

# THCC-1M1UNV140P-50E



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## Constant Current LED Driver

- 120~277VAC(NA), 220-240VAC(EU), 50/60Hz
- cULus Listed, Class P, CE
- Programmable: 400mA - 1400mA
- 0-10V dimmable from 100%-1%, Dim to off (only applicable in North America)
- 12V, 200mA AUX Output
- Linear Form Factor with Connectors
- Flicker Free (<4%)
- NTC

### General Specifications

|                                          |                                                                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input Voltage / Frequency                | 120~277VAC(NA), 120-240VAC(EU) 50/60Hz                                                                                                                                     |
| Input Current                            | 0.52A Max                                                                                                                                                                  |
| Input Power                              | 62W Max                                                                                                                                                                    |
| Input Power Factor                       | >0.9                                                                                                                                                                       |
| THD                                      | <20%                                                                                                                                                                       |
| Driver Type                              | Constant Current                                                                                                                                                           |
| Output Voltage                           | 12-55VDC                                                                                                                                                                   |
| Output Current                           | 400-1400mA                                                                                                                                                                 |
| Default Output Current                   | 1400mA                                                                                                                                                                     |
| Output Power                             | 50W Max                                                                                                                                                                    |
| Efficiency                               | 86%                                                                                                                                                                        |
| Output Type                              | LED Class 2                                                                                                                                                                |
| Inrush Current                           | 5A@120V, 14A@277V                                                                                                                                                          |
| Max. Leakage Current                     | 750uA at 277V Full Load                                                                                                                                                    |
| Line Regulation / Load Regulation        | Line Regulation +/-3%, Load Regulation +/-4%                                                                                                                               |
| Flicker Percentage                       | <4%                                                                                                                                                                        |
| Dimming Type                             | 0-10V                                                                                                                                                                      |
| Dimming Range                            | 100%-1%, Dim-to-off disabled by default (dim-to-off only applicable in North America and can be enabled using the TPSB-100 or SmartSet Software)                           |
| Operating Ambient Temperature Range      | -40°C to 50°C (-40°F to 122°F)                                                                                                                                             |
| Max. Driver Case Tc Temperature (Per UL) | 90°C (194°F)                                                                                                                                                               |
| Start Up Time                            | <750ms                                                                                                                                                                     |
| Number of Output Channels                | 1                                                                                                                                                                          |
| Overall Size                             | 11.02" x 1.14" x 1.02"                                                                                                                                                     |
| Wire Type / Length                       | N/A                                                                                                                                                                        |
| Connector Type                           | WAGO 250-102 Push Pin                                                                                                                                                      |
| Safety / Compliance                      | UL8750, CSA-C22.2 No.250.13, IEC/EN 61347-1, IEC/EN61347-2-13                                                                                                              |
| IP Rating                                | IP20, Suitable for Dry and Damp locations                                                                                                                                  |
| Withstand Voltage                        | Input to Output: 2000 Vac. Output to Dim: 2000Vac                                                                                                                          |
| EMC Emission                             | FCC 47CFR Part 15 Class A                                                                                                                                                  |
| EMC Immunity                             | EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN61547                                                                                              |
| Operating Humidity                       | 95% RH                                                                                                                                                                     |
| Input Surge Protection                   | Input Surge Line-Neutral 2.5KV, Line & Neutral-Ground 2.5KV                                                                                                                |
| Protections                              | Output Over Current (OCP)<br>Output Open Circuit Protection<br>Output Short Circuit Protection(Recovers automatically after short is removed)<br>Output Over Voltage (OVP) |
| Hot Swappable                            | No                                                                                                                                                                         |
| Service Life                             | 50,000 hours lifetime @ 85°C (185°F)                                                                                                                                       |
| Warranty                                 | 5 Years @ tc 85°C (185°F) from the date of manufacture                                                                                                                     |

