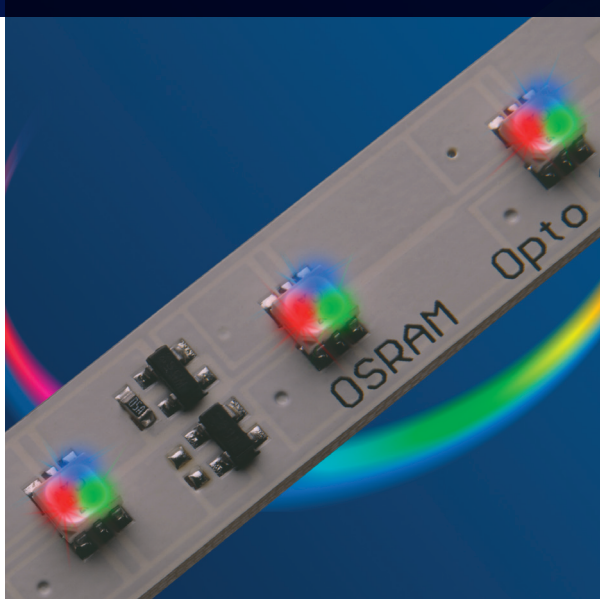


# LINEARlight Colormix

## Rigid Colormixing LED Module



LINEARlight Colormix modules provide dynamic control of colored illumination. Each individual LED contains red, green, and blue chips in one LED package. LINEARlight Colormix is optimally paired with OPTOTRONIC® 24Vdc Power Supplies and OPTOTRONIC OT RGB DIM, OT Sequencer or OT RGB DMX control interfaces to yield an infinite choice of colors, including white. This unique method of colormixing within each LED achieves better color consistency and uniformity than by combining separate, colored LEDs. LINEARlight Colormix modules are easily configured with available connector accessories.

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 are ideal for wherever temperatures or space limitations prevent the use of conventional means of illumination.

### Key Features & Benefits

- Each Multi LED contains an individually powered red, green and blue chip; this unique method of colormixing achieves excellent color consistency and uniformity
- Modules may be field cut to achieve a customized fit
- LEDs are closely spaced to minimize hot spots in shallow installations
- Dimmable by pulse width modulation, a method that maintains consistent lumen output and color
- Long life: up to 50,000 hours when temperature at Tc point is maintained at 40°C minimizing maintenance frequency

### Product Offering

Ordering Abbreviation	Wattage	Color
L8LRE/24V/RGB/LNRLT	8.3	RGB

### Application Information

#### Applications

- Accent lighting
- Backlighting
- Controlled color sequencing
- Cove lighting
- Edge lighting

#### Specifications and Certifications



This light source meets restrictions on hazardous substances.



## Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	Date

## Ordering Information

Item Number	Ordering Abbreviation	Module Length (ft)	No. of LEDs	Power (W)	Voltage (Vdc)	Current (Amps)	Wavelength	Lumens (lm)	Watts/ft
70080	L8LRE/24V/RGB/LNRLT	1.48	30						
	Red Channel			1.8	24	0.075	617nm	32	1.2
	Green Channel			3.6	24	0.15	525nm	51	2.4
	Blue Channel			2.9	24	0.12	467nm	8	2.0

All data is related to entire module measured at Tc point of 25°C. Data reflects statistical mean values. Actual data may differ depending on variances in the manufacturing process. End users need to take into account the lumen depreciation as the temperature rises with various thermal management solutions installed.

