Tunable White System

The OSRAM 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 OSRAM 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 OSRAM 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 OSRAM 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 OSRAM TW Wallstation into the application space and run a quick wiring test.

Key Features & Benefits

— The driver has two operating modes:
  – Two-channel mode (for direct/indirect without color tuning)
  – Tunable white mode
— 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$_{AC}$ 50/60H
— UL Class 2 output for safe operation

Product Offering

Item Number	Item Name	Ordering Description
58287	TW/2CH Driver	OTi50W/120-277/1A4/2CH TW L
58288	TW LED Module	PLTWG1-Lin-2000-560x24
58289	TW Wallstation	TW-Wall-Station
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.

Constant Lumen | End of Life | Thermal NTC Protection | Dimmable <1%

DIM to Off <1% | Soft Start On | Programmability

Application Information

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

Light is OSRAM

OSRAM

OPTOTRONIC® Tunable White LED Driver

Electrical Characteristics

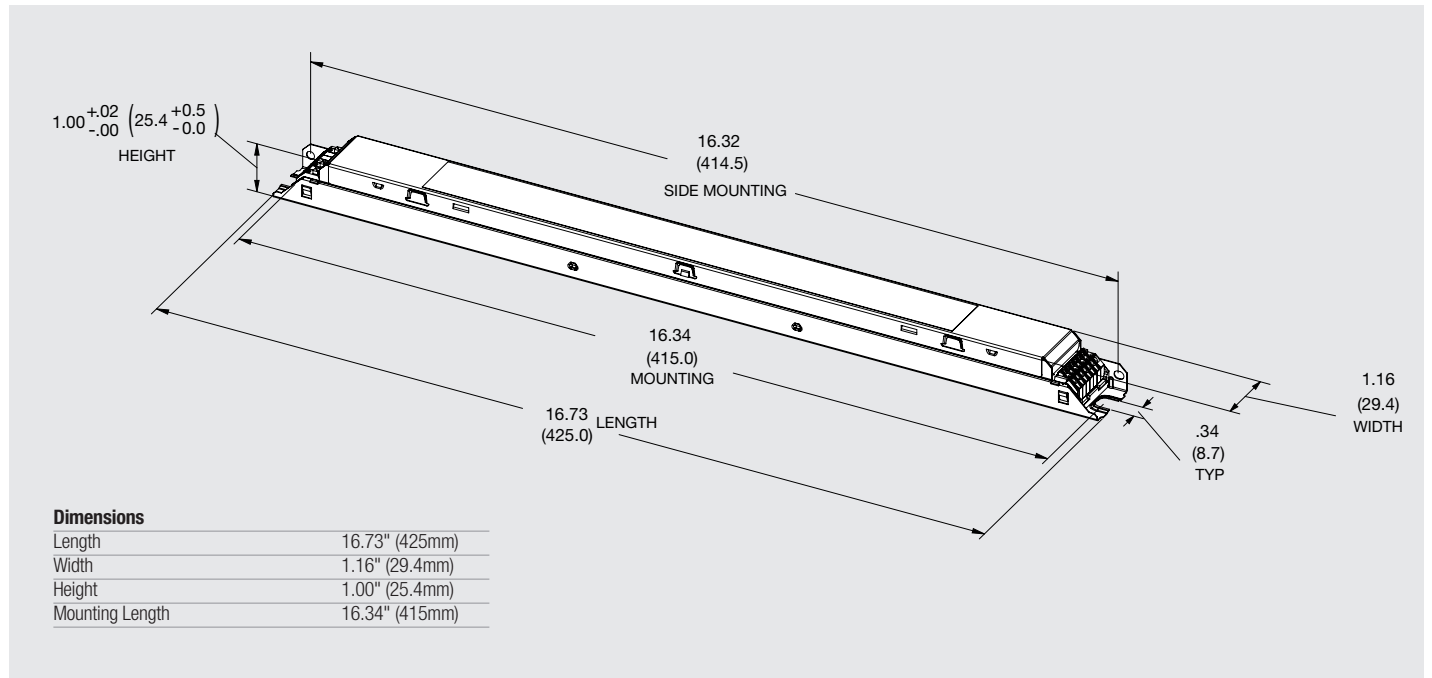| Max Output Power (W)	Nominal Input Voltage (V_{AC})	Max Input Current (A)	Power Factor	THD	Line Transient	Efficiency	Environmental Rating	UL File #
50W	120-277 V_{AC} 50/60 Hz	0.55 @ 120V 0.25 @ 277V	>0.9	<20%	ANSI C62.41 Cat A 2.5kV	>84%	Dry & Damp	E320395

