

## Product Information Bulletin

# LINEARlight Colormix



- 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)  
17.7" x 0.45" (450mm x 11.5mm)
- Size of smallest unit (LxW):  
5.9" x 0.45" (150mm x 11.5mm)
- Maximum assembly: 10 modules in parallel chain
- Low heat generation

### Product Availability

Product	Color
LINEARCOLORMIX-OS-LM01M-RGB	RGB

### OSRAM's NEW 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 Sequencer dimming 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 and flexible 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.



By using 3 diodes in one LED package, color mixing is achieved without color separation.

### Ordering and Specification Information<sup>1</sup>

Item Number	Ordering Abbreviation	Watts	Volts	Current (mAmps)	Viewing Angle	Color	Number LEDs	Wave Length	Luminous Intensity (cd)	Luminous Flux (lm)
70080	LINEARCOLORMIX-OS-LM01M-RGB									
	All Colors	7.71	24Vdc	321	120°	RGB	30	-	24	72
	Red Channel	1.8	24Vdc	75	120°	RED	30	617	10.5	31.5
	Green Channel	2.94	24Vdc	123	120°	GREEN	30	525	10.5	31.5
	Blue Channel	2.94	24Vdc	123	120°	BLUE	30	470	3	9

1. All information is per module, 30 LEDs. Modules may be subdivided into coupons of 10 LEDs.

### 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

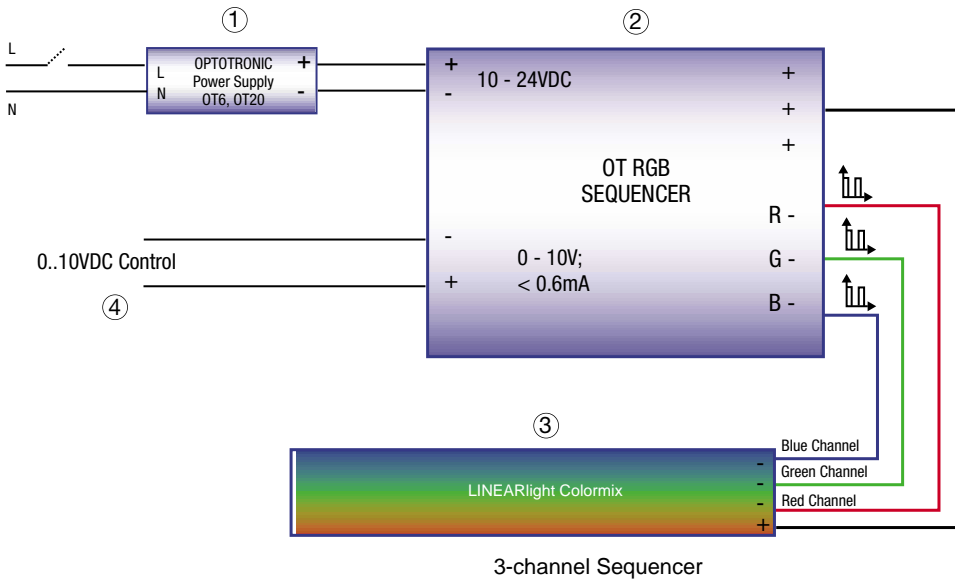
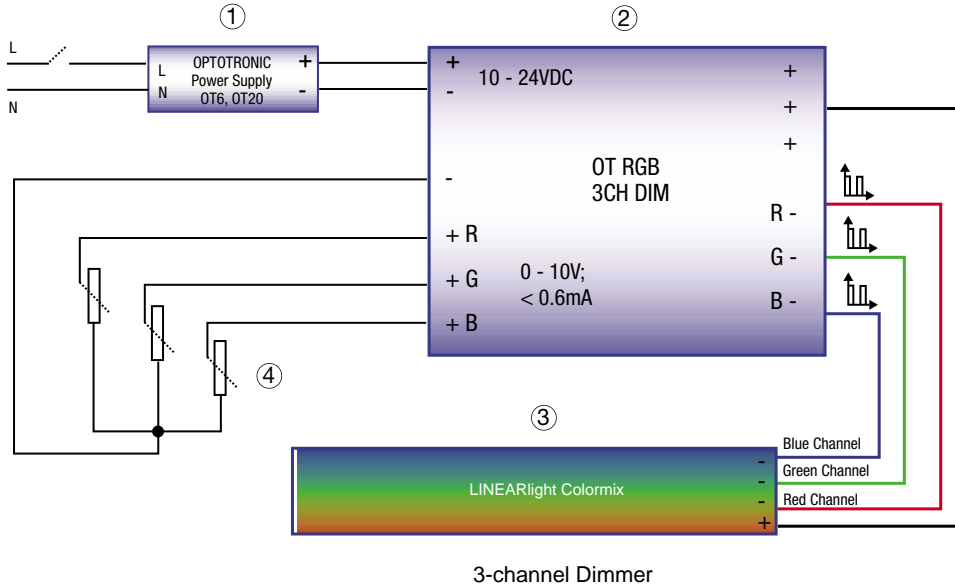
6. Able to cut and reconfigure every 10 LEDs
7. Compatible with OSRAM LED power supplies and dimmers

