S027W-038C1000-R01-UN-DA1
27W Programmable Driver

select SYNC™ intelligent

Electrical Specifications

Maximum Power:	27W
Typical Efficiency:	83%
Input Voltage Range:	108-305 Vac
Frequency:	47/63 Hz
Power Factor:	>0.90 @ >75% Output Load
Inrush Current:	15A @ 120V 143ms@50% Ipk 35A @ 277V 157ms@50% Ipk
Input Current (Max):	1.45A @ 120Vac 0.6A @ 277Vac
Output Dimming Range	10-100%
Load Regulation:	±5%
Line Regulation:	±5%
THD:	<20%
Start Up Delay Time:	<1,000ms @ 100% load
Output Ripple Current:	<10% Io

Protections

Over-voltage:	Auto Recovery
Over-current:	Auto recovery
Short Circuit:	Latch-off
Over-temperature:	Reduce Output To 10% @ Tc $\geq$ 100ºC Tc

Environmental Specifications

Max Case Life Temp: *(5 year warranty)*	80˚C
Maximum Case Temp:	80˚C
Minimum Starting Temp:	-40˚C
Storage Temperature:	-40˚C to +85˚C
Humidity:	10% to 90%
Cooling:	Convection
Vibration Frequency:	10-150 Hz/1.5g
Sound Rating:	Class A (Engergy Star)
Weight:	21 oz (600g)

- Multiple Dimming Control Types: 1-10V, DALI, Schedule
- Dim-to-off mode (DALI)
- Programming Functions:
  Programmable Output Current (POC),
  Lumen Output Compensation (LOC),
  Constant Power Control (CPC),
  Temperature Protection Control (TPC)
- Programs with TRP Configurator and Wired Programming Module
- Programming doesn't require power to the driver
- Metal case, fully potted
- 5 year warranty*

Part	Model	Adj. Current Out (mA ±5%)	Voltage Out (Vdc)	Max Power (W)	Wire Entry
93057523	S027W-038C1000-R01-UN-DA1	200-1000	10-38	27	Ends

Class 2: US/Canada

Safety Cert.	Standard
UL/CUL	UL8750, UL1012
EMC Standard	**Notes**
FCC Part 15	Class B

* For extended warranty options beyond 5 yrs., contact factory.

Thomas Research Products

select **SYNC** intelligent

Dimensions

IN [mm]

INPUT
N (White)
L (Black)

0.16-0.2 [4-5]

0.4±0.1 [10±3]

12.0±0.4 [304.8±10]

5.8 [148.2]

5.7 [144.2]

1.3 [33.8]

2.3 [59.6]

12.0±0.4 [304.8±10]

OUPUT
LED - (Red)
LED + (Blue)
COM (Gray)
RNTC (Black/White)

1.1 [27.4]

CONTROL
Aux 3.3Vdc (Yellow)
COM (Gray)
EXT DALI 2 (Purple/White)
EXT DALI 1 / Dim + (Purple)
Dim - (Blue/White)

10.3±0.4 [261.6±10]
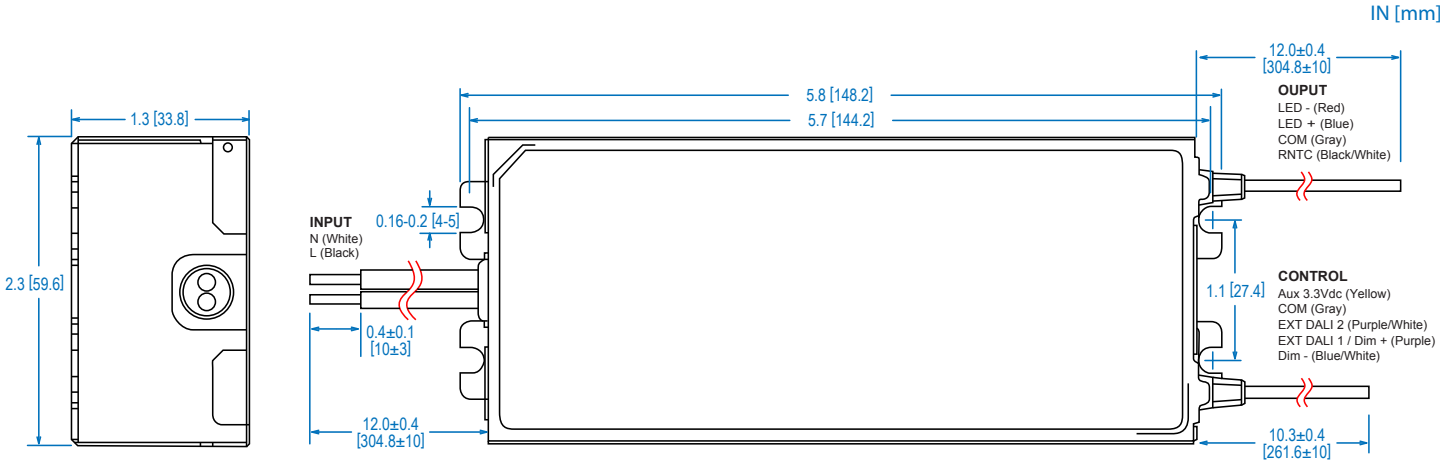
Case must be grounded in end-use application.