## Ordering Guide

L	8	L	R	E	/	24V	/	RGB	/	LNRLT
LED	Wattage	Linear	Rigid	Engine		Voltage		Colormix Red, Green, Blue		Product Family LINEARlight Colormix

## Power Supply Information

Application	OPTOTRONIC® Power Supply	Ordering Code	Qty.	OPTOTRONIC RGB Control Interface	Ordering Code	Qty.	Max. length of LINEARlight Colormix Strip	No. of Modules	Controllers
Colormixing, Color Changing, Sequencing	OT20	51512	1	OT RGB 3CH DIM	51517	1	2.9 ft.	2	*Three 0-10V controllers or 100 K ohm potentiometers required ** DMX controller
	OT50	51598	1	OT RGB Sequencer	51518		8.9 ft.	6	
	OT75	51514	1	OT DMX RGB	51600		13.3 ft.	9	
	OT96D	51510	1				14.8 ft.	10	
	OT96	51626***	1				14.8 ft.	10	
	OT240	51627***	1				3 x 13.3 ft.	3 x 9	

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

\*\* DMX controller is only compatible with OT DMX RGB.

\*\*\* NAED # 51626 has replaced NAED # 51511. NAED # 51627 has replaced NAED # 51515.

Notes:

1. A maximum of 5 modules can be connected in a single run. Please reference the "Wiring Diagram" in this document for specifics.
2. This table is for indoor applications. For outdoor applications reduce the number of modules by one.
3. OPTOTRONIC power supplies are optimally paired with SYLVANIA LED modules and are specifically designed with protection features for safe operation.

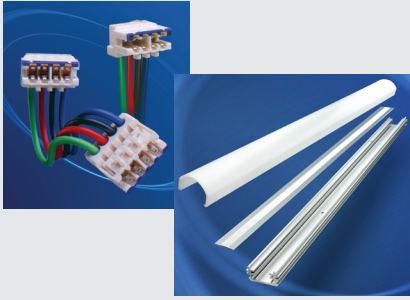
## Minimum and Maximum Ratings

Parameter	Values
Operating Temperature at Tc point	-30 to +75°C (-22 to +162°F)
Storage Temperature Range	-30 to +80°C (-22 to +176°F)
Voltage Range	23 – 25Vdc
Reverse Voltage	25Vdc

Notes:

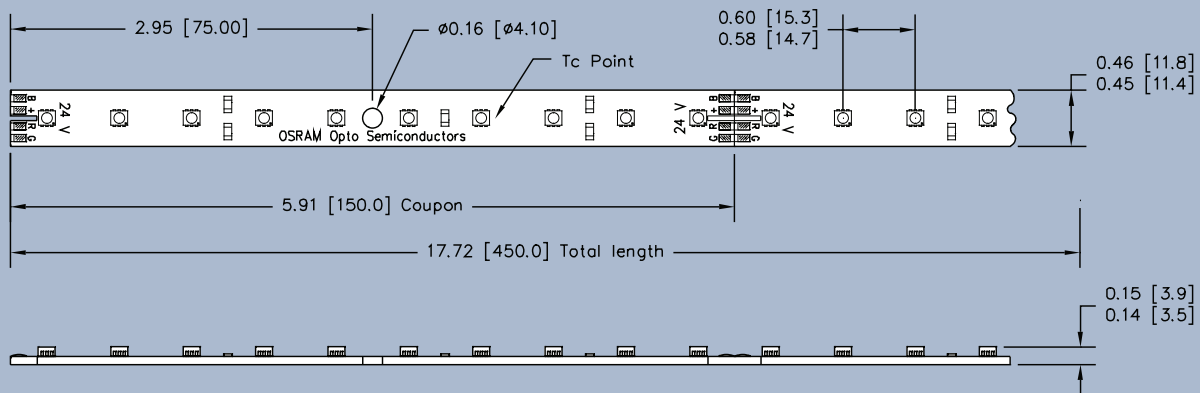
1. Exceeding maximum ratings may damage the LED module and pose potential safety hazards.
2. Elevated operating temperatures can be expected to negatively impact the service life in terms of lumen output.
3. Incorrect wiring may damage the LED module.
4. Not intended for use with constant current power supplies.

