LED Driver C.P. 55W Indoor Linear Programmable Series

Main Features:

- Input Voltage: 90~305Vac or 127~420Vdc
- Output Wattage: Constant Wattage (C.P.) at **55W**
  with Adjustable Current Setting
- Programmable Method: **NFC** (**F**)
- Dimming Function: **0-10V/PWM** (-V) **or DALI** (-D)
- Auxiliaire Voltage : **12**Vaux with **300**mA
- Lightning Protection: Built-in Surge Protector at 6KV/3KA
- Reliability Protection: OVP, SCP, OTP
- Safety Regulation: Complies with UL1598 & EN61347
- **UL Class 2 and Class P**
- Five Year Warranty under Normal Usage Conditions

SPECIFICATION

Model No. (i)	Output Voltage Range V_{min} - V_{max}	C.P. Programmable Output C.C. Range	OVP	OTP	Case Temperature
	(Vdc)	(mA) (i)	(Vdc max.)	(°C) (ii)	(Tc)
LDD-N55D026F2100-U-V	16 - 52	1050 - 2100	120% Vomax, typ.	Tc≧105±10°C	90C
LDD-N55D052F1050-U-V	31 - 79	700 - 1050	120% Vomax, typ.	Tc≧105±10°C	90C
LDD-N55-026F2100-U-D	16 - 52	1050 - 2100	120% Vomax, typ.	Tc≧105±10°C	90C
LDD-N55-052F1050-U-D	31 - 79	700 - 1050	120% Vomax, typ.	Tc≧105±10°C	90C
Note	(i) Pre-set Constant Current Value with dimming				
	(ii) Lower the output current when Tc≧105±10°C; Auto Recovery When Tc≦70±10°C				

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Universal Input	90	100-277	305	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	110 VAC/220 VAC input, full load output			**0.5/0.25**	A
Power Factor	At 100 VAC/220 VAC input		0.99/0.96		
Inrush Current	At 230 VAC input, 25°C cold start / At 277 VAC input, 25°C cold start			65 / 70	A
Leakage Current	max @277Vac 60Hz			0.001	A
Surge Protection	Line to line 4kV, line to ground 10kV, IEC 61000-4-5				

Output Spec.	Condition Description	Min.	Normal	Max.	Units

Current Accuracy			±5		%
Ripple Current	At 100%-60% Load. The result differs according to different LED load characteristic.			**5**	% Ip-p (Io)
Overshoot/Undershoot	% of Iout max & LED load			10	%
Turn-On Delay	Measured at 110 VAC/220 VAC input and Full Load			1.2	S
Auxiliary Power (Vaux)	With 300mA max	-5%	12	+5%	Vdc

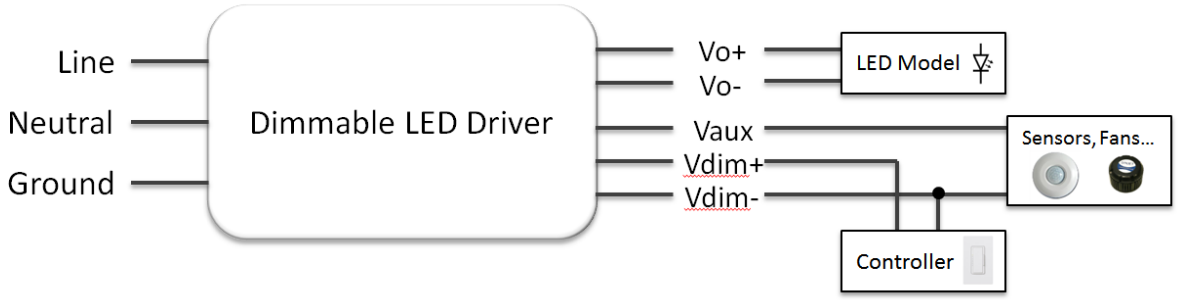
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	Measured at full load and 220Vac in the thermal balanced condition.		92	93	%
MTBF	measured at Tc= 75℃ (MIL-HDBK-217F)		≥320,000		Hours
Lifetime	measured at Tc= 75℃		≥100,000		Hours
Operating/Storage Temperature	10%RH～100%RH (See De-rating Curve for more details	-40/-40		70/85	°C
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	**378/370 x 30 x 21**			mm
		14.88/14.57 x 1.18 x 0.83			inch
Weight	Net weight without package	**2.5/1.14**			lb/kg

