

OPTOTRONIC®

Electronic LED Control Interfaces

Key System Features

- Utilizes pulse width modulation, (PWM) to control LED performance
- Lightweight, low profile
- Dimming range: 0-100%
- Long life
- Options available for analog DALI or DMX control protocols
- 10V-24 Vdc input voltage
- Short circuit, overload and overheating protection
- UL and cUL recognized component
- OTi DALI DIM: TouchDIM® able to control and program light levels from manual push-button switch
- -20°C through 50°C ambient operation

Application Information

OPTOTRONIC Control Interface are ideally suited for:

- Backlighting signs and panels
- Path and roadway marking
- Step and seat marking
- Ambience lighting inside furniture
- Effect lighting
- Panel lighting
- Wall washing
- General lighting
- Cove lighting
- Façade lighting
- Any application where a variable amount of light is desirable
- Combining with multi-color LED modules for color mixing
- DALI Controllable Option

OPTOTRONIC control interface modules are compact, electronically stabilized control interface units with input line voltages ranging from 10-24 Vdc for use with most popular LED power supplies.

OPTOTRONIC control interfaces complete the system of innovative control gear and open up even more possibilities for dynamic control of LED based lighting solutions. They are ideal for use in color mixing applications in combination with multi-color LED modules.

The OPTOTRONIC DIM is a 1-Channel 0-10V dimmer for comfortable dimming of LED systems and is supplied power by OPTOTRONIC 10V or 24V power supplies. Dimming of the LED modules is performed by PWM (pulse width modulation) and the control input is isolated according to SELV requirements.



The OPTOTRONIC DMX RGB DIM

is a 3-Channel DMX dimmer which enables RGB LED modules to be individually dimmed and controlled. Power is supplied by OPTOTRONIC 10V or 24V power supplies. The unit has 3 independent DMX control circuits and dim the LED modules by PWM (pulse width modulation). Onboard rotary switches are a simple means of setting the DMX

address. The output terminals are configured with a common (+) pole.

The OTi DALI DIM is a single channel DALI compatible electronic dimmer with intelligent processor technology. Integrated Touch DIM function enables dimming and saving setpoint light levels. Power is supplied by 10V or 24V OPTOTRONIC power supplies.

System Information

To complement the variety of LED modules, OSRAM offers specifically matched OPTOTRONIC Power Supply Units with rated voltages between 10V and 24Vdc.

OPTOTRONIC control interfaces operate on the principle of pulse width modulation and are used on the secondary side of the power supply unit, i.e. wired between the OPTOTRONIC power supply and the LED modules.

1-10V Input	DMX Input	DALI Input
OT DIM- White LED Applications	OTDMXRGBDIM- Color Changing LED Applications	OTiDALIDIM- Touch DIM Capabilities

In pulse width modulation, the power supply to the LED Modules is interrupted at a specific frequency. This permits individual adjustment of the required light output. In this context, the high frequency provides flicker-free

lighting. Pulse width modulation technology guarantees a linear dimming characteristic with minimal color shift from the LED module.

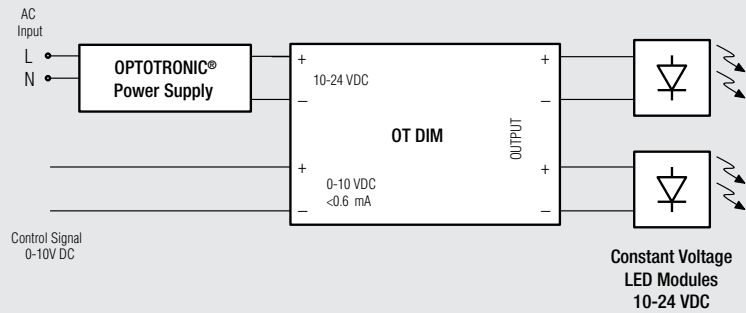


Catalog #	Type
Project	
Comments	
Prepared by	

OPTOTRONIC® Control Interfaces

Wiring Diagram (OTDIM)

Wiring Requirements:
Input, load, and control wires:
Use 16 to 18AWG solid or stranded wire

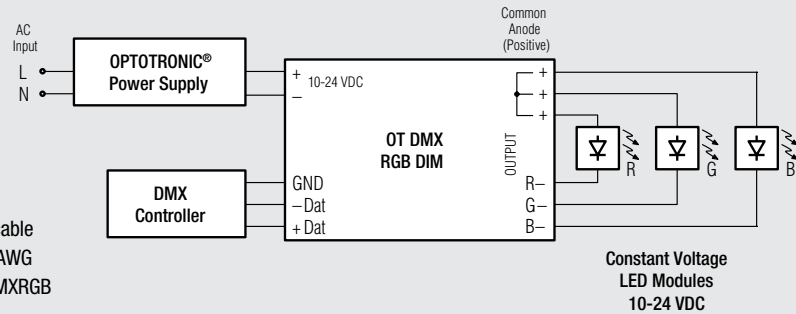


Notes: 1. OTDIM may be controlled by 1-10Vdc controllers, 1-10V converters, or 100k Ohm linear potentiometers.
2. The OTDIM has two dependent channel outputs (internally, these channels are in parallel). The sum of the loads from the channel outputs must not exceed the maximum output of the OTDIM (52.5W at 10V and 120W at 24V).

