



The Tunable White (TW) System provides a digitally controllable lighting solution which helps simulate natural daylight that reinforces human wellness and productivity. This digital solution offers the freedom to adjust light preferences for Human Centric Lighting (HCL) applications including educational, commercial office and healthcare settings. The Tunable White System consists of an OPTOTRONIC® Tunable White LED Driver, Tunable White Wallstation, PrevaLED® Tunable White Light Engine and optional Control Power Pack.

The TW Wallstation provides precise color temperature and brightness control when used in conjunction with the OPTOTRONIC Programmable TW LED Driver. The color temperature of the PrevaLED light engine can be adjusted within the range of 2700K to 6500K and between 1-100% light intensity. The wallstation comes with three, preprogrammed scene buttons that can be customized to control the room's ambiance. Third party tunable white light engines can be paired with the OPTOTRONIC TW LED Driver, offering flexibility to OEMs. Using the OPTOTRONIC Programmer allows users to program custom light engine parameters into the driver.

This tunable white system is compatible with light management systems capable of communicating via DALI.

The installation of the Tunable White System is straightforward. The OPTOTRONIC TW LED Driver and PrevaLED TW Light Engine is integrated into the luminaire during the manufacturing process. Contractors simply install the luminaires and TW Wallstation into the application space and run a quick wiring test.

The Tunable White Solutions is compatible with the following controls:

CASAMBI **ENCELIUM**

Key Features & Benefits

- The driver has two operating modes:
 - Two channel mode using DALI Type 6 (for direct/indirect without color tuning)
 - Tunable white mode using DALI Type 8
- DALI compatible controls color temperature and brightness
- OEM programmable with 1mA resolution to perfectly match LED load and maximize performance
- Able to interface with LED modules of OEM choice third-party LED light engines
- Specification grade dimming down to 1%
- Dim-to-off
- Soft start
- Integrated OEM programmable features include:
 - Constant lumen maintenance
 - End-of-life indication
 - LED thermal protection
 - Configurable LED module parameters
- Programming does not require powering up or connecting the power supply to AC line voltage
- Input voltage: Universal 120-277V_{ac} 50/60Hz
- UL Class 2 output for safe operation

Product Offering

Item Number	NAED	Item Name	Ordering Description
*2743Y6	58287	TW/2CH Driver	OTI50W/120-277/1A4/2CH TW L
*2744MW	58288	TW LED Module	PLTWG1-Lin-2000-560x24
*2743UY	58289	TW Wallstation	TW-Wall-Station
2743Y7	58290	DALI Power Pack	TW-DL-12V/110mA-Power Pack

*The power pack is needed only when the wallstation is not intended to be powered by the tunable white driver.

Application Information

- Commercial office
- Human Centric Lighting (HCL)
- Education

OPTOTRONIC® Tunable White LED Driver

Electrical Characteristics

Max Output Power (W)	Nominal Input Voltage (V _{AC})	Max Input Current (A)	Power Factor	THD	Line Transient	Efficiency	Environmental Rating	UL File #
50W	120-277 V _{AC} 50/60 Hz	0.55 @ 120V 0.25 @ 277V	>0.9	<20%	ANSI C62.41 Cat A 2.5kV	>84%	Dry & Damp	E320395