WIRE SPECS:
Control Leads: UL1569, 20AWG, 10.3", 600V, 105°C
Input & Output Leads: UL1569, 18AWG, 12", 600V, 105°C.
Stranded Copper Wire
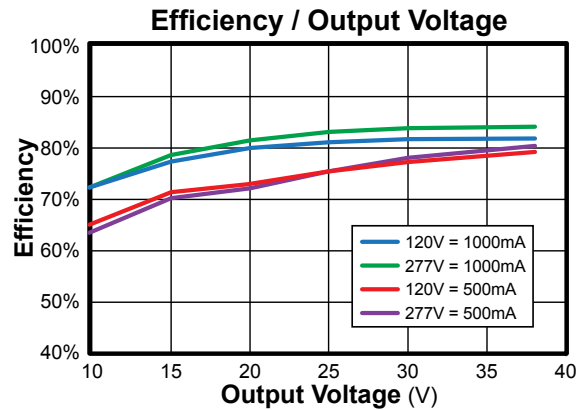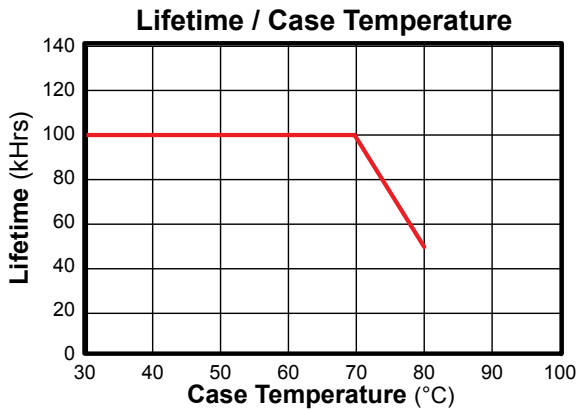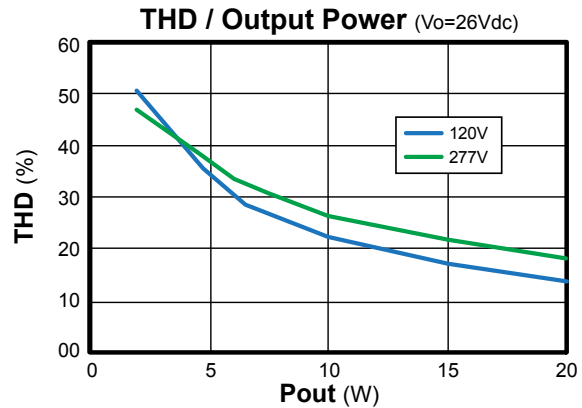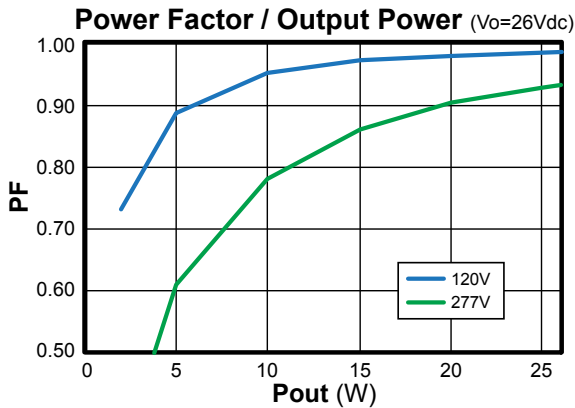All stripped leads are copper dipped.

