

55W, 100-277Vac Input, NFC Programmable LED Driver

■ Features

- Supply Voltage: 90-305Vac or 127-250Vdc
- 100,000Hour Life @ Tc=75C
- 5 Year Warranty
- Airset™ NFC Programmability
- 1% 0-10V/PWM/Time/DALI Dimmable
- Isolated Dimming Input
- Dim Off with 0.5W Standby Power (Optional)
- 12V 300mA Auxiliary Power (Optional)
- Low Inrush Current
- Class II (Optional)
- UL Type TL, 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 (TBD)
55W-C210-XYZ	90 ~ 305 Vac	55 W	16-52Vdc	1050mA	2100mA	UL/FCC/CB/ENEC/CCC
55W-C105-XYZ	90 ~ 305 Vac	55 W	31-110Vdc	500mA	1050mA	UL/FCC/CB/ENEC/CCC
55W-C210-XYZ-HA0000	90 ~ 305 Vac	55 W	16-39Vdc	1400mA	2100mA	UL/FCC/CB/ENEC/CCC
55W-C140-XYZ-HA0000	90 ~ 305 Vac	55 W	23-52Vdc	1050mA	1400mA	UL/FCC/CB/ENEC/CCC

XYZ=	Dimming Method	Min Dim Level	Programmable	12Vaux	Dim-off	Isolated Dim
NNZ	-	-	-	-	-	-
DNZ	0-10V	-	-	-	-	-
DRZ	0-10V	1%	√			
ERZ	0-10V/PWM/Time	1%	√	√	√	√
ARZ	DALI/0-10V	1%	√	√	√	√
ARZ-HA0000	DALI/0-10V	0.1%	√	√	√	√

Z: C, Class I Model; E, Class II Model

■ Technical Data

Input Voltage	90~305Vac or 127V-250Vdc
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	1.8 Amax@110Vac & Full-Load, 0.9Amax@220Vac & Full-Load
Inrush Current	2A peak, 1.2ms duration, <0.025A2s@230Vac, Cold Start 4A peak, 1.3ms duration, <0.05A2s@277Vac, Cold Start
Leakage Current	1mA max @277Vac 60Hz, UL8750, 0.75mAmax @220Vac 50Hz, IEC61347-1
Input Under Voltage	Shut down and auto-recovery
Surge Protection	Line to line 4kV, line to ground 6kV, 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	-30°C~+70°C ; 10%RH~100%RH
Storage Temperature	-30°C~+85°C; 5%RH~100%RH
MTBF	≥350,000 hours, 50°C case temperature (MIL-HDBK-217F)
Lifetime	≥100,000 hours, 75°C case temperature, refer to life vs. Tc curve
Case Temperature	90°C max, marked in the Tc point of label
Dimensions	14.88x1.18x0.82 by inch 378 x 30 x 21 by mm
Net Weight	-
Packing	-

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

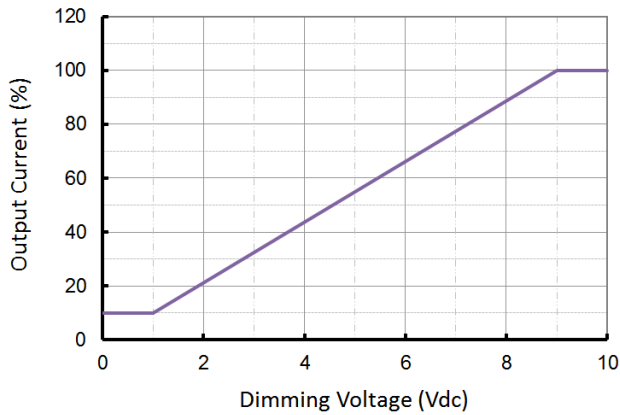
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	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		
DA1,DA2 High Level	9.5	16	22.5
DA1,DA2 Low Level	-6.5	0	6.5
DA1,DA2 Current	0		2mA