Safety & EMC Compliance	Category	Condition Description
Safety Regulations	UL8750	Light Emitting Diode(LED) Equipment for Use in Lighting Products
	UL1012	Power Unit Other Than Class 2
	UL1598	applies to luminaires for use in non-hazardous locations and that are intended for installation on branch circuits of 600 V nominal or less between conductors in accordance with the Canadian Electrical Code, Part I (CEC), CSA C22.1, with the U.S. *National Electrical Code (NEC), ANSI/NFPA 70*, and with the Mexican National Electrical Code, NOM-001-SEDE.
	IEC 61347-1	Lamp Controlgear Part 1: General and Safety Requirements
	IEC 61347-2-13	Lamp Controlgear Part 2-13: Particular Requirement for d.c. or a.c. Supplied Electronic Controlgear foe LED Modules
	CE	Europe: EN 61347-1, EN61347-2-13
EMI Standards	IEC 55015	Conducted emission test & Radiated emission test
	IEC 61000-3-2	Harmonic current emissions; Class C (≥75% load)
	IEC 61000-3-3	Voltage fluctuations & flicker
	FCC Part 15	Class B
EMS Standards	IEC 61000-4-2	Electrostatic discharge (ESD)
	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 Curve

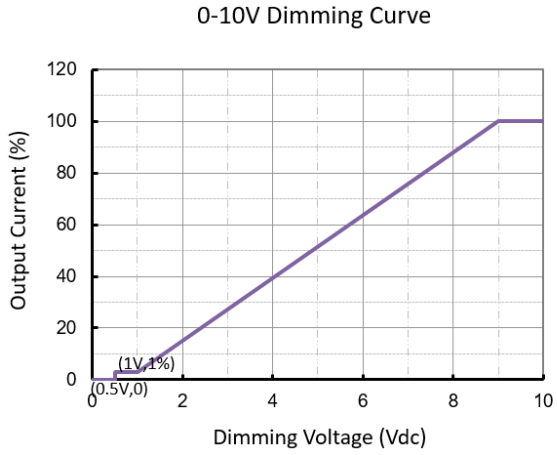
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	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