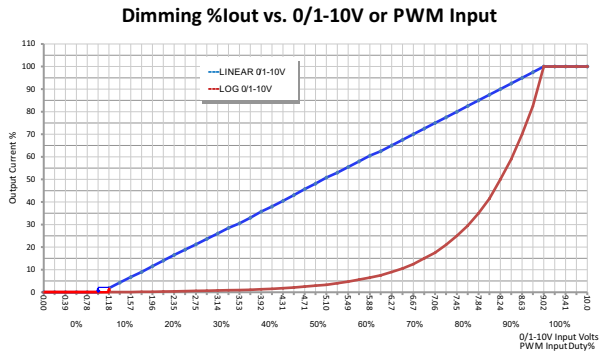


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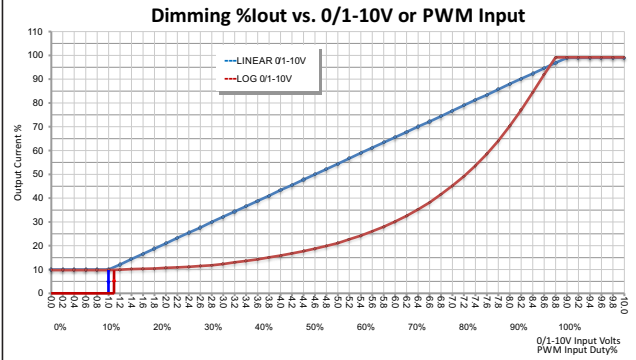


## Charts

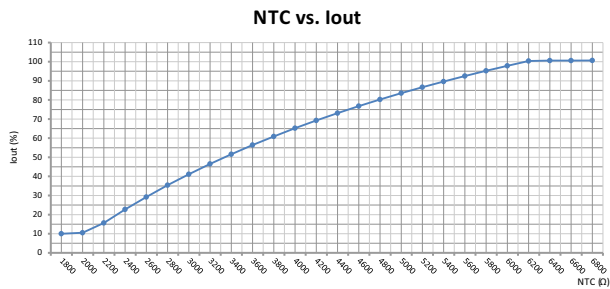
0-10V Dimming Curve @ Minimum Dimming Set to 0



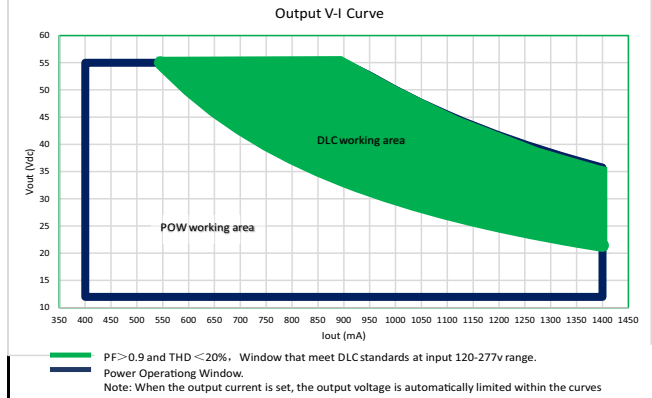
0-10V Dimming Curve @ Minimum Dimming Set to 10%



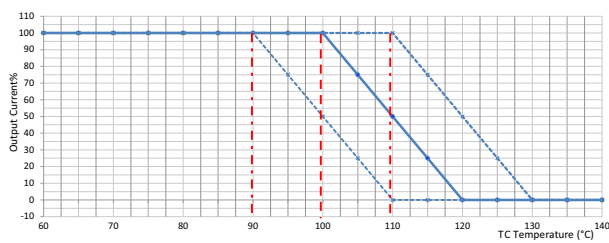
NTC Current Control



Power Operating Window & DLC Window

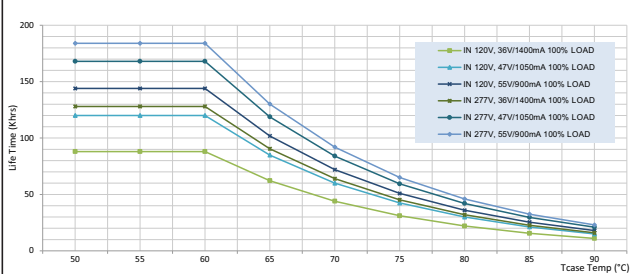


Output Current % Derating vs. TC Temperature Curve



Note:  
♦ The temperature control curve is the test result of the technical sample, and the product is not tested.  
♦ Affected by the internal temperature distribution of the shell, the test temperature has a large error corresponding to the TC temperature.