Ordering Information

Item Number	Ordering Abbreviation	Total Output Power	Output Current Range	Default Current	Output Voltage Range (V_{DC})	Dimming Control	Dimming Range	LED Thermal Protection
58287	OTi50W/120-277/1A4/2CH TW L	50W (per channel and combined)	400-1400mA (Programmable)	400mA per channel	20-48V	DALI 2.0 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

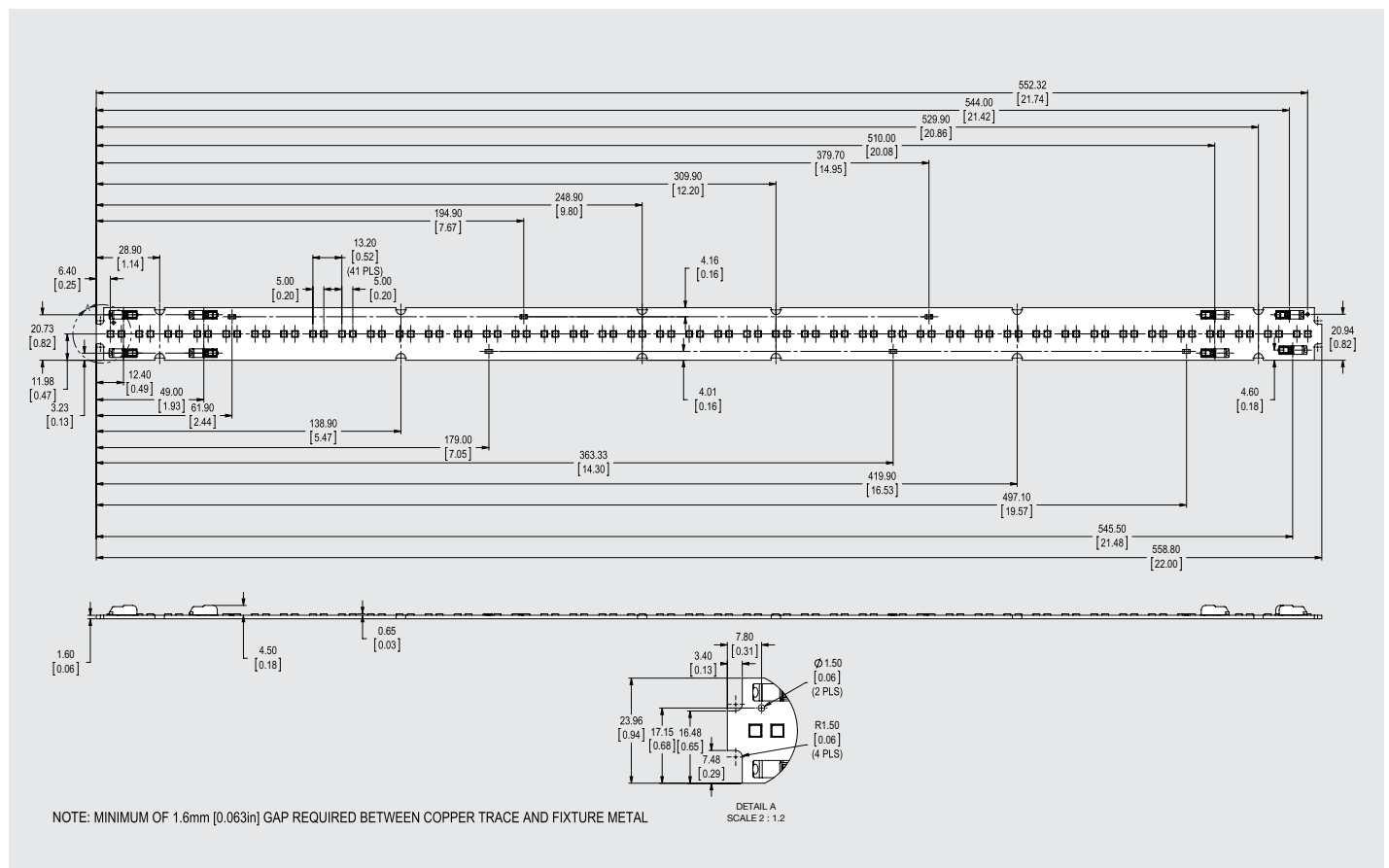| Dimensions	
Length	16.73" (425mm)
Width	1.16" (29.4mm)
Height	1.00" (25.4mm)
Mounting Length	16.34" (415mm)

