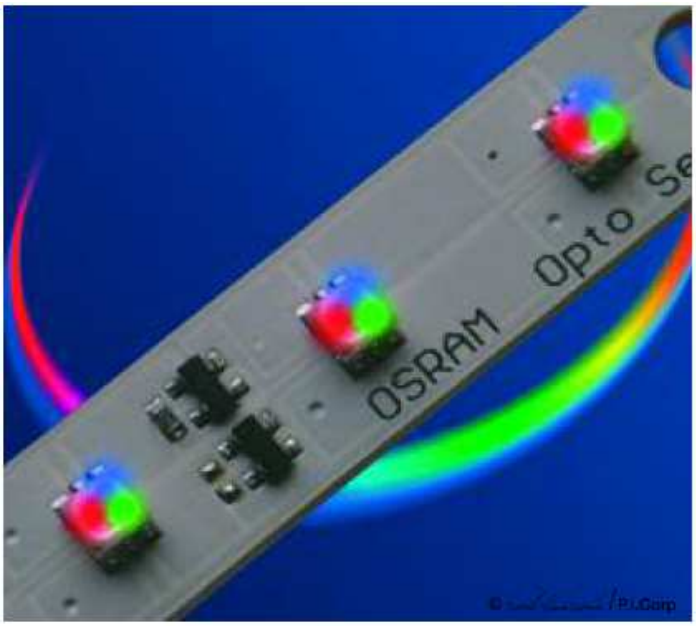
Product Information Bulletin

LINEARlight Colormix

LED Module

Gilway Technical Lamp
Distributed by
www.gilway.com
781.935-4442
Fax:781.938.5867



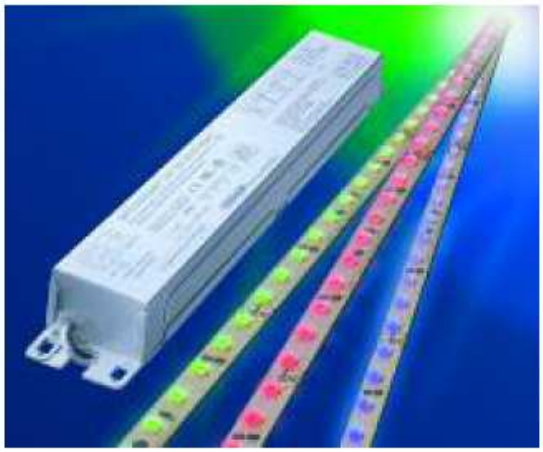
- Dynamic colored illumination
- Each LED contains individually powered red, green and blue chips
- Each module consists of 30 LEDs, 120° viewing angle per LED
- Modules may be subdivided into smaller coupons of 10 LEDs
- 15mm LED spacing for superior uniformity
- Size of entire module (LxW)
  1.48 ft x 0.45 in (450mm x 11.5mm)
- Size of smallest unit (LxW):
  5.9 in x 0.45 in (150mm x 11.5mm)
- Maximum assembly: 10 modules in a row
- Minimal heat generation
- Optimal operation with OPTOTRONIC® OT 24V power supplies (Lit. code ECS050) and OT RGB controls (Lit. code ECS042)

Product Availability

Product	Color
LINEARCOLORMIX-OS-LM01M-RGB	RGB

The OSRAM SYLVANIA LINEARlight Colormix provides infinite possibilities for colored lighting.

LINEARlight Colormix modules provide dynamic control of colored illumination. Each individual LED contains red, green and blue chips in one LED package that can be controlled by OPTOTRONIC® OT RGB 3CH DIM and OT RGB Sequencer modules to yield an infinite choice of colors, including white. This unique method of color mixing within each LED, achieves better color consistency and uniformity than by combining separate, colored LEDs. These dynamic features enable the systems to be used in a wide range of large-scale applications, including edge lighting of transparent and diffusing materials, illuminating facades and coves and architectural applications. These modules can be used wherever temperature or space limitations prevent the use of conventional means of illumination.