Life Time vs. Tcase Temp

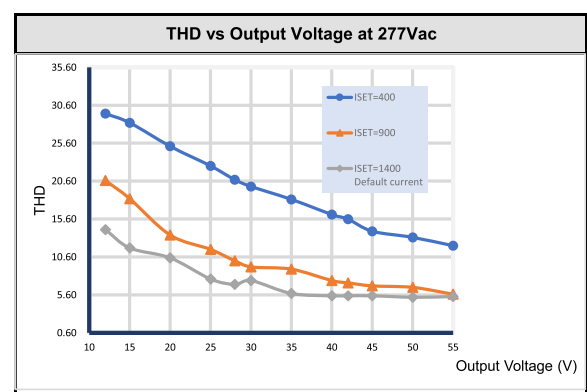
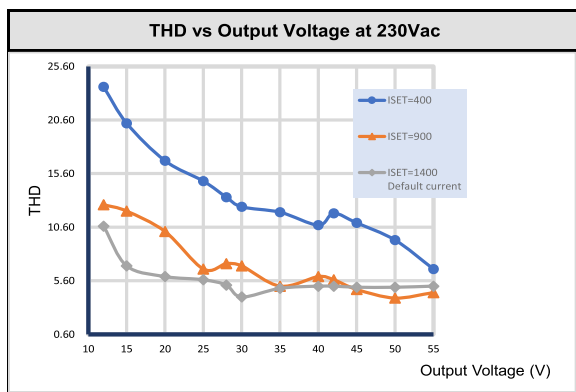
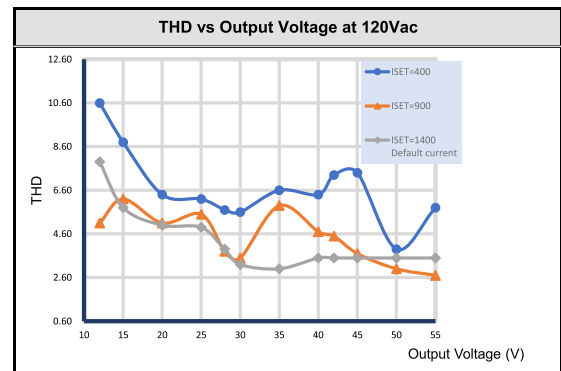
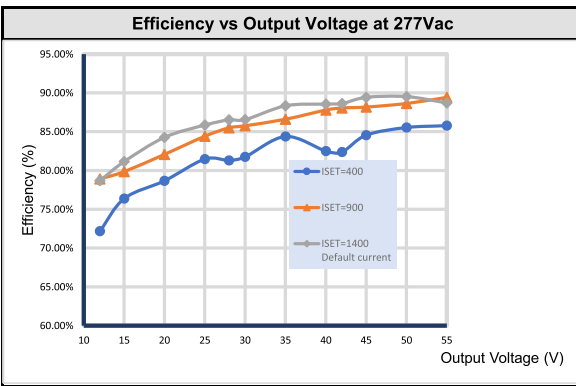
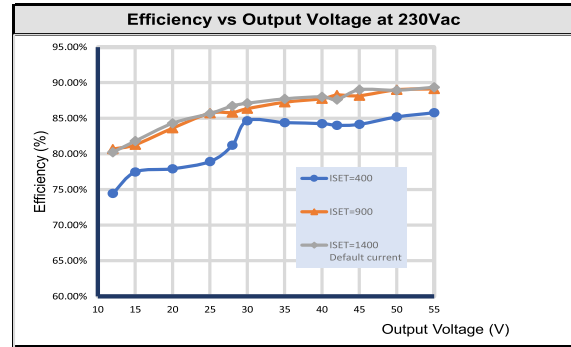
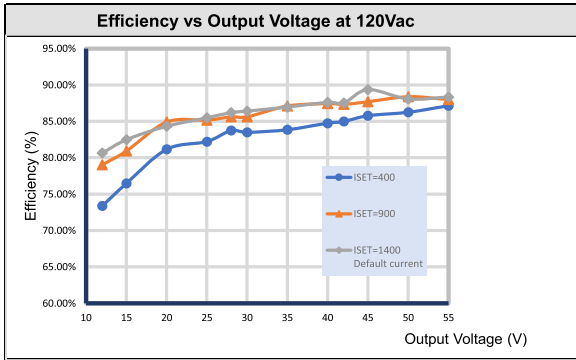