Remote Mounting:
Output Wires Max Distance 10m
Control Wires Max Distance 0.5m
For connector options contact factory.

Parameter Defaults

Parameter	Default Setting	Setting Range	Increment
Output Current (mA)	1000	200 - 1000	1
Enable Analog Dimming	No	Yes *or* No	
DALI Dimming Curve	Logarithmic	Linear *or* Logarithmic	
0-10V Minimum Level (%)	10	10 - 100	1
Enable NTC	No	Yes *or* No	
NTC-Derating Temperature Start (°C)	50	50 - 85	1
NTC-Derating Temperature Stop (°C)	70	55 - 95	1
NTC-Max Temperature (°C)	100	60 - 105	1
NTC-Minimum Derating Level (%)	90	10 - 90	1
Enable DALI Interface	Yes	Yes *or* No	

HUBBELL

select|SYNC
intelligent

Power Characteristics

Power Factor / Output Power (Vo=26Vdc)

Legend: 120V, 277V

THD / Output Power (Vo=26Vdc)

Legend: 120V, 277V

Lifetime / Case Temperature

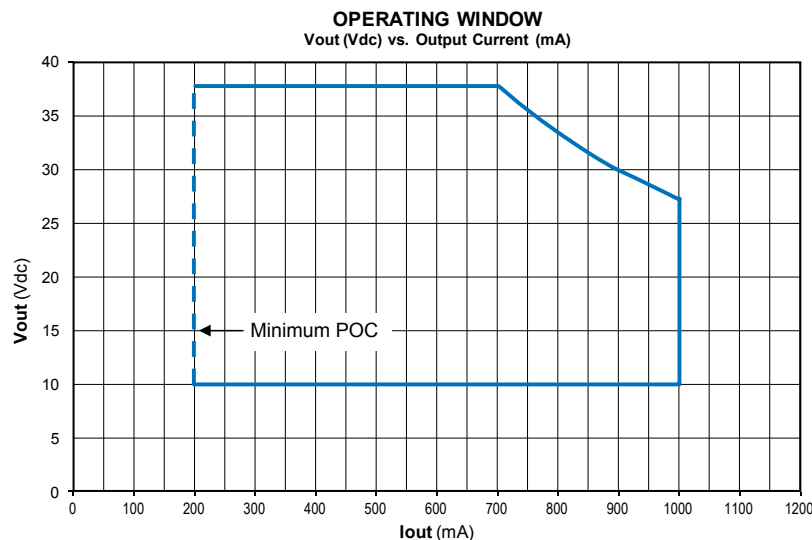### Efficiency / Output Voltage

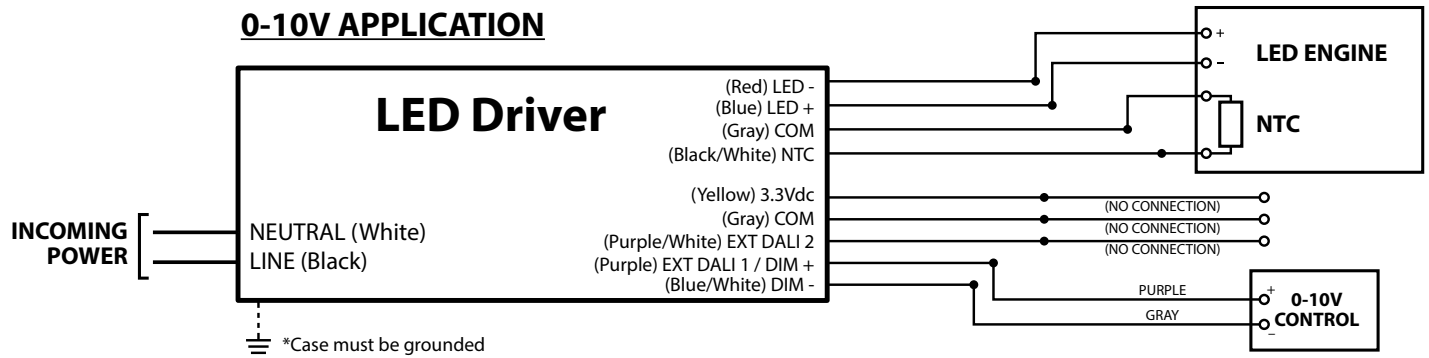Legend: 120V = 1000mA, 277V = 1000mA, 120V = 500mA, 277V = 500mA