Ordering and Specification Information[1]

Item Number	Ordering Abbreviation	Watts[2]	Volts	Viewing Angle	Wave Length (nm)	Luminous Flux (lm)	Approx. Lumens per ft
70080	LINEARCOLORMIX-OS-LM01M-RGB						
	All Colors	8	24Vdc	120°	Cool White	87	58
	Red Channel	1.8	24Vdc	120°	617	32	21
	Green Channel	3.6	24Vdc	120°	525	51	34
	Blue Channel	2.9	24Vdc	120°	470	8	5

1. All information is per module, 30 LEDs. Modules may be subdivided into coupons of 10 LEDs.
2. The wattage listed for each individual color represents maximum possible values; however, the manufacturing process assures that no module will exhibit the maximum in all colors simultaneously.

Application Information

Applications

Edge-lighting
Accent lighting
Cove lighting
Color mixing
Controlled color sequencing
Custom color applications

Application Notes

1. Small dimensions
2. Shock resistance
3. High color efficiency
4. Directional radiation characteristics
5. No IR or UV radiation
6. Able to cut and reconfigure every 10 LEDs
7. Compatible with OSRAM LED power supplies and dimmers

SEE THE WORLD IN A NEW LIGHT OSRAM

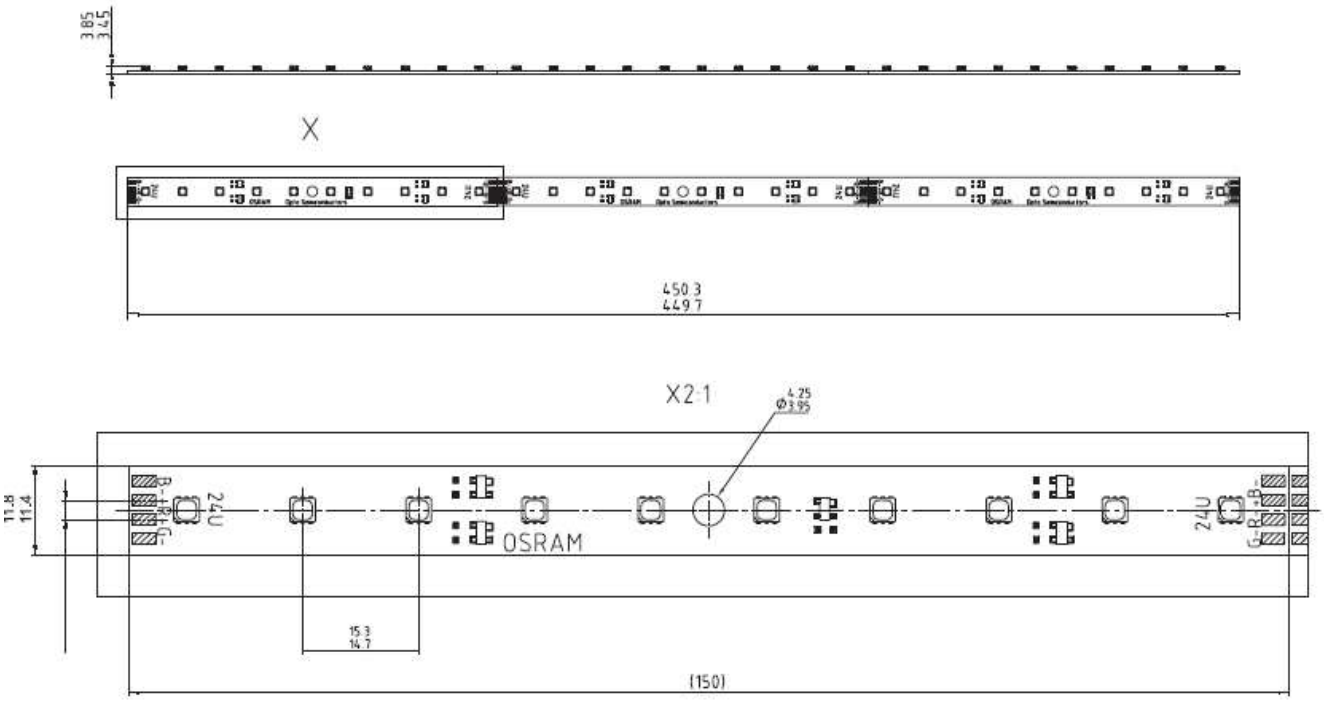
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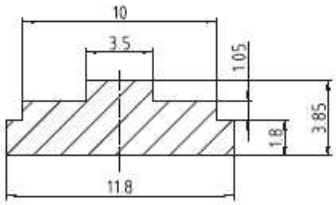
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Dimensions