## 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.

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.



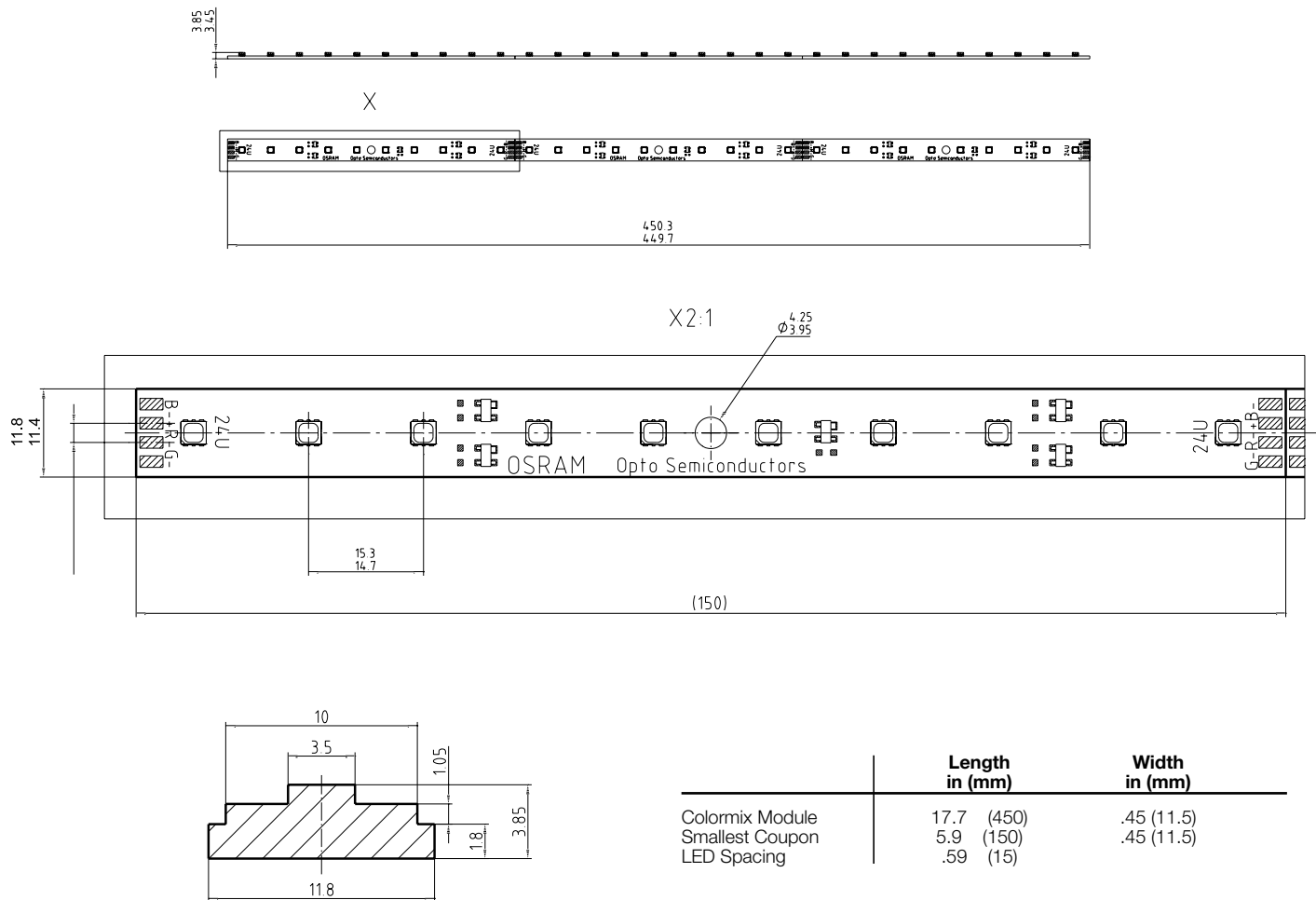
## Power Supply and Dimmer Ordering Information

