Electronic LED RGB Control Modules
OPTOTRONIC® OT RGB

RGB Module Guide

OT RGB 3CH DIM
OT RGB SEQUENCER

OTRGB modules operate in conjunction with the following LED Power Supplies:
(Literature Ordering #ECS027)
OT6/100-240/10COS
OT6/100-240/24COS
OT20/120-240/24S

Controls all OSRAM LED modules including:
LINEARlight Colormix
(Literature Ordering #LED016)
LINEARlight Flex Colormix
(Literature Ordering #LED017)

Key System Features

- Lightweight, low profile
- -20°C through 50°C ambient operation
- Long life
- Utilizes pulse width modulation, (PWM)
- 0 – 10 VDC control voltage
- Dimming Range: 0 – 100% (OT RGB 3CH DIM)
- 10V – 24 VDC Input Voltage
- Short Circuit, Overload and Overheating Protection when operated in conjunction with OPTOTRONIC® power supplies
- Low power loss
- Output terminals with common positive pole

Application Information

OSRAM OPTOTRONIC OT RGB modules are ideally suited for:

- Combining with Colormix and multi-color LED modules for color mixing applications
- For dynamic color changing
- For selecting any color within the chromaticity triangle
- Wall washing
- Cove lighting
- Facade lighting
- Effect lighing

OT RGB control modules are compact pulse width modulated (PWM) controllers for creating colored lighting solutions with LED's. The OT RGB 3CH DIM allows color mixing by independently controlling three dimmable output channels. The OT RGB SEQUENCER generates a preset dynamic sequence of colors, allowing the user to control the speed of the sequence. Both modules are controlled by 0...10 VDC control inputs.

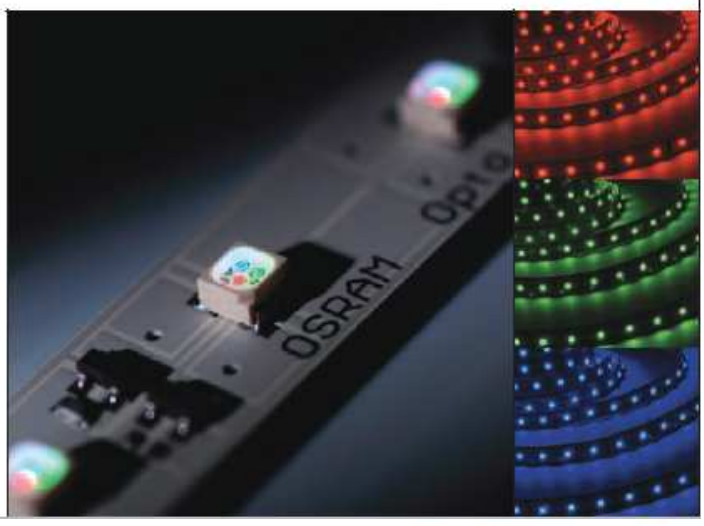
The OPTOTRONIC collection of power supplies and RGB controls combined with Osram LED modules provides the optimum solution for colored lighting applications. Having the entire system available from Osram provides unmatched ease of use and low complexity, opening up new possibilities for the world of dynamic colored lighting.

System Information

To combine with the variety of RGB LED modules, OSRAM SYLVANIA offers specifically matched **OPTOTRONIC Power Supply Units** with rated voltages of 10V and 24V.

The OT RGB control modules 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 and the LED modules (diagram). The OT RGB controlled modules can be controlled via a 0...10V interface.

In pulse width modulation with the RGB controllers, the power supply to the **LED Modules** is interrupted at a frequency of 350 Hz. 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 and color mixing characteristic for the eye at maximum dimming speed without any color shift from the LED. In contrast, dimming LED's by simply changing the applied voltage can result in significant color shift.



Electronic LED RGB Control Modules
OPTOTRONIC® OT RGB

Item Number	Description	Nominal Input Voltage (VDC)	Max.[1] Input Current (A)	Control Voltage (VDC)	Output Power per channel (W)	Max.[2] Output Power (W)	Max. Power Loss (W)	Max. Output Current per channel (A)
51517 51518	OT RGB 3CH DIM OT RGB SEQUENCER	10.5 / 24	6	0-10	0-20 / 0-48	60 / 140	3	2

1. For Class 2 applications maximum input power is limited to 50W@10.5V and 100W@24V.
2. For Class 2 applications maximum output power would be 47W@10.5V and 98W@24V.