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## Charts

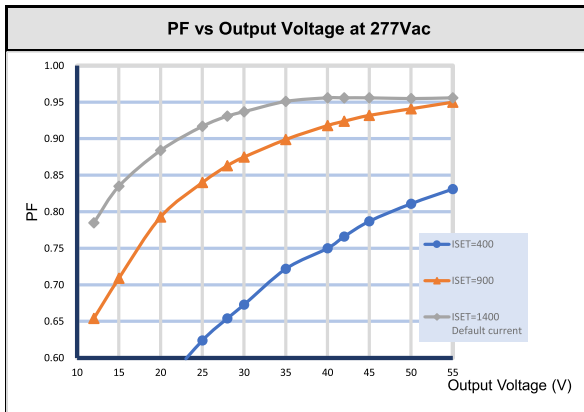
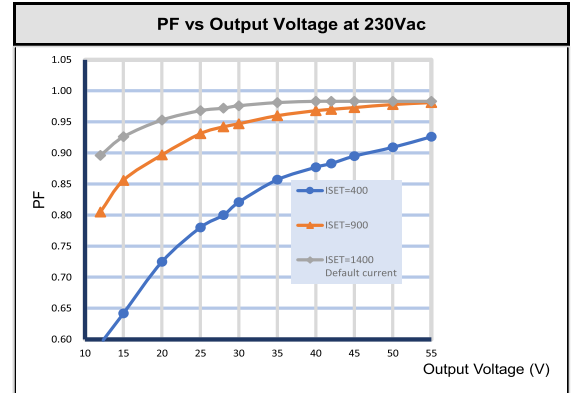
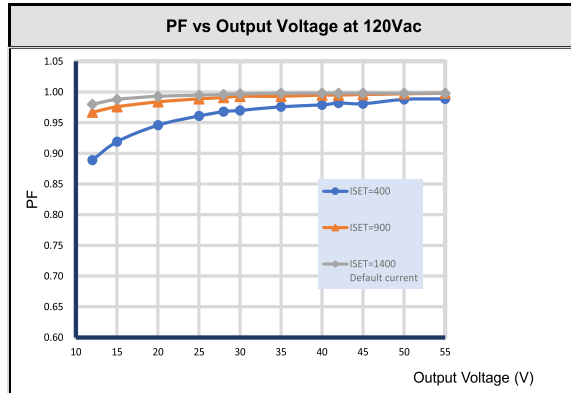




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## Charts



# THCC-1M1UNV140P-50E



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## Part Number Matrix

| LED Driver  | Constant Current      | # of Control Channels | Control Type      | # of Output Channels | Input Voltage                    | Output current | Characteristic   | Max. Output Power | Case Type            |
|-------------|-----------------------|-----------------------|-------------------|----------------------|----------------------------------|----------------|------------------|-------------------|----------------------|
| TH=ThoroLED | CC = Constant Current | 1 = 1 Channel         | M = 0-10V dimming | 1 = 1 Channel        | 120~277VAC(NA)<br>120-240VAC(EU) | 140=1400mA     | P = Programmable | 50=50W            | E = Long + Terminals |

## Grounding

- Driver must be grounded by means of the driver's case or ground wire/connection.

## Over temperature protection

- The Fulham ThoroLED drivers is protected against thermal overload. If the temperature limit is exceeded, the output current is reduced.

## LED load

- Fulham ThoroLED drivers are designed to drive passive LEDs, -COB's and -LED assemblies .Proper function is not guaranteed when (LED)loads with active components are used.

## Short-circuit protection

- In case of a short circuit the LED driver switches to protection mode. After the removal of the short-circuit the LED driver will recover automatically.

## No-load Operation

- This product isn't recommended working under no load condition for a long time for energy saving purpose.
- It's not recommended to use this product for a long time without load.

## Hot Swapping

- This driver does not support hot swapping of the LEDs.

## Remote Mounting

- Up to 50ft[5.5m] with 18AWG[0.823mm<sup>2</sup>]. Contact Fulham for higher remote distance.

## Service life/Lifetime

- Failure Rate Info based upon MTBF modeling: 90% survivals at end of life @ <=Tc lifetime rating.

## Warranty

- Reference Fulham's limited Warranty: <https://cdn.fulham.com/PDFs/Limited-Warranty.pdf>



## Programming

### TPSB-100 Programming Controller

Please consult the user manual for instructions on using the TPSB-100 SmartSet Programming Controller.



## Programming Instructions

1. To program use the Fulham TPSB-100 SmartSet controller; connect the programming forks in to the appropriately labeled programming connections located on the LED driver.
2. Program the driver output current between 400mA - 1400mA. (Note: set current represents total current of one channel).
3. Current programming and more function setting can be done through SmartSet PC Software.