	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	Qty
Colormixing, changing	OT6/100-240/24/COS	51501	1	OT RGB 3CH DIM	51517	1	11.8" (300 mm)	2/3	0-10V Controllers* or three 100 K ohm potentiometers	3
	OT20/120-240/24S	51512	1	OT RGB 3CH DIM	51517	1	35.4" (900mm)	2		
	OT75/120/24	51513**	1	OT RGB 3CH DIM	51517	1	159.3" (4050mm)	9		
Color spectrum sequencing	OT6/100-240/24/COS	51501	1	OT RGB Sequencer	51518	1	11.8" (300 mm)	2/3	0-10V Contrllers* or one 100 K ohm potentiometer	1
	OT20/120-240/24S	51512	1	OT RGB Sequencer	51518	1	35.4" (900mm)	2		
	OT75/120/24	51513**	1	OT RGB Sequencer	51518	1	159.3" (4050mm)	9		

\*Please contact OSRAM SYLVANIA for a list of approved 0-10V controllers

\*\* Available 1st Quarter 2004

## Dimensions



## Maximum Ratings

Parameter	Symbol	Values	Units
Storage Temperature Range	$T_{stg}$	-22... +149	°F
Maximum Operating Voltage	$V_{max}$	25	$V_{dc}$
Maximum Reverse Voltage	$V_R$	25	$V_{dc}$

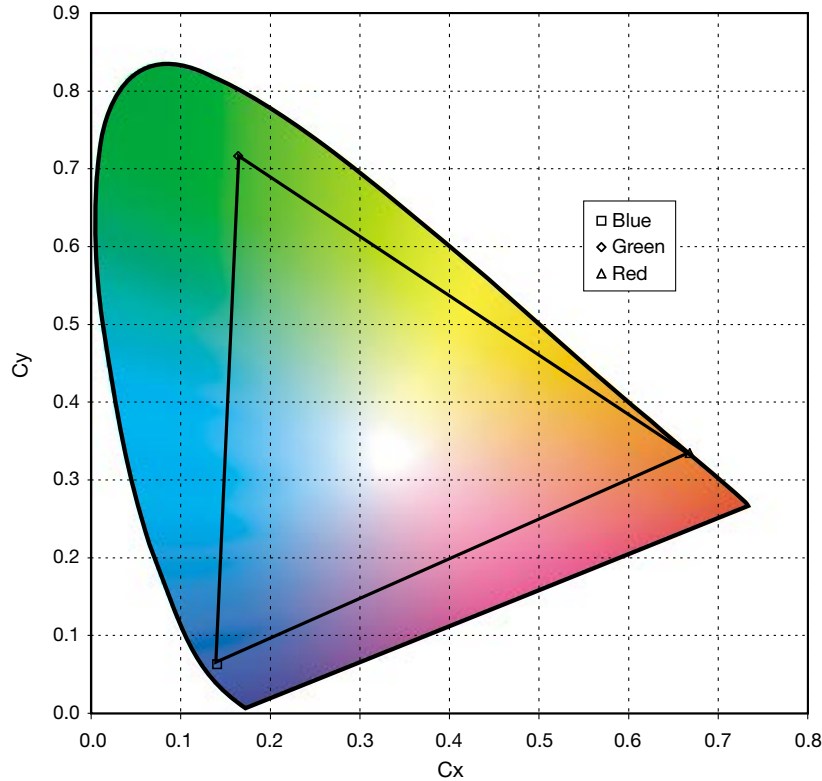
**hi-Tech lamps**  
 800-229-6509  
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## Theory of Color

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 will display any dimmed 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.



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## Ordering Guide

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

# hi-Tech lamps

## 800-229-6509

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