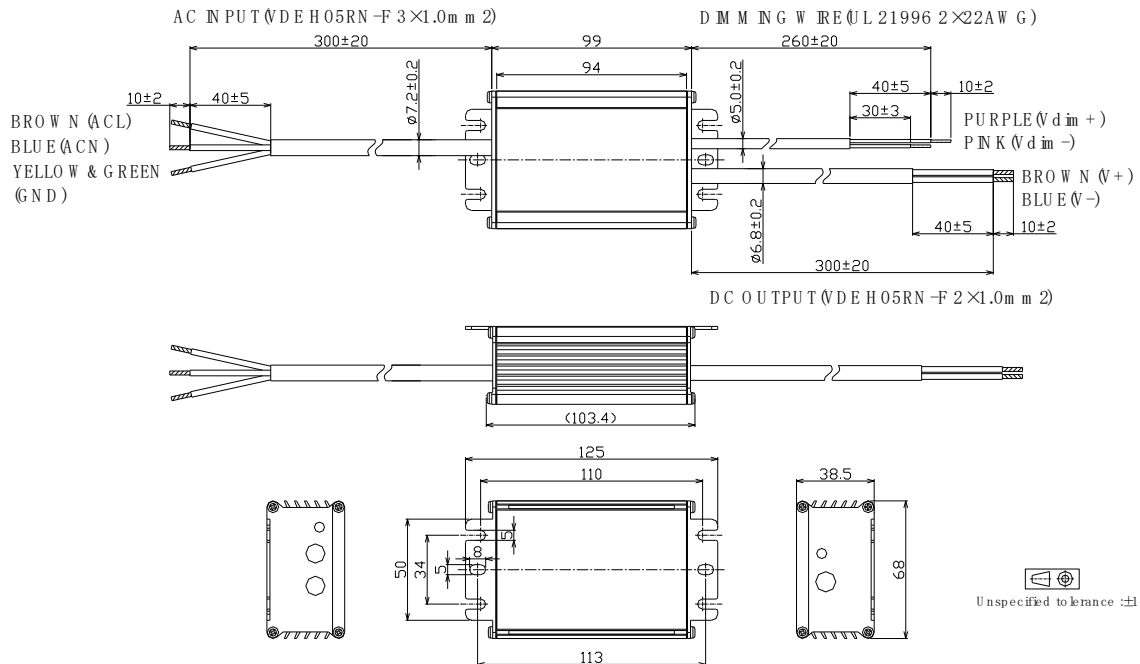


96W, Isolated Dimming, NFC Programmable LED Driver

- BLD-096-Cxxx-NN/TRS (VDE Cable)



BLD-096-Cxxx-DN/DRS (VDE Cable)



■ 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	96	55	91	105
	1000	96	58	96	100
	950	96	61	101	95
	900	96	64	107	90
	850	96	68	113	85
	800	96	72	120	80
	750	96	77	128	75
	700	96	82	137	70
	650	89	82	137	70
	600	82	82	137	70
	550	75	82	137	70
	500	69	82	137	70

	70	10	82	137	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	96	41	69	140
	1300	96	44	74	130
	1200	96	48	80	120
	1100	96	52	87	110
	1050	96	55	91	105
	1000	91	55	91	105
	950	87	55	91	105
	900	82	55	91	105
	850	78	55	91	105
	800	73	55	91	105
	750	69	55	91	105
	700	64	55	91	105

	105	10	55	91	105

96W, Isolated Dimming, NFC Programmable 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	96	27	46	210
	2000	96	29	48	200
	1900	96	30	51	190
	1800	96	32	53	180
	1700	96	34	56	170
	1600	96	36	60	160
	1500	96	38	64	150
	1400	96	41	69	140
	1300	89	41	69	140
	1200	82	41	69	140
	1100	75	41	69	140
	1000	69	41	69	140

	140	10	41	69	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	96	21	34	280
	2700	96	21	36	270
	2600	96	22	37	260
	2500	96	23	38	250
	2400	96	24	40	240
	2300	96	25	42	230
	2200	96	26	44	220
	2100	96	27	46	210
	2000	91	27	46	210
	1900	87	27	46	210
	1800	82	27	46	210
	1700	78	27	46	210

	210	78	27	46	210

■ Revision History

Revision	Date	Contents
B	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