VIVID RGB LIGHTING

Key Features

6X Brightness

User Customizable Spacing

Epoxy Sealed Electronics

Low Profile .50in / 12.7mm

4 Corner Mounting Holes

Full-color RGB pixels

IP66 Dust and Water Resistant

24 Month Warranty

ETL Listed RoHS Compliant Intertek

Many Applications

- Light Shows
- Signage
- Building Facades
- Trade Shows
- Retail Interiors
- Concerts and Events
- Decorative Elements
- Architectural Accents
- High Brightness Video Installations

Further Reading

Visit us online for the most up-to-date product information:

www.VividRGBlighting.com

Introducing Chip6X

Brighter and more flexibility is what you asked for, and **Chip6X** answered the call. **Chip6X** from Vivid RGB Lighting allows you to choose your own path! Build these strings in your own shop to your desired specifications or let Vivid RGB Lighting build them for you.

Chip6X module housing, Vivid Wire and PCB boards are available in black or white. We also offer a variety of lens options: clear, white translucent flat, and the ever-popular dome. Just choose and snap, and change it later!
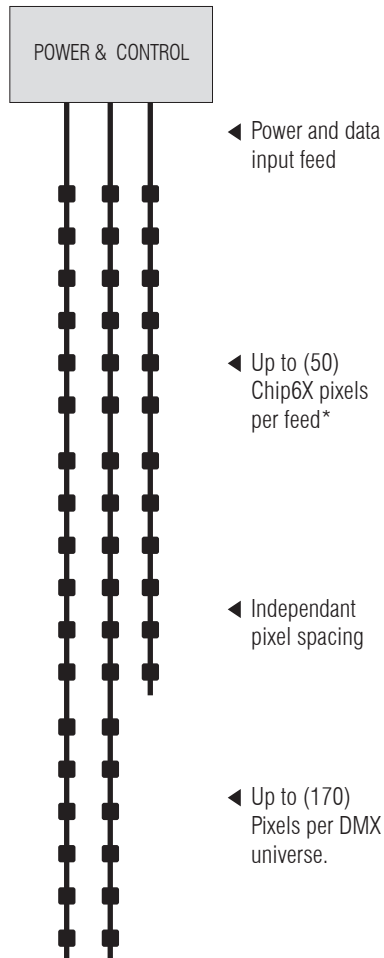
Field replaceable modules!

We'd love to tell you that you'll never have a concern with one of our modules but we didn't grow a great product line and outstanding customer service by lying. However, if you do have a failure in the field - the **Chip6X** are field replaceable!

System Overview

POWER & CONTROL

◄ Power and data input feed

◄ Up to (50) Chip6X pixels per feed*
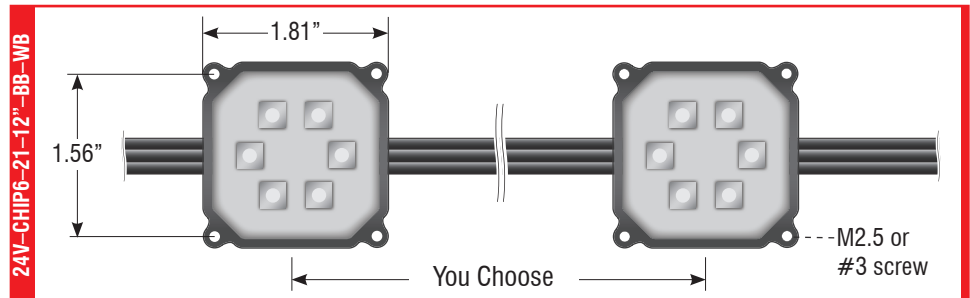
◄ Independant pixel spacing

◄ Up to (170) Pixels per DMX universe.

*More than (50) pixels per home run maybe possible in some circumstances.

Standard Configuration You create the standard!

We have broken the convention that you can't have what you want. With **Chip6X**, you choose the spacing, you build to your specification!