	Length in (mm)	Width in (mm)
Colormix Module	17.7 (450)	.45 (11.5)
Smallest Coupon	5.9 (150)	.45 (11.5)
LED Spacing	.59 (15)	

Maximum Ratings

Parameter	Values
Storage Temperature Range	-40… +85°C (-40… +185°F)
Operating Temperature Range	-30… +75°C (-22… +177°F)
Maximum Operating Voltage	25 V_{dc}
Maximum Reverse Voltage	25 V_{dc}

Example Wiring Schematic

Four components are needed to form the Colormix system, OPTOTRONIC® power supplies, OT RGB controllers, LINEARlight Colormix, and a 0-10V controller. Refer to Product Information Bulletin ECS042 for wiring schematics and additional information.

With OT RGB 3CH DIM, custom colors and dynamic color changing is possible. A 0-10V signal for each color controls the light output.

With the OT RGB sequencer, the Colormix system cycles through the entire color spectrum. A 0-10V input signal controls the rate of the cycle.

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Safety Information

1. The LED module and all of its components should not be subject to mechanical stress.
2. Assembly must not damage or destroy the conducting paths on the circuit board.
3. A maximum of 10 LINEARlight Colormix modules may be installed consecutively from any power feed. Operation of more than 10 modules in a row is not recommended.
4. The LED module incorporates no protection against short circuits, overload or overheating. Therefore, it is absolutely necessary to operate the modules with an electrically stabilized power supply offering protection against the above mentioned safety risks. For dimming applications, attention should be paid to the specific references in the ECS 042 literature code. OSRAM OPTOTRONIC power supplies are specifically designed with protection features for safe operation. Use of third party power supplies is not recommended.
5. Installation of the LED modules and OSRAM LED power supplies need to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
6. Correct electrical polarity needs to be observed. Incorrect polarity may result in no light emission or incorrect color output.
7. Any installation configuration involving more than one module or module segments should be electrically wired in a parallel connection so as to maintain the 24 V operating condition.
8. Please ensure that the power supply is of adequate capacity to operate the load.
9. When mounting on metallic or otherwise conductive surfaces, there needs to be an electrical isolation between the module and the mounting surface.
10. The mounting of the Colormix module is carried out by attaching it at the mounting holes. Mounting screws should be used in conjunction with insulating washers to prevent circuit board damage and possible short circuit.
11. Pay attention to standard ESD precautions when handling and installing the module.
12. The module, as manufactured, has no conformal coating and therefore offers no inherent protection against corrosion. The ability to customize the length of the module by cutting at specifically marked points is a key feature of the product and hence the reason for no factory installed conformal coating. For these reasons, it is recommended that the user complete all module modifications first (cutting, wiring, etc.) and then apply a conformal coating in the final stages of installation.
13. Damage by corrosion will not be honored as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.
14. For applications involving exposure to humidity and dust, the module must be protected by a fixture or housing with a suitable protection class. The module can be protected against condensation water by treatment with an appropriate circuit board grade conformal coating. The conformal coating should have the following features:

    – Optical transparency
    – UV resistance
    – Thermal expansion properties matching those of the module (15-30 x 10-6 cm/cm/K)
    – Low permeability of steam for all climatic conditions
    – Resistance against corrosive environments

    Note: The "APL" grade conformal coating from Electrolube, Inc. (www.electrolube.com) has met the conditions for the LINEARlight Colormix in our tests.