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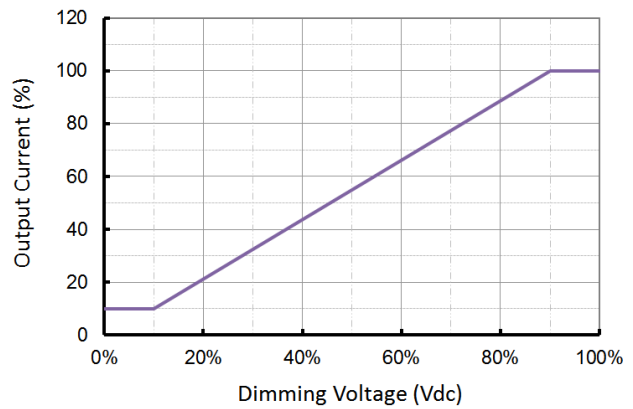
- Dimming Curve

a. Without dim-off

0-10V Dimming Curve

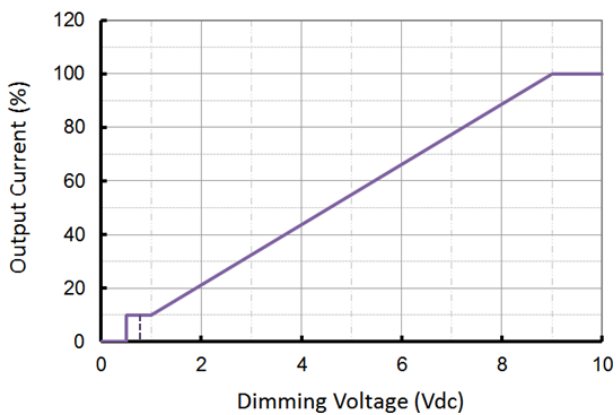


PWM Dimming Curve

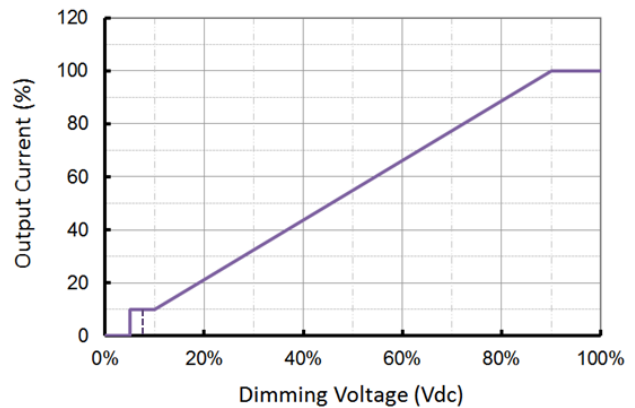


b. With dim-off

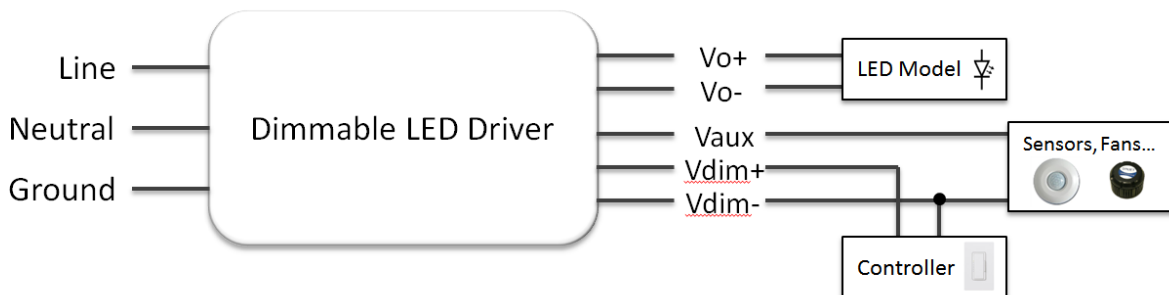
0-10V Dimming Curve



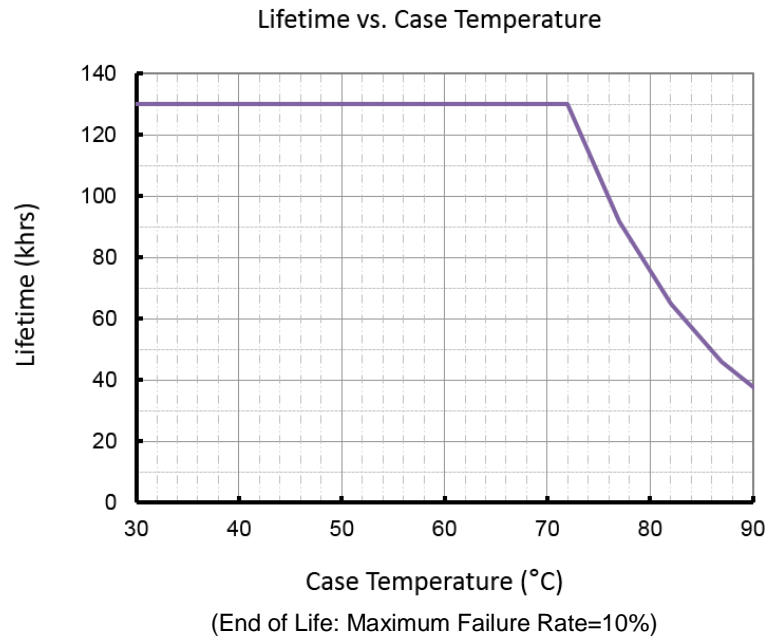
PWM Dimming Curve



- Dimming Wiring

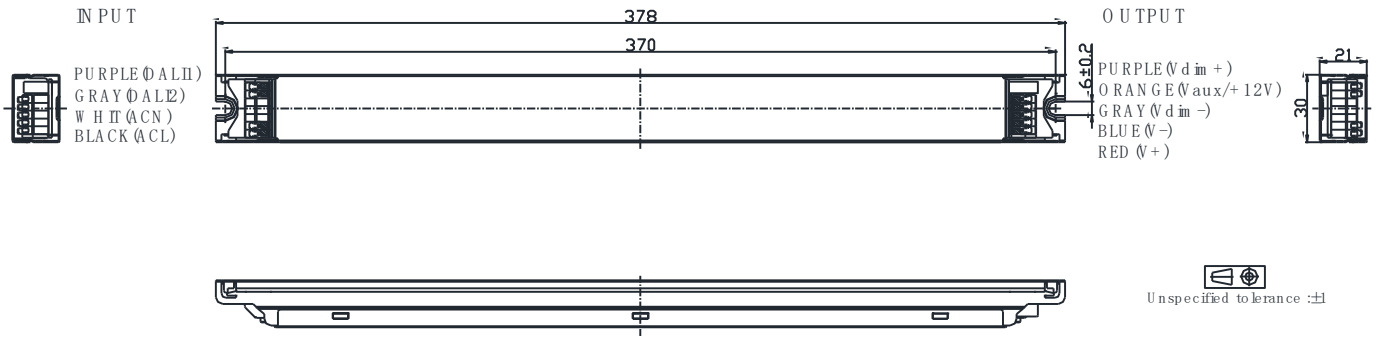


■ Lifetime vs. Case Temperature



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■ Mechanical Design



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Operation Area

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C105	1050	55	31	52	10.5
	1000	55	33	55	10
	950	55	35	58	9.5
	900	55	37	61	9
	850	55	39	65	8.5
	800	55	41	69	8
	750	55	44	73	7.5
	700	55	47	79	7
	650	55	51	85	6.5
	600	55	55	92	6
	550	55	60	100	5.5
	500	55	66	110	5
	450	50	66	110	5
	400	44	66	110	5
	350	39	66	110	5

	5	1	66	110	5

Model	Typical Set Output Current (mA)	Max Output Power (W)	Output Voltage Min (V)	Output Voltage Max(V)	Minimum Dimming Current (mA)
-C210	2100	55	16	26	21
	2000	55	17	28	20
	1900	55	17	29	19
	1800	55	18	31	18
	1700	55	19	32	17
	1600	55	21	34	16
	1500	55	22	37	15
	1400	55	24	39	14
	1300	55	25	42	13
	1200	55	28	46	12
	1100	55	30	50	11
	1050	55	31	52	10.5
	900	47	31	52	10.5
	800	42	31	52	10.5
	700	37	31	52	10.5
	600	31	31	52	10.5

	10.5	1	31	52	10.5