24V–CHIP6–21–12"–BB–WB

1.81"

1.56"

You Choose

M2.5 or #3 screw

Technical Specifications*

OUTPUT	LUMEN MAINTENANCE	50,000+ hours
	LED CHANNELS	Red, Green, & Blue
	GRAYSCALE	256, 8-bit
ELECTRICAL	INPUT VOLTAGE	24V DC
	POWER	1.5W / pixel
CONTROL	INTERFACE	1-Wire DMX512
	CONTROL SYSTEM	ADS, VPD, Color Mimic, or compatible third-party DMX controller
PHYSICAL	TEMPERATURE RANGES	-20ºC – 50ºC / -4ºF – 122ºF
	HUMIDITY	Any
SAFETY	ENVIRONMENT	Dry & damp, water resistant; IP66

*Due to continuous improvements and design innovations, specifications subject to change without notice.

Build-to-Order Configurations

Our stocking version of the **Chip6X** is a White PCB with Black Housing and Clear Snap Lens. Stock Order Code: VRGB-C6X-WB-C

We also offer pre-made strings with custom spacing built exactly to your project needs.

Options Include

PCB Color: White (W) or Black (B)
Housing: Black (B) or White (W)
Lens: Clear Flat (C), Translucent White Flat (W), or Translucent White Dome (D)
Vivid Wire: Black (VWB) or White (VWW)

VIVID RGB LIGHTING

Typical Wiring Instructions

Input cables connect to driver and power supply and provide a common ground between them.

CHIP6X String Power

- Use total watts to determine necessary power supply capacity.
- Maximum power draw is 1.5 W per pixel at 24 V DC.

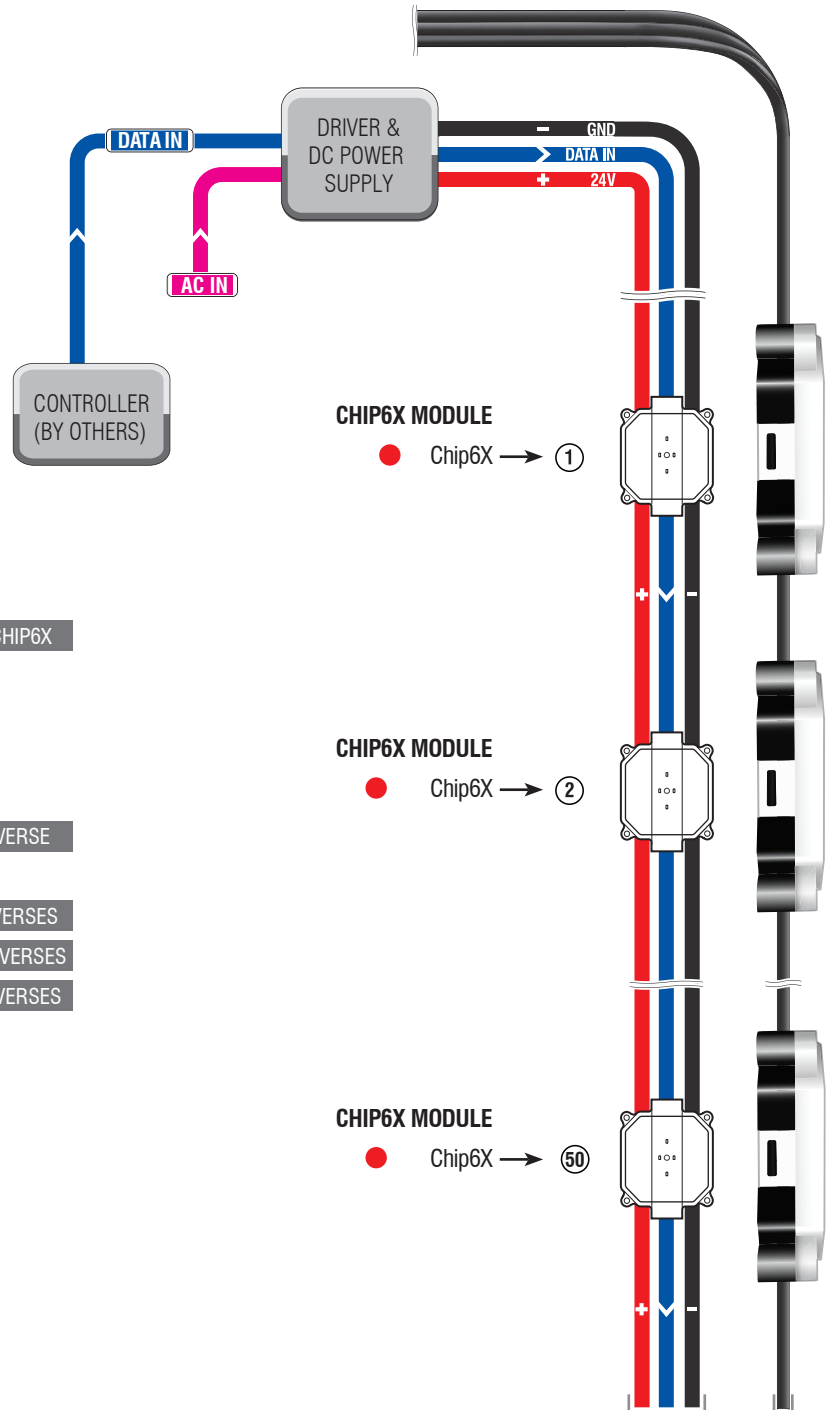| CHIP6X	AMPS @ 24V	TOTAL WATTS	
1	.065 A	1.50 W	SINGLE CHIP6X
12	.750 A	18 W	
24	1.50 A	36 W	
48	3.00 A	72 W	
96	6.00 A	144 W	
170	11.00 A	255 W	ONE UNIVERSE
340	21.00 A	510 W	TWO UNIVERSES
510	32.00 A	765 W	THREE UNIVERSES
680	43.00 A	1020 W	FOUR UNIVERSES