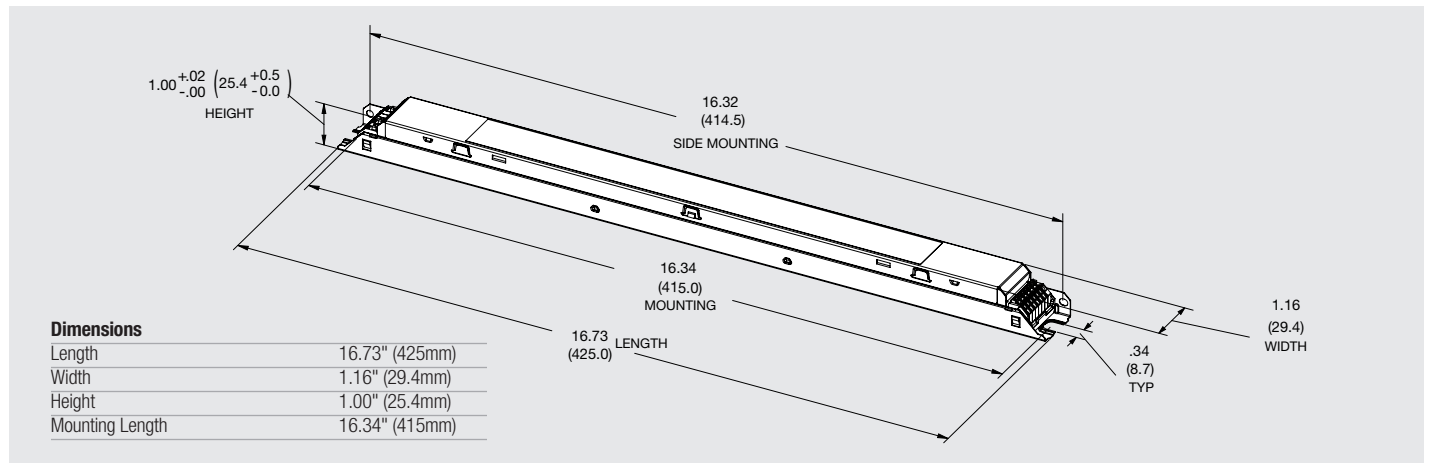
Ordering Information

Item Number	Original Item Number	Ordering Abbreviation	Total Output Power	Output Current Range	Default Current	Output Voltage Range (V _{OC})	Dimming Control	Dimming Range	LED Thermal Protection
*2743Y6	58287	OTi50W/120-277/1A4/2CH TW L	50W (per channel and combined)	400-1400mA (Programmable)	400mA per channel	20-48V	DALI or DEXAL	1%-100%	Yes

Ordering Guide

OTi	50W	/	120-277	/	1A4	/	2CH	TW	L
OPTOTRONIC Intelligent	Output Wattage		Input Voltage		Output Current (Max) 1A4 = 1400mA		2 Channel	Tunable White	Linear

Dimensions



Key Application Notes

- DEXAL port is polarity sensitive
- Driver will respond to DALI Type 8 commands when programmed mode is "Enable TW"

Enable TW

- Driver will respond to DALI Type 6 commands when programmed mode is default 2-Channel Mode
- The default dimming mode is DALI (DEXAL power off)

Dimming
 DALI Enable DEXAL

- When using in an Tunable White Standalone System, please follow these guidelines:
 - To power up the Tunable White Wallstation from the driver, "Enable DEXAL" mode in OTProgrammer

Dimming
 DALI Enable DEXAL

- When using in a Light Management System for Tunable White applications, please following these guidelines:
 - Check the box for "Enable TW" and then configure settings for the appropriate light engine

Enable TW

- If the Tunable White fixture is being installed along with a wireless device, check the box for "Enable DEXAL". This turns on the power over DALI feature that is used to power the wireless device