Tunable White Light Engine

Ordering Information

Item Number	Ordering Abbreviation	Input Voltage (V)	Nominal Current (mA)	Max. Current (mA)	Nominal Wattage (W)	Max. Wattage (W)	Nominal Lumens (lm)	Nominal LPW	CCT	CRI	Dimensions (in)	Case Qty
58288	PLTW-G1-Lin-2000-560x24	42.1	400	420	16.8	18.6	2000	119	2700K	90	22.0 x 0.94	80
		41.5	340	420	14.1		2000	142	6500K	90		

Ordering Guide

PL	TW	G1	-	Lin	-	2000	-	560x24
Sub-Brand	Type	Generation		Shape		Lumen Output		Size (mm)
PL = PrevaLED®	Tunable White			Linear, Bar, Area				

Dimensions

NOTE: MINIMUM OF 1.6mm [0.063in] GAP REQUIRED BETWEEN COPPER TRACE AND FIXTURE METAL

DETAIL A
SCALE 2 : 1.2

Tunable White Wallstation

Ordering Information

Item Number	Ordering Abbreviation
58289	TW-Wall-Station

Dimensions

The wallstation can be powered by up to 4 drivers at a time.
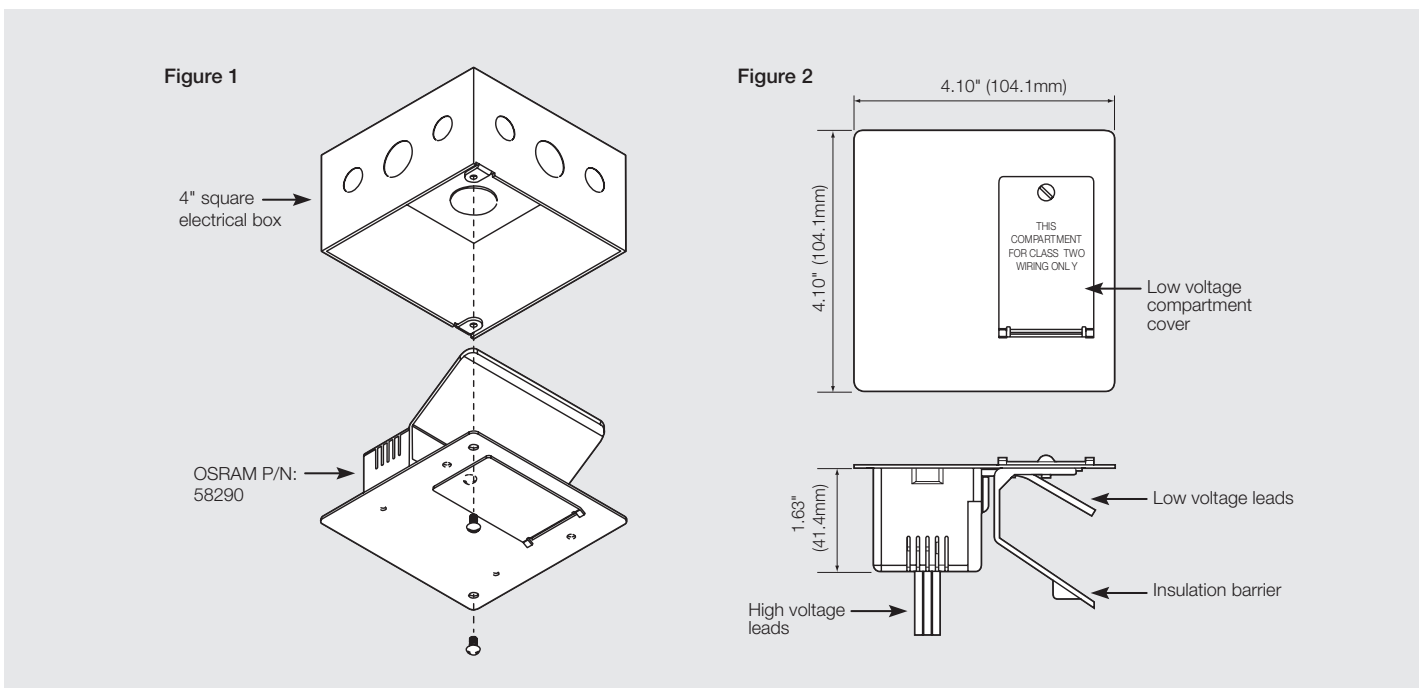A power pack is required when more than 4 drivers per wallstation are needed
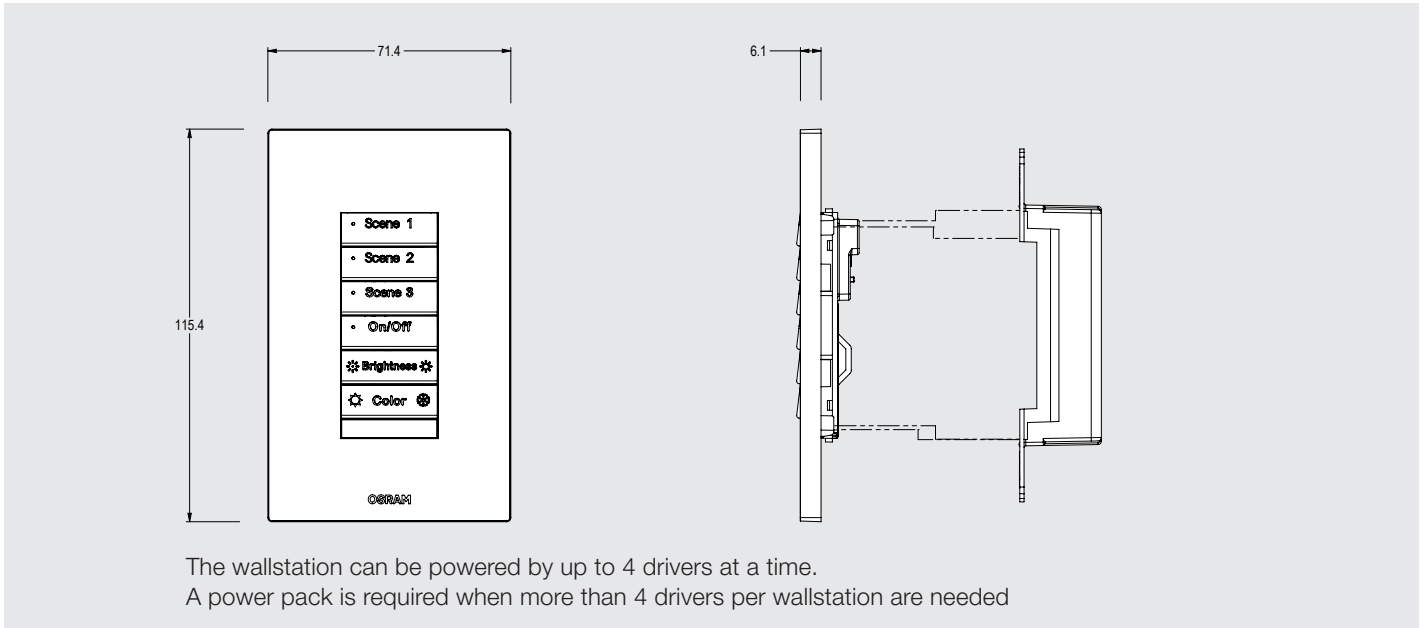
DALI Power Pack

Ordering Information

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

Dimensions

Figure 1

4" square electrical box

OSRAM P/N: 58290

Figure 2

4.10" (104.1mm)

4.10" (104.1mm)

THIS COMPARTMENT FOR CLASS TWO WIRING ONLY

Low voltage compartment cover

1.63" (41.4mm)