NOTES

Figures in this chart allow for **5%** headroom.
Typical per-pixel wattage is **1.40 W**.

IMPORTANT

Keep the power supply as close as possible to the strings to minimize voltage drop. Excessive voltage drop will cause color shift and/or intermittent operation.

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DATA IN

DRIVER & DC POWER SUPPLY

− GND
DATA IN
+ 24V

AC IN

CONTROLLER (BY OTHERS)

CHIP6X MODULE ● Chip6X → ①

CHIP6X MODULE ● Chip6X → ②

CHIP6X MODULE ● Chip6X → ㊿

VIVID RGB LIGHTING

Installation Guide

Step 1: Determine your layout

The cable for the Chip6X is designed for easy customization of module spacing. The cable is labeled with a marking every 1.5 inches to simplify the hole punching process.

NOTE

Due to the stamping process, the marks may not be exactly 1.5" - if your project requires exact spacing, please confirm with the actual cable being used.

Step 2: Punch Hole

Using the hole in the specialized hole punch tool, visually line up the desired location of the module, squeeze the handles of the punch together, and the punch will perforate the cable.

NOTE

The cable can be inserted from either side of the cable. However, please ensure cable is fully seated and aligned before punching hole, it is not possible to repair a mis-punched hole!*

Step 3: Add Silicone

Place a small dab of silicone (smaller than size of a dime) to cover the exposed insulation displacement pins on the bottom of the Chip6X housing to provide a water resistant seal. MORE is NOT better - too much will prevent proper tightening of the screws.
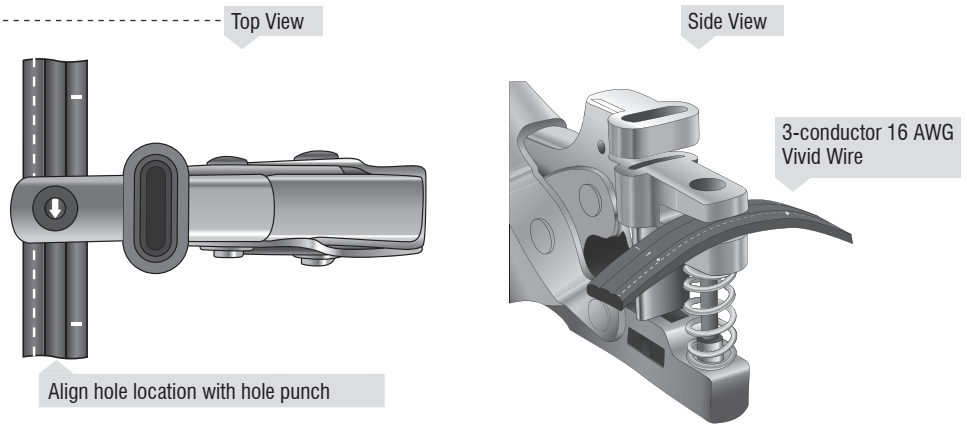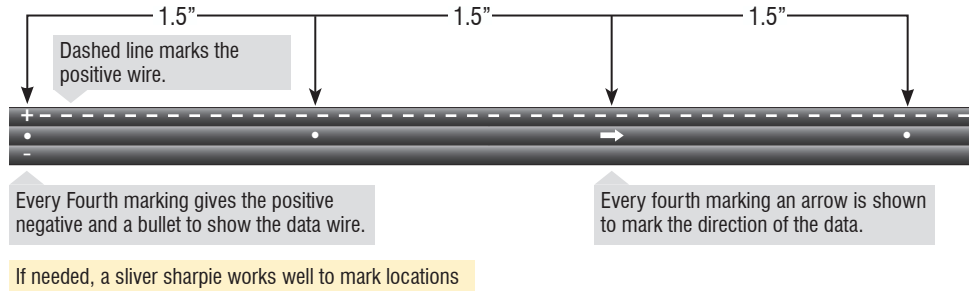
NOTE

The silicone is not required for all projects, but its helps prevent water from corroding the cable and electrical connection pins and is recommended for outdoor projects.

Tools Required

VIVID-PUNCH

Assembly Illustrations

1.5"   1.5"   1.5"

Dashed line marks the positive wire.