Note: The area under the life-temperature curve represents where the driver has highly reliable operation within specification. Driver performance may drift out of published specifications as the hours of operation exceed the curve at a given temperature. Higher operating temperatures increase the chances of a failure to function. Other electrical, mechanical and environmental factors affect driver lifetime but are not represented in this calculation.
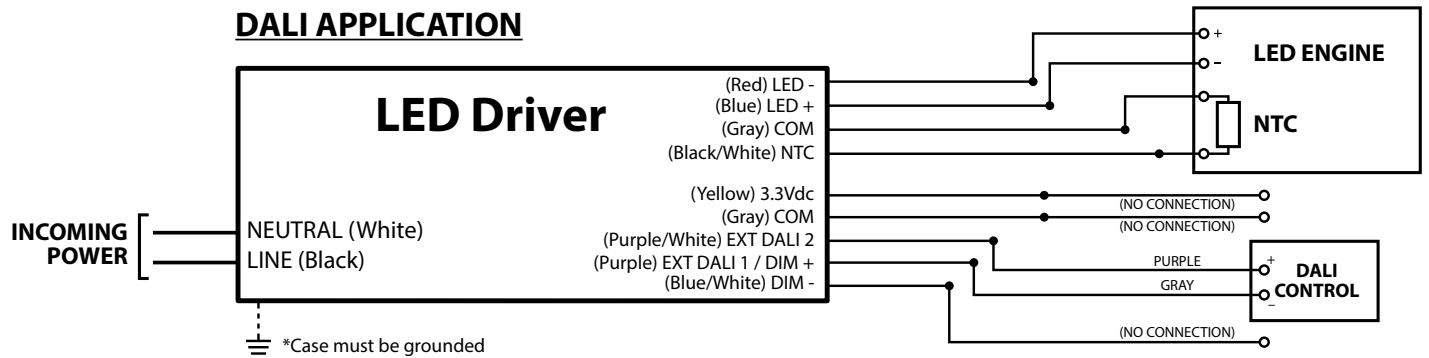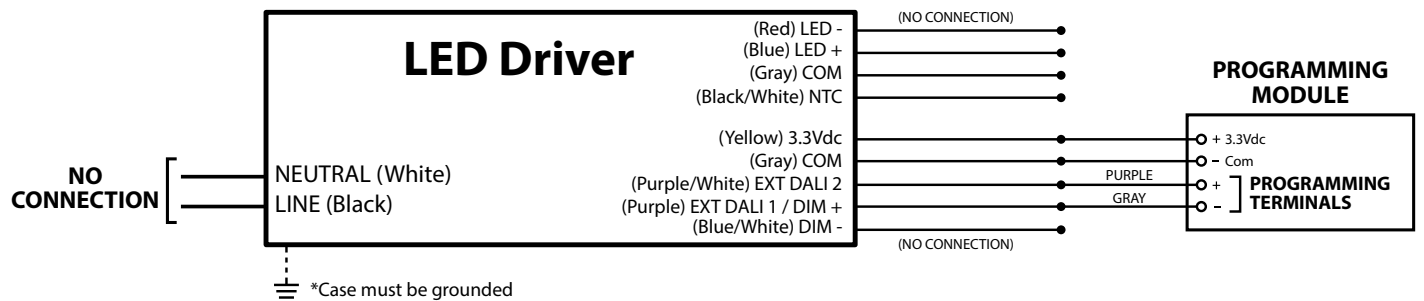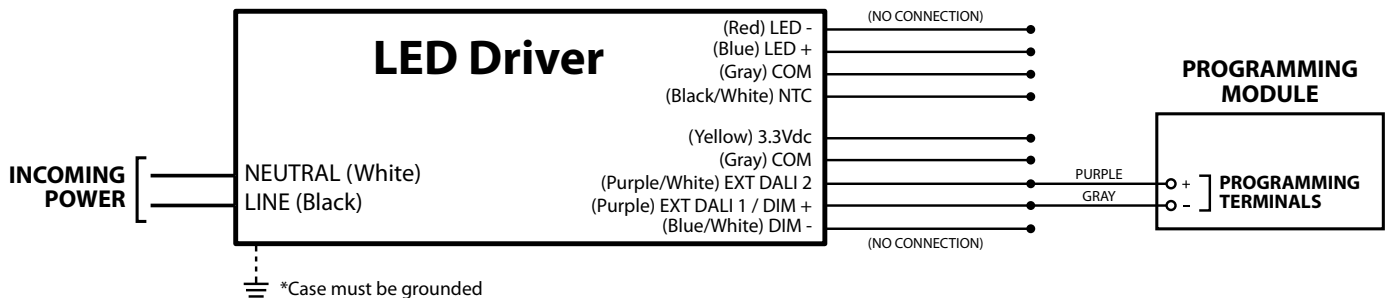
Power Operating Window