Assembly Information

1. Solder connections should only be performed on designated solder pads. During soldering, do not exceed the maximum soldering time of 10 seconds and the maximum soldering temperature of 260°C.
2. Each module can be divided into subunits of 10 LEDs by cutting carefully at the indicated points.

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Power Supply and Dimmer Ordering Information***

	①			②			③		④
Application	OPTOTRONIC Power Supply	Ordering Code	Qty	OPTOTRONIC RGB Controller	Ordering Code	Qty	Max length of LINEARlight Colormix Strip	No. of Modules	0-10V Controllers*
Colormixing, color changing	OT20/120-240/24S	51512	1				2.9 ft (900mm)	2	Three 0-10V controllers or 100 K ohm potentiometers required
	OT75/120/24	51513	1	OT RGB 3CH DIM	51517	1	13.3 ft (4050mm)	9	
	OT75/120-227/24E	51514**	1				13.3 ft (4050mm)	9	
Color spectrum sequencing	OT20/120-240/24S	51512	1				2.9 ft (900mm)	2	One 0-10V controllers or 100 K ohm potentiometers required
	OT75/120/24	51513	1	OT RGB Sequencer	51518	1	13.3 ft (4050mm)	9	
	OT75/120-227/24E	51514**	1				13.3 ft (4050mm)	9	

*Please contact OSRAM SYLVANIA for a list of approved 0-10V controllers ** Available 1st Quarter 2005

*** This table is for indoor applications. For outdoor applications reduce the number of modules by 1.

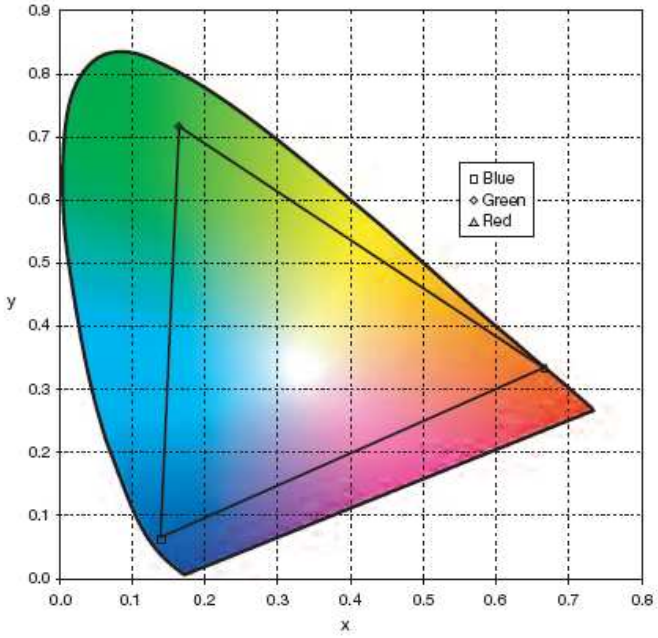
Theory of Color

A combination of all three primary colors of light (red, green, and blue) appears white to the human eye. Combinations of two primaries produce the "secondary" colors — magenta, cyan, and yellow. The three primary colors can be mixed to create almost any other color light. By mixing colors, the color temperature (cct) may be adjusted to blend with the surrounding environment.

The LINEARlight Colormix can display almost any color by combining the light output of closely spaced RGB chips. All three colors are placed within what appears to be just one LED.

Any color within the triangle below is achievable with the colormix system.

1931 CIE Chromaticity Diagram



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Visit our website: www.sylvania.com

Ordering Guide

LINEAR COLORMIX	/	OS	/	LM01M	/	RGB
LINEARlight Colormix		OSRAM		Internal ID No.		Color Code

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