## Accessories



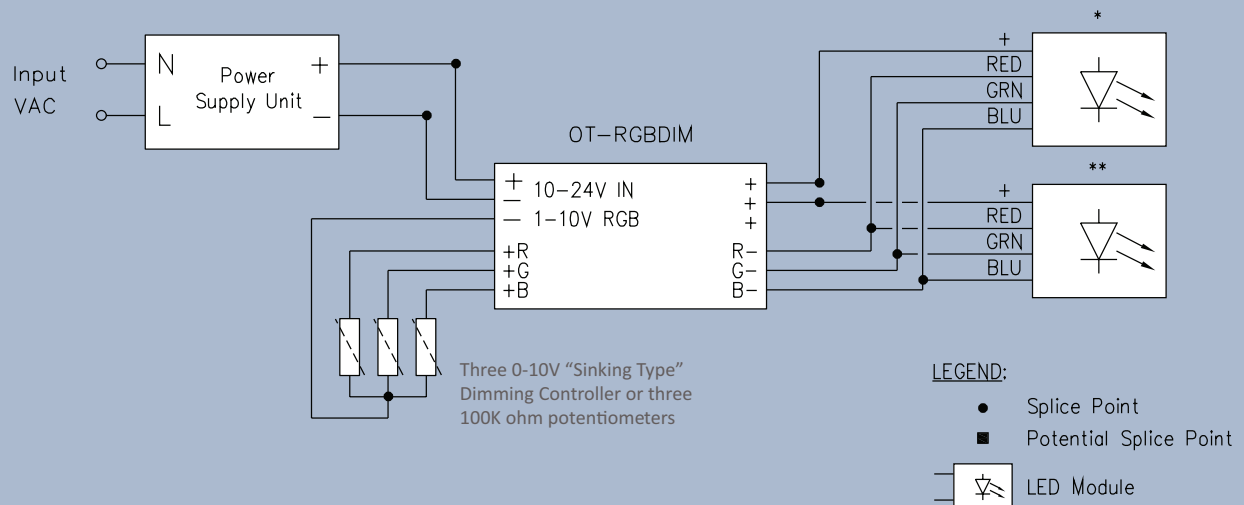
Item Number	Ordering Abbreviation	Description	Length (in)
70110	LAC-C/LL/RGB/BB/4P/2IN	Board-to-Board Connector	1.77
70114	LAC-C/LL/RGB/IC/4P/20IN	Input Connector	19.67
71236	LAC-T/LNRLT/P/2FT	Prismatic Mounting Track	18
71237	LAC-T/LNRLT/P/5FT	Prismatic Mounting Track	56
71238	LAC-T/LNRLT/D/2FT	Diffused Mounting Track	18
71239	LAC-T/LNRLT/D/5FT	Diffused Mounting Track	56

## Assembly Diagram



DIMENSIONS: inches [mm]

## Wiring Diagram



Reference the "Power Supply Information" for the maximum product load per power supply.

Circuit Requirements:

- \* Maximum 5 modules per single power feed.
- \*\* Remaining load to be connected with additional power feeds.

## Safety Information

### **WARNING: ONLY QUALIFIED PERSONNEL SHOULD PERFORM INSTALLATION.**

#### **TO AVOID ELECTRICAL SHOCK OR COMPONENT DAMAGE, DISCONNECT POWER BEFORE ATTEMPTING INSTALLATION OF THE POWER SUPPLIES AND/OR MODULES.**

Failure to install the power supplies and/or LED modules in accordance with the National Electric Code (NEC), all applicable Federal, State and local electric codes as well as the specific Underwriters Laboratories (UL) safety standards for the installation, location and application may cause serious personal injury, death, property damage and/or product malfunction.

1. The LED module itself and all its components shall not be subjected to mechanical stress and assembly must not damage or destroy conducting paths on the circuit board.
2. Installation of LED modules shall be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
3. Observe correct electrical polarity, incorrect polarity may destroy the module. (Depending on the product, incorrect polarity may lead to emission of red or no light.)
4. Electrostatic Discharge (ESD) precautions shall be incorporated when handling or installing the module. (For more information, reference document # LED093 ESD Protection for LED Systems.)
5. Damage by corrosion and improper heat sinking will not be honored as a materials defect claim. It is the user's responsibility to ensure adequate heat sink and protection against corrosive agents such as moisture, condensation and other harmful elements.
6. Modules may be hot to the touch. Use caution when handling.