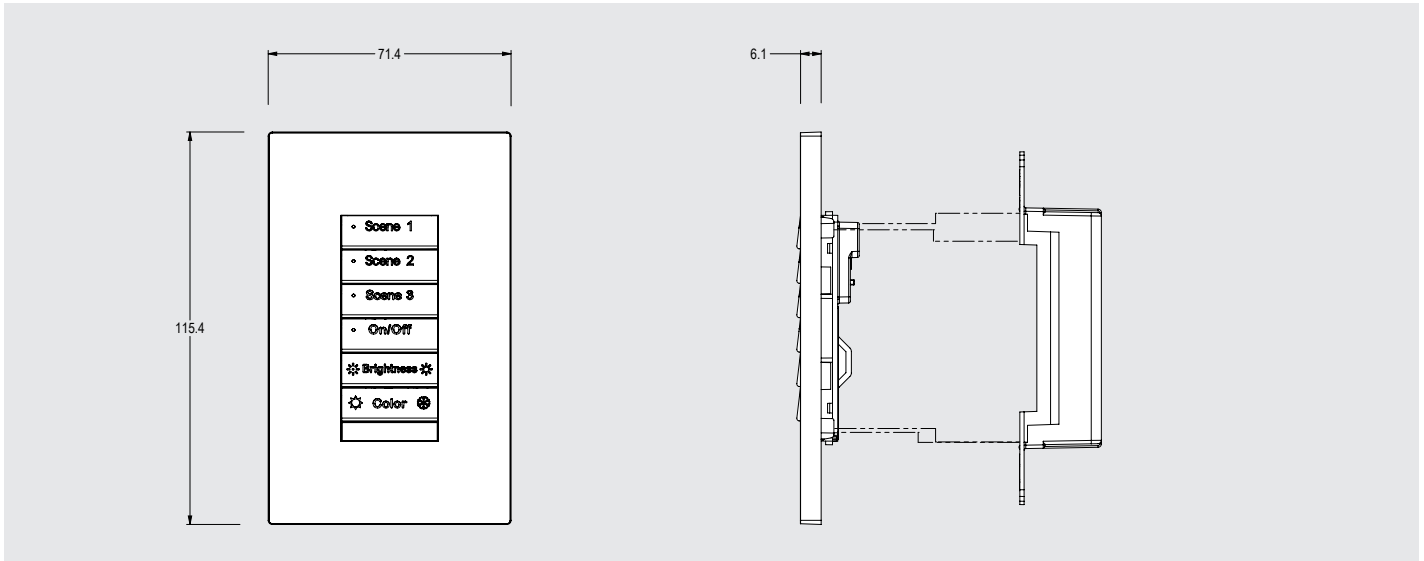
Dimming
 DALI Enable DEXAL

Tunable White Wallstation

Ordering Information

Item Number	Original Item Number	Ordering Abbreviation
*2743UY	58289	TW-Wall-Station

Dimensions

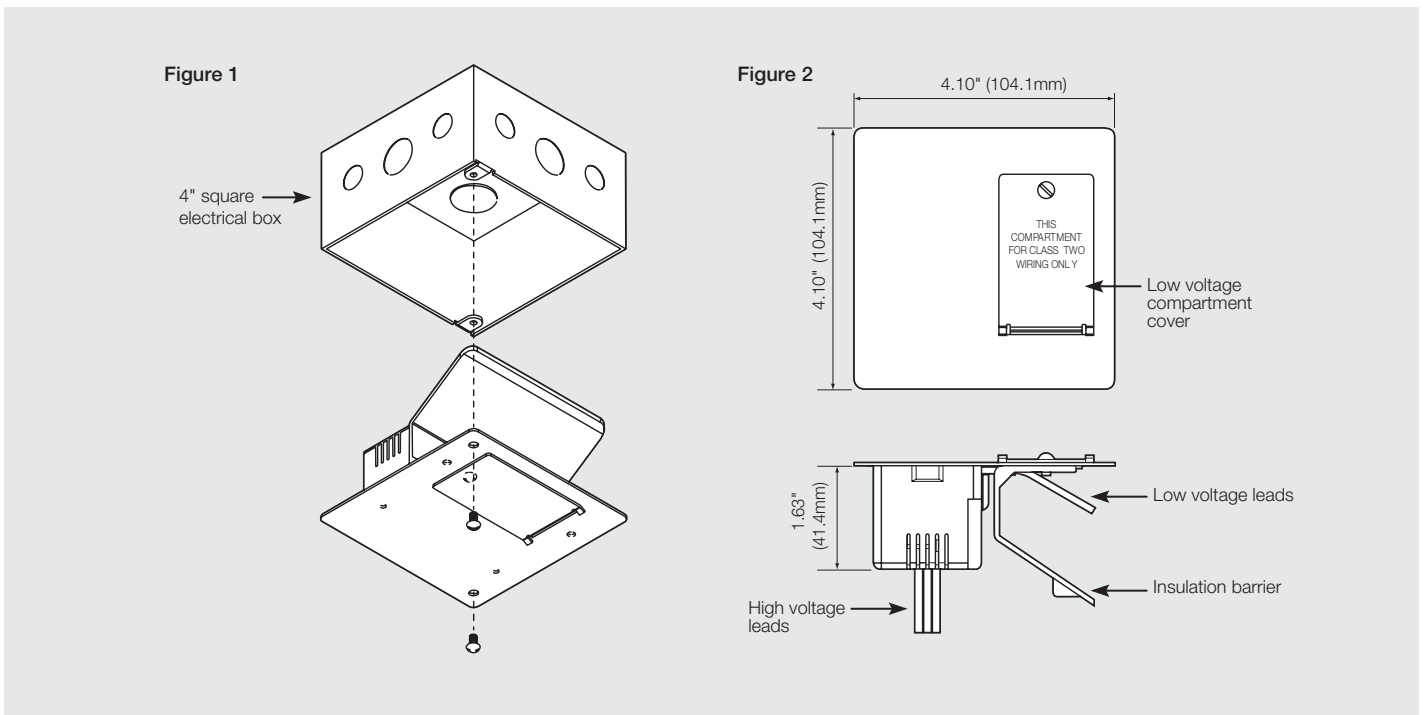


DALI Power Pack

Ordering Information

Item Number	Original Item Number	Ordering Abbreviation	Input Voltage (V _{AC})	DALI Output Voltage (V _{DC})	DALI Output Current (mA)
*2743Y7	58290	TW-DL-12V/110mA-Power Pack	120-277	12	110