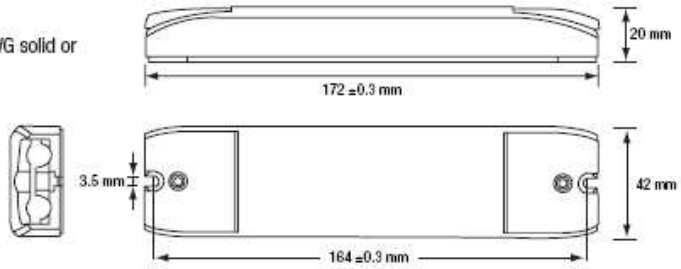
Performance Guide

RGB Control module shall be an LED OPTOTRONIC electronic module with 10 – 24 VDC input, with 0 – 10 VDC control voltage, and a common positive pole for the 3 channel output.

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

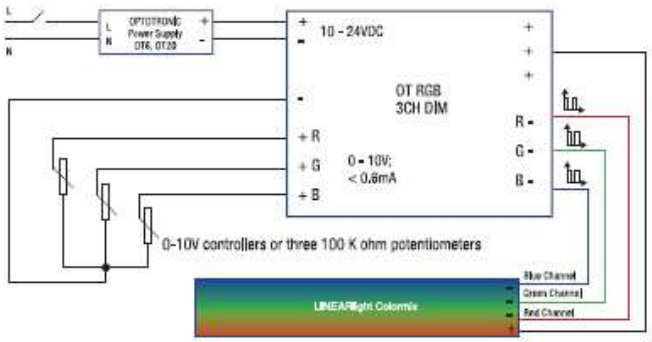
Wiring: Connectors only
(No leads provided) Use 14AWG solid or stranded copper wire only

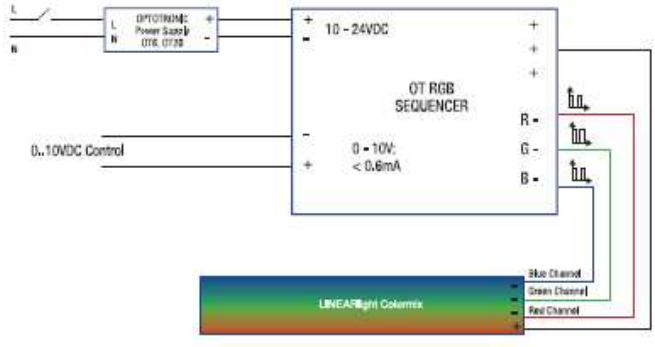


Specifications

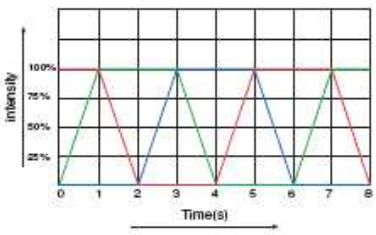
RGB Control Module
Input Voltage Range: 9.5-25VDC
Input Current: 6 Amps max.
Output Frequency: 350 Hz
Output Current: 2 Amps max. per channel
Dimming Range: 0 – 100% for each channel of OT RGB 3CH DIM
Control Voltage: 0 – 10 VDC, 0.6 ma max.
Temp. Range: -20°C through +50°C
Max. Case Temperature: 70°C
Color Mixing: Yes*

Wiring Diagram:





OT RGB SEQUENCER:
The following preset profile is generated by the sequencer. The speed of the sequence may be controlled from the 0…10V control input.



Control Specifications

- RGB control modules can be controlled by 0-10V DC controllers (see ECS041) or 100 Kohm linear potentiometers
- OT RGB modules can be controlled by DMX to 0-10V converters or DALI to 0-10V converters
- 0-10V interface on the OT RGB 3 CH DIM has a common cathode connection
- OT RGB SEQUENCER has a preset color sequence that can be controlled by a 0-10V controller:
  - Below 1.3V the output is OFF
  - Between 1.3V and 9.8V the sequence speed changes from 5 seconds to 10 minutes
  - Above 9.8V the sequence retains its current color

System Life / Warranty

OPTOTRONIC OT RGB 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 warranty bulletin.

Ordering Guide

Item Number — 51517 OT RGB 3CH DIM
OPTOTRONIC
RGB Control
3 Channel Dimming

Specifications subject to change without notice.