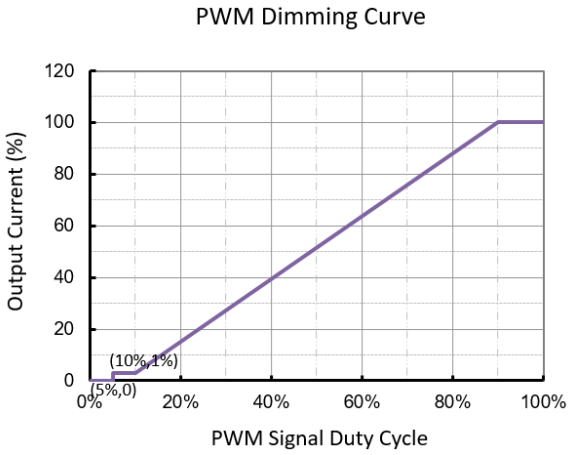
Dimming Wire



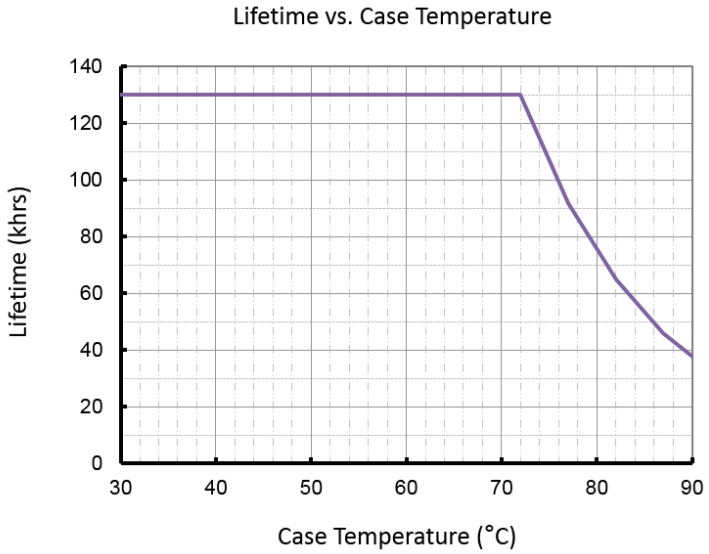
- **With dim-off (dto)**

  1% dimming model

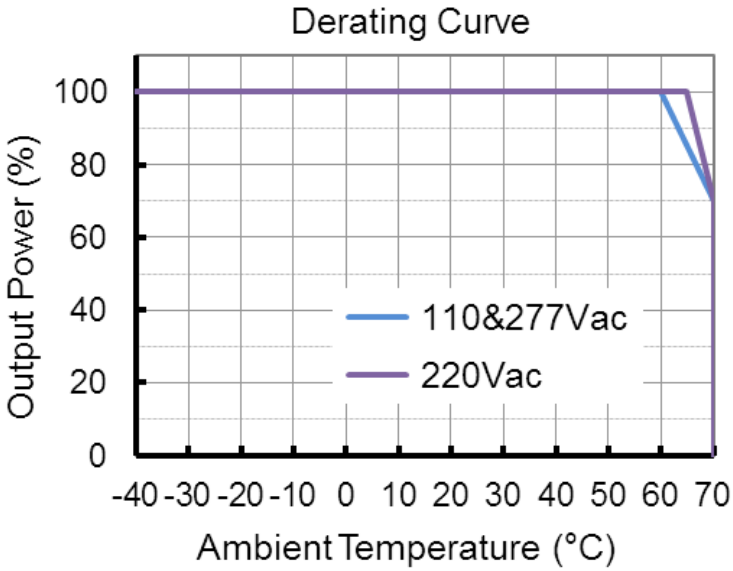




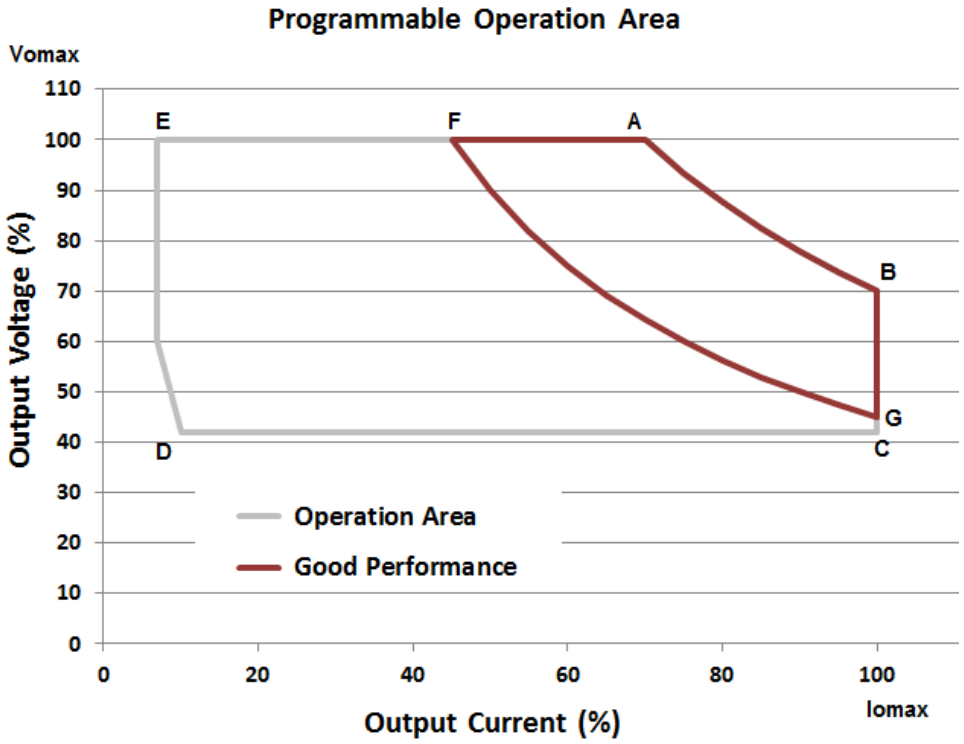
■ Lifetime vs. Case Temperature



■ De-rating Curve



■ Current vs. Voltage Curve



Io (mA) | Vo (V)	**B** Imax | Rated Vf	**A** Vmax	**F** (60% of I at A) | (as Vmax)	**G** (as Imax) | (60% of V at B)	**C** (as Imax) | Vmin = (60% of V at B)	**D** (10% of Imax) | (60% of V at B)	**E** (10% of I at A) | (as Vmax)
LDD-055D026F2100-U-V	***2100 | 26***	***1050 | 52***	***630 | 52***	***2100 | 16***	***2100 | 16***	***210 | 16***	***105 | 52***
LDD-055D052F1050-U-V	***1050 | 52***	***700 | 79***	***420 | 79***	***1050 | 31***	***1050 | 31***	***105 | 31***	***70 | 79***
On **BA** Curve Line	Constant Power Area						
Within **BAFG** Box	Good Performance Area						
Within **ABCDE** Box	Operational Area						

■ Mechanical Outline (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance: ±0.51 mm

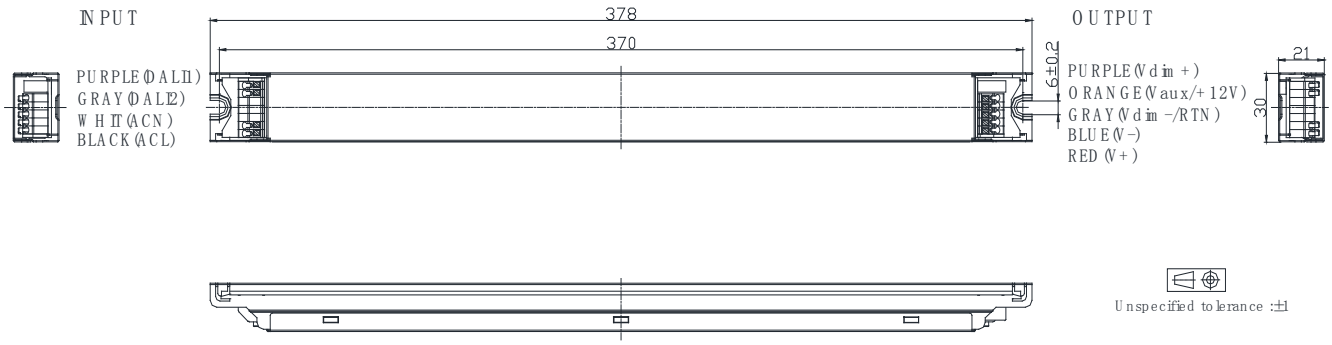


Fig. NR15T

Safety Note: Please make sure the output wire does not connect to dimming wire or the wire of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