Low voltage leads

Insulation barrier

High voltage leads

Wiring Diagrams

Wiring in DEXAL Mode
DEXAL wiring is polarity sensitive

Wiring in DALI Mode

TW-DL-12V/110mA
Powerpack
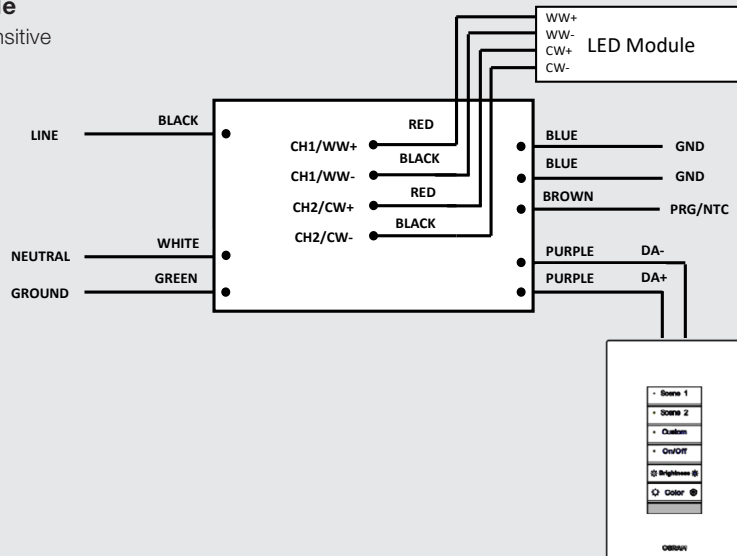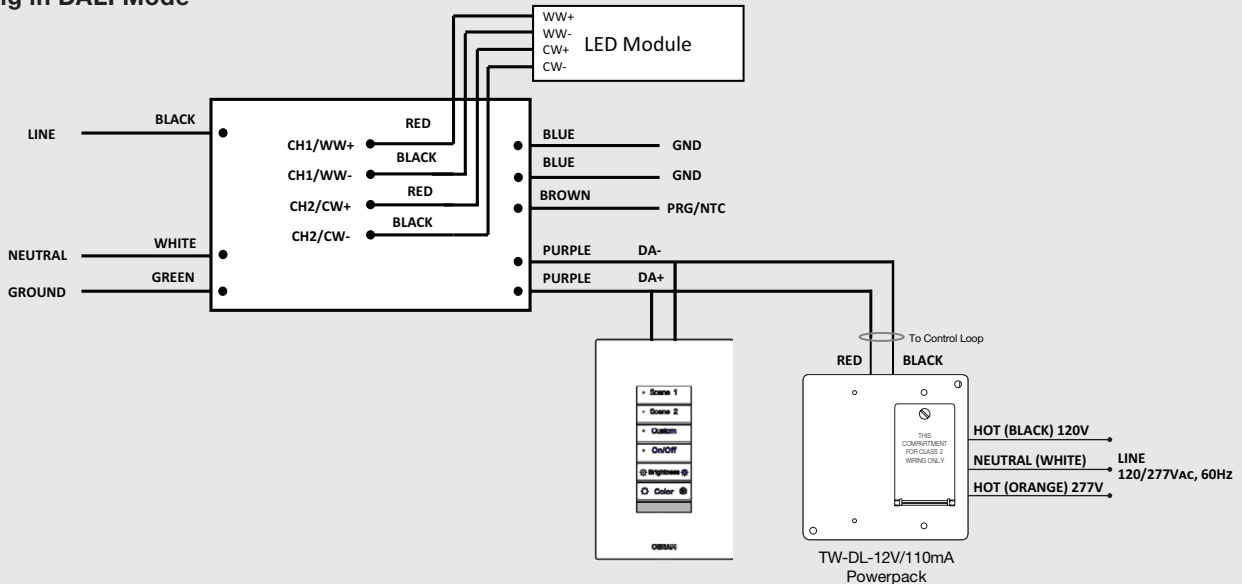
Packaging

TW/2CH Driver - 58287
Quantity: 10 pieces per case
Weight: 0.95 lbs ea./9.5 lbs
per case (approx.)

TW LED Module - 58288
Quantity: 80 pieces per case
Weight: 0.06 lbs ea./4.8 lbs
per case (approx.)

TW Wallstation - 58289
Quantity: 20 pieces per case
Weight: 0.13 lbs ea./2.6 lbs
per case (approx.)

DALI Power Pack - 58290
Quantity: 20 pieces per case
Weight: 0.24 lbs ea./4.8 lbs
per case (approx.)

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