## Assembly Information

1. The module should be installed on flat surfaces to facilitate intimate contact between the circuit board and the substrate material. The module should not be installed on curved surfaces.
2. Mount the module using the pre-drilled mounting holes.
3. Heat sink compounds may be used to facilitate heat transfer from the module to the heat sink material.
4. Ensure the power supply has adequate power to operate the load. See the requirements under the section titled Power Supply Ordering Information.
5. Make electrical connection from the power supply to the LED modules using the LINEARlight Colormix – Connector System.
6. A maximum of five LINEARlight Colormix LED modules can be operated from a single power feed. Operation of greater than five LED modules in series will exceed the current capacity of the connector system.

## Application Information (continued)

### **Application Notes**

1. Installation of the LINEARlight Colormix must provide for thermal management to avoid premature failure of the product and to obtain expected service life. Service life (i.e. lumen depreciation) is primarily a function of LED temperature which is to be monitored on the circuit board at the designated Tc point temperature of 40°C and should be sufficient to enable a service life of 50,000 hours.
2. There is no exact installation prescription for obtaining an appropriate Tc point temperature, due to variations in fixture designs. In general, the LINEARlight Colormix module should be adhered to a flat, metal surface which has enough surface area to transfer the heat from the LED to the surrounding air. The metal surface can be part of the mass of the fixture itself.
3. Concerning fixture design, it is important to understand that once heat is transferred to a "heat sink", that heat must still be allowed to escape the "system". A heat sink transferring the thermal energy to the inside of an enclosed cavity may ultimately be of little use.
4. The fixture manufacturer's strategy should be to design a prototype fixture and test that fixture in an appropriate environment while monitoring the temperature at the Tc point, which should be allowed enough time to reach thermal equilibrium. Tc point temperature can be measured with a standard thermocouple in direct contact with the circuit board at the Tc point or with ML4C Series non-reversible OMEGALABELS ([www.omega.com](http://www.omega.com)) or equivalent.

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SEE THE WORLD IN A NEW LIGHT is a registered trademark of OSRAM SYLVANIA Inc.  
OPTOTRONIC is a registered trademark of OSRAM AG.  
Specifications subject to change without notice.

## Warranty

SYLVANIA LED products are covered by our LED Module, OPTOTRONIC® Power Supply or Control warranty.

The LINEARlight Colormix is covered under warranty as long as the temperature at the Tc point does not exceed 40°C; exceeding this temperature will void all warranties.

For additional information or to download the warranty registration form, refer to the latest version of the warranty available in the Literature section of [www.sylvania.com/LED](http://www.sylvania.com/LED).

Module Warranty: 3 years

System Warranty: 5 years

### **United States**

#### **OSRAM SYLVANIA**

100 Endicott Street  
Danvers, MA 01923

#### **Trade**

Phone: 1-800-255-5042

Fax: 1-800-255-5043

#### **National Accounts**

Phone: 1-800-562-4671

Fax: 1-800-562-4674

#### **OEM/Special Markets**

Phone: 1-800-762-7191

Fax: 1-800-762-7192

#### **Display/Optic**

Phone: 1-888-677-2627

Fax: 1-800-762-7192

#### **SYLVANIA Lighting Services**

Phone: 1-800-323-0572

Fax: 1-800-537-0784

### **Canada**

#### **OSRAM SYLVANIA LTD.**

2001 Drew Road  
Mississauga, ON L5S 1S4

#### **Trade**

Phone: 1-800-263-2852

Fax: 1-800-667-6772

#### **OEM/Special Markets/Display/Optic**

Phone: 1-800-265-2852

Fax: 1-800-667-6772

#### **SYLVANIA Lighting Services**

Phone: 1-800-663-4268

Fax: 1-866-239-1278

### **Mexico**

#### **OSRAM MEXICO**

Headquarters

Tultitlan/Edo de Mexico

011-52-55-58-99-18-50

[www.sylvania.com](http://www.sylvania.com)