Every Fourth marking gives the positive negative and a bullet to show the data wire.

Every fourth marking an arrow is shown to mark the direction of the data.

If needed, a sliver sharpie works well to mark locations

Top View

Align hole location with hole punch

Side View

3-conductor 16 AWG Vivid Wire

We now have several different punch options.
Light & Medium duty Hand-held and a heavy duty bench-top model.

Silicone covering ID pins
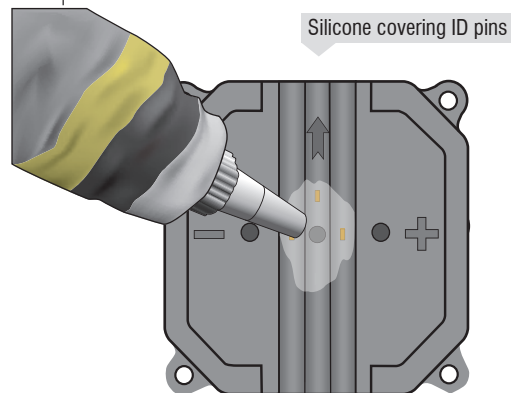
* A 'dummy' module is available to install in mis-punched holes. it is the same size as a full module, but only contains a jumper bar to bridge the data line.

VIVID RGB LIGHTING

Installation Guide cont.

Assembly Illustrations

Step 4: Align Chip6X

After perforating the cable, confirm proper orientation of the +/- symbols with the wire. Line up the post on the inside of the Chip6X housing with the hole and lightly push cable into place so the 4 pins perforate the wire.

Line up hole with post

NOTE

Installing a Chip 6X in reverse will not damage the module. However, that module and all modules after, will blink, flash or not work.

Step 5: Attach Chip6X

Place the wire into the grooves on the front and back panel. Fit wire over silicon and Attach the cap, insert screws and tighten.

When properly assembled, the back panel will be flush with the rest of the fixture housing. Do not over tighten!

Step 6: Four Corner Mounting Holes

Use a 2.5m screw on the four corner mounting holes to install the lights.

NOTE

The mounting holes fit a #3 or 2.5mm screw or smaller. These are available from Mcmaster Carr or other online stores at various lengths.
Depending on the installation, two screws maybe sufficient to hold the Chip6X in place.

Step 7: End Cap

A silicone end cap is also available to place on the end of the cable. Simply fill the cap with silicone and attach it at the end of the cable to seal from water.

End Cap