Revision

Date	Rev.	Description of Change		
		Item	Old	New
12/26/2016	V1	In Draft Release	/	/
12/28/2016	V2a	Modify model names	LDD-055D026P2100-U-V	LDD-M55D026P2100-U-V
			LDD-055D052P1050-U-V	LDD-M55D052P1050-U-V
		Update		Values on point F and E
		Change file name	PS_LDD-055-Prgrm-Series_v1	PS_LDD-M55-Prgrm-Series_NR11T_v2a
1/15/2017	V2b	Change model names	LDD-M55D026P2100-U-V	**LDD-N55D026P2100-U-V**
			LDD-M55D052P1050-U-V	**LDD-N55D052P1050-U-V**
		Change file name	PS_LDD-M55-Prgrm-Series_NR11T_v2a	PS_LDD-N55-Prgrm-Series_NR11T_v2b
5/29/2017	V2c	Add UL Standard		UL1598 & Class P
11/26/2018	V2d	Add the NFC models:		**LDD-N55D026F2100-U-V** **LDD-N55D052F1050-U-V**
6/14/2019	V2e	Add dimming method, DALI	Dimming Function: 0-10V/PWM	Dimming Function: 0-10V/PWM or **DALI 2**
		Remove one programming method	Programmable Method: Wire (P) or NFC (F)	Programmable Method: **NFC** (F)
		Modify Vf and C.C. range	31 -110 (Vdc) 500 – 1050 (mA)	31 -80 (Vdc) 700 – 1050 (mA)
		Update dimensions	432x42.84 x25.4 mm 17 x1.7 x1.00 inch	**378/370 x 30 x 21 mm** **14.88/14.57 x 1.18 x 0.83 inch**
		Update Case ID	NR11T	**NR15T**
		Add DALI related setting		DA1,DA2 High Level DA1,DA2 Low Level DA1,DA2 Current