SmartSet Software



TPSB-100 SmartSet  
Controller

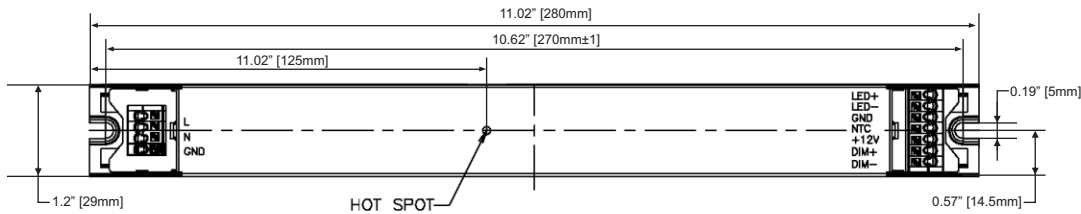
# THCC-1M1UNV140P-50E



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## Mechanical Drawing

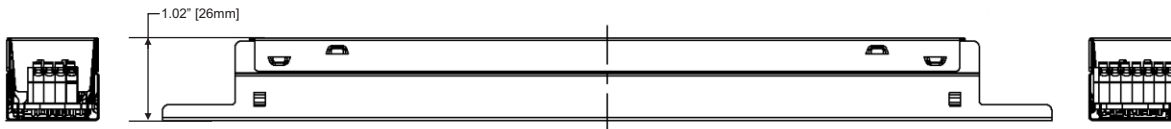


### Overall Dimensions

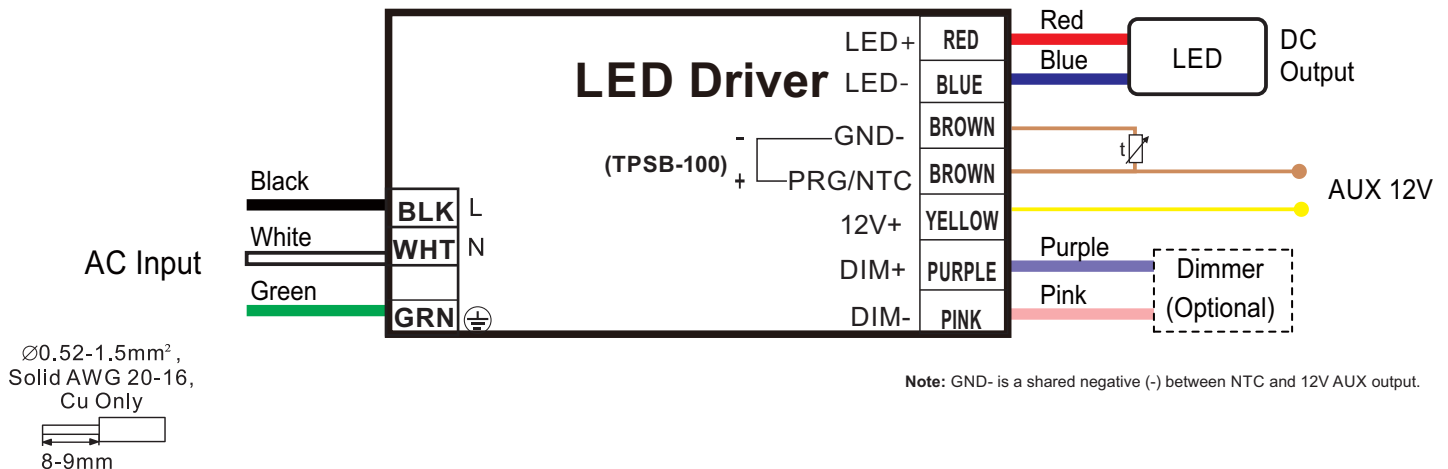
|          |                |
|----------|----------------|
| Length   | 11.02" [280mm] |
| Width    | 1.2" [29mm]    |
| Height   | 1.02" [26mm]   |
| Mounting | 10.62" [270mm] |

### Connector Type

WAGO 250-402



## Wiring Diagram



Servicing should only be performed by qualified service personnel.  
Use 16-20 AWG solid copper wire stripped to 3/8" with driver push in connectors.



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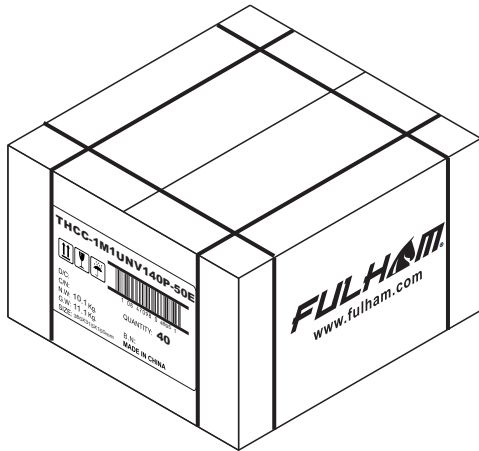


## Product Image:



## Packaging

### Master Carton



| OUTER DIMENSION       |                       |               |
|-----------------------|-----------------------|---------------|
| L                     | W                     | H             |
| 14.96" (380mm)        | 12.40" (315mm)        | 5.91" (150mm) |
| Net Weight            | Gross Weight          | QUANTITY      |
| 22.27bs.<br>(10.1kg.) | 24.47lbs.<br>(11.1kg) | 40pcs.        |