OPERATING WINDOW
Vout (Vdc) vs. Output Current (mA)

Minimum POC

HUBBELL®

Wiring

0-10V APPLICATION

LED Driver

LED ENGINE

(Red) LED -
(Blue) LED +
(Gray) COM
(Black/White) NTC

NTC

(Yellow) 3.3Vdc — (NO CONNECTION)
(Gray) COM — (NO CONNECTION)
(Purple/White) EXT DALI 2 — (NO CONNECTION)
(Purple) EXT DALI 1 / DIM +
(Blue/White) DIM -

INCOMING POWER

NEUTRAL (White)
LINE (Black)

PURPLE
GRAY
0-10V CONTROL

*Case must be grounded

DALI APPLICATION

LED Driver

LED ENGINE

(Red) LED -
(Blue) LED +
(Gray) COM
(Black/White) NTC

NTC

(Yellow) 3.3Vdc — (NO CONNECTION)
(Gray) COM — (NO CONNECTION)
(Purple/White) EXT DALI 2
(Purple) EXT DALI 1 / DIM +
(Blue/White) DIM -

INCOMING POWER

NEUTRAL (White)
LINE (Black)

PURPLE
GRAY
DALI CONTROL

(NO CONNECTION)

*Case must be grounded

PROGRAMMING MODE #1

LED Driver

(Red) LED - — (NO CONNECTION)
(Blue) LED +
(Gray) COM
(Black/White) NTC

PROGRAMMING MODULE

(Yellow) 3.3Vdc — + 3.3Vdc
(Gray) COM — – Com
(Purple/White) EXT DALI 2 — PURPLE — + PROGRAMMING TERMINALS
(Purple) EXT DALI 1 / DIM + — GRAY — –
(Blue/White) DIM - — (NO CONNECTION)

NO CONNECTION

NEUTRAL (White)
LINE (Black)

*Case must be grounded

PROGRAMMING MODE #2

LED Driver

(Red) LED - — (NO CONNECTION)
(Blue) LED +
(Gray) COM
(Black/White) NTC

PROGRAMMING MODULE

(Yellow) 3.3Vdc
(Gray) COM
(Purple/White) EXT DALI 2 — PURPLE — + PROGRAMMING TERMINALS
(Purple) EXT DALI 1 / DIM + — GRAY — –
(Blue/White) DIM - — (NO CONNECTION)

INCOMING POWER

NEUTRAL (White)
LINE (Black)

*Case must be grounded

Programming Guide

Dimming Interface

Parameters	Min	Max	Notes
DALI	0% (Off)	100%	IEC 62386-102-207(Ed1.0)
1-10V	10%	100%	Input range: 1-8V
Schedule Dimming	10%	100%	Up to 5 steps. Min step: 1%