Wiring Diagram (OTDMXRGB)

Wiring Requirements:
Input and load wires:
Use 16 to 18AWG solid or stranded wire

Control Wires:
Use a connector to join DMX cable from DMX controller to 16-18AWG solid or stranded wire to OTDMXRGB

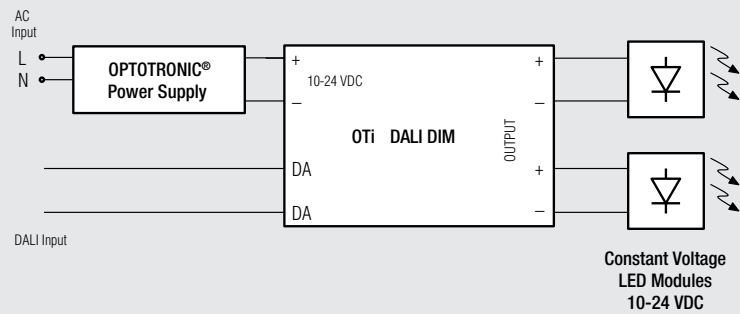


Note: OTDMXRGB can be controlled by DMX controllers providing protocols that meet USITT DMX-512A or DMX512 (DIN 56930-2).

Wiring Diagram (OTi DALI DIM)

Wiring Requirements:
Input and load wires:
Use 16 to 18AWG solid or stranded wire

Control Wires:
Non Polarity specific control input



Note: OT DALI DIM can be controlled by DALI Interface or Touch-DIM (momentary contact).


OPTOTRONIC® Control Interfaces

Item Number	OSRAM SYLVANIA Description	Nominal Input Voltage (Vdc)	Max. ¹ Input Current (A)	Control Voltage (Vdc)	Max. Output Power per Channel (W)	Max. ^{2,3} Output Power (W)	Max. Output Current per Channel (A)	Output Frequency (Hz)
51516	OT DIM	10	5	0-10Vdc	0-52.5	52.5	2.5	135
		24	5		0-120	120	2.5	
51600	OTDMXRGB	10	6	DMX	0-21	60	2	N/A
		24	6		0-48	140	2	
51349	OT DALI DIM	10	5	DALI	0-50	50	2.5	350
		24			0-100	100	2.5	

¹ For Class 2 applications maximum input current should be limited to 5A.
² For Class 2 applications maximum output power would be 47W @ 10V and 97W @ 24V.
³ Max. power loss is 4W for all control interfaces at 10V and 24V input voltages.

Additional Specifications

Input Voltage: 9.5-25Vdc
Dimming Range: 0-100%
Control Current: 0.6 mAmax. for 0-10 units only
Temp. Range: -20°C to +50°C
Max. Case Temperature: 70°C

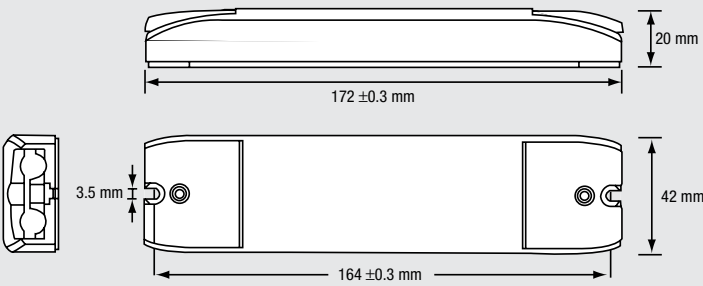
 **us**
UL508 recognized unit
(UL file# E23286 & E224357)
RoHS compliant

OT DALI DIM: UL Recognized unit
(E320662)

Product Details

For all units:
Dimensions:
6.77" L x 1.65" W x 0.79" H
(172mm L x 42mm W x 20mm H)

Packaging:
Quantity: 20 pieces/carton
Weight: 0.165 lbs ea. (approx.)
3.3 lbs/carton



System Life / Warranty

OPTOTRONIC Control Interfaces are warranted for 5 years. OPTOTRONIC Products are covered by our LED system warranty, a comprehensive LED module and power supply system warranty. For additional details, refer to our latest version of the LED System warranty bulletin.
For additional information refer to the warranty section of www.osram-americas.com

Ordering Guide

Item Number _____ **51516 OT DIM** _____
OPTOTRONIC _____ Dimming Module

OSRAM

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