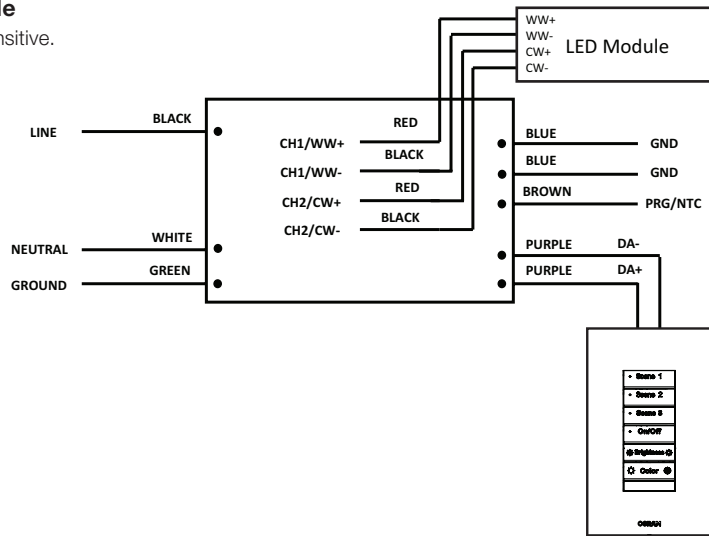
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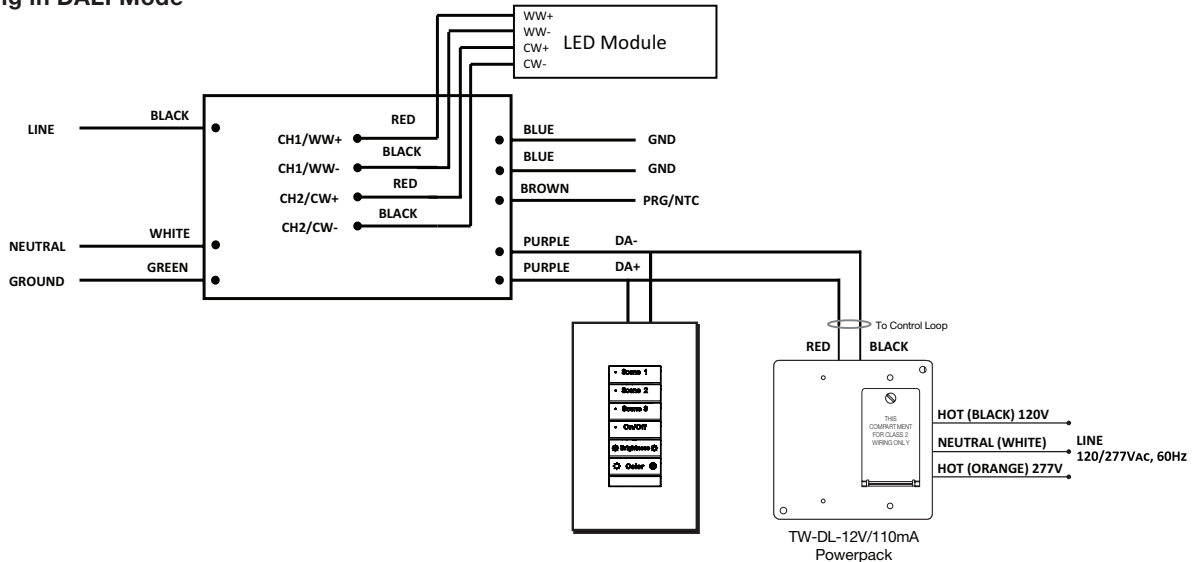
Wiring Diagrams

Wiring in DEXAL Mode

DEXAL wiring is polarity sensitive.



Wiring in DALI Mode



Packaging

TW/2CH Driver

Quantity: 10 pieces per case
Weight: 0.95 lbs ea./9.5 lbs per case (approx.)

TW LED Module

Quantity: 80 pieces per case
Weight: 0.06 lbs ea./4.8 lbs per case (approx.)

TW Wallstation

Quantity: 20 pieces per case
Weight: 0.13 lbs ea./2.6 lbs per case (approx.)

DALI Power Pack

Quantity: 20 pieces per case
Weight: 0.24 lbs ea./4.8 lbs per case (approx.)

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Specifications subject to change without notice. Actual performance may differ as a result of end-user environment and application.