Temperature Protection Control (TPC)

Parameters	Min	Max	Notes
T start	50ºC	85ºC	Temperature @ Dim start
T stop	55ºC	95ºC	Temperature @ Dim stop
T max	60ºC	105ºC	Temperature @ Dim off
TPC tolerance	-3ºC	3ºC	Temperature @ TPC range
Protection Dim Level	10%	90%	Dim Level @ T stop

Lumen Output Compensation (LOC)

Parameters	Min	Max	Notes
Working Hours (Max 16 steps)	0 kHrs	127.5 kHrs	Min step: 500 hrs.
Dim Level (Max 16 steps)	10%	130%	Min step: 1%
Operating Time Accuracy	-4%	4%	

Schedule Dimmer

| Parameters	Min	Max	Notes
Dimming Schedule	1min	5min	Min step: 1min
Dim Level	10%	100%	Min step: 1%
Override Hold Time	0	60min	Min step: 1min
Midnight Shift	-120min	120min	Min step: 1min

Labeling Programmable Drivers

It is highly recommended that the drivers be labeled with information traceable to the programmed current and feature configuration.
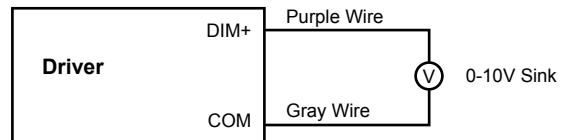***This information is critical to answering any field questions from the contractor or end user.***

Dimming: 0-10Vdc

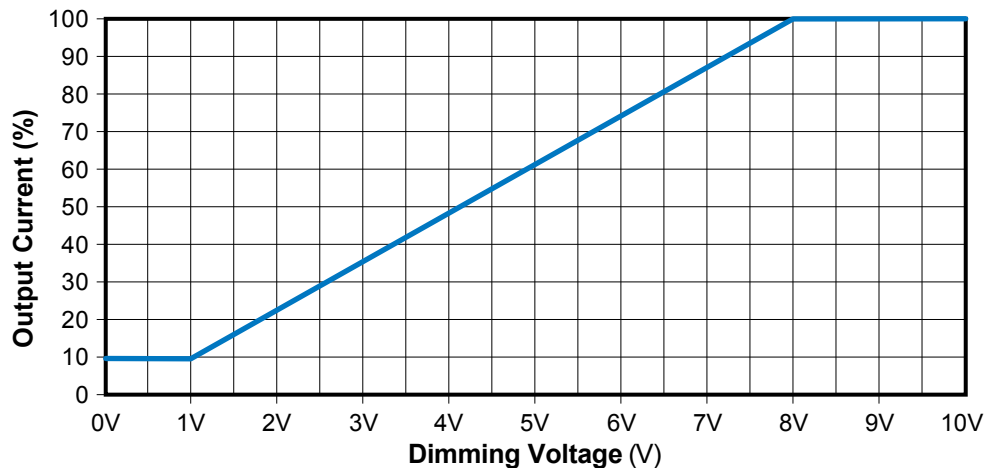| Parameters	Minimum	Typical	Maximum
Source Current out of 0-10V Purple Wire	0 mA	—-	1.5 mA
Absolute Voltage Range on 0-10V (+) Purple Wire	-2.0 V	—-	+15 V

Typical Dimming Circuit: 2-Wire Resistance
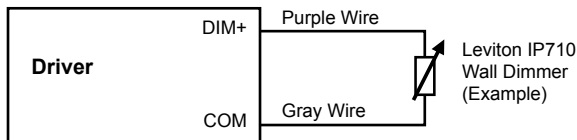
Typical Dimming Circuit: 2-Wire 0-10V Analog

Output Current / Dimming Voltage

0-10V Dimming Notes:
1. Part comes with two dimming input connectors +Purple/-Gray on the output side.
2. Part is compatible with most 0-10V Wall Slide dimmers and 0-10V dimming.
3. Output current will be 10% when Vdim ≤1.0V.
4. Output will be 100% with Purple/Gray open and 10% with Purple/Gray Shorted.

© 2017 Thomas Research Products. Specifications subject to change without notice.