# VIVID RGB LIGHTING

**Pixel360** Omnidirectional Inline RGB LED Pixels

## Key Features

360º Viewing Angle

Fully Overmolded Clear or Frosted Enclosures

Interconnected Strings Maintain Spacing

Easy Installation and Maintenance

Full-color RGB Pixels

IP66 Dust and Waterproof

24 Month Warranty

International Patent Pending

ETL Listed PoHS Compliant

## Many Applications

• Theater and Concert Stage Elements
• Trade Shows
• Interior and Exterior Architecture
• Themed Environments
• Nightclubs
• Museums and Art Installations
• TV Production
• Holiday Light Shows

## Further Reading

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

**www.VividRGBlighting.com**

## Presenting Pixel360

One of Vivid RGB Lighting's original products has proven to be a workhorse in the industry. **Pixel360** is an omnidirectional, DMX controlled RGB spherical inline pixel product. **Pixel360** is dustproof and durable in all weather applications. The waterproof pixel enclosures are made of solid thermoplastic rubber. The internal RGB LEDs are capable of displaying over 16 million colors using your existing DMX controller!

**Its flexibility of design will give life to your creativity indoors or out.**
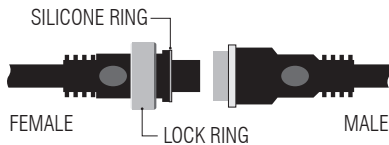
**Pixel360** has limitless applications in architectural and entertainment design and is constructed to the highest specifications. The flexible nature of the system capability gives rise to spectacular new possibilities in two and three dimensional lighting design.
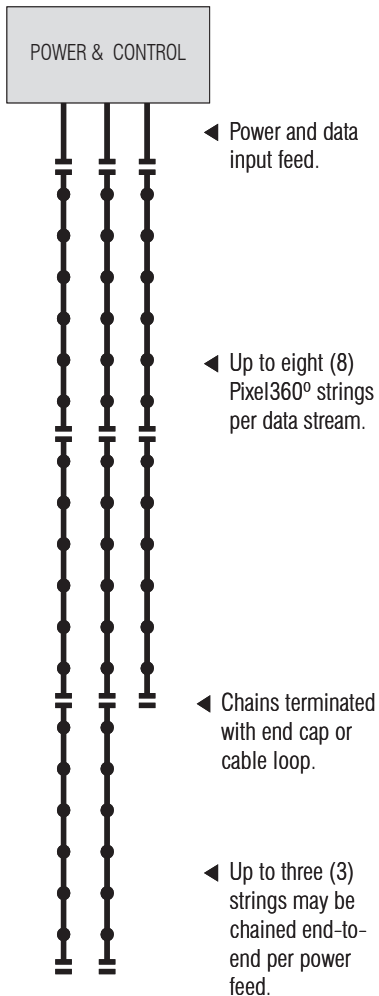
# VIVID RGB LIGHTING

**Pixel360** Omnidirectional Inline RGB LED Pixels

## Connectors

4-PIN keyed aviation-style connector with weathertight lock ring.

SILICONE RING

FEMALE        LOCK RING        MALE

## System Overview

POWER & CONTROL

◄ Power and data input feed.

◄ Up to eight (8) Pixel360º strings per data stream.

◄ Chains terminated with end cap or cable loop.

◄ Up to three (3) strings may be chained end-to-end per power feed.

## Standard Configuration: VRGB-P360–21–8"–BB–WCW

Each string consists of 21 individually-controllable LED pixels, with integrated power and control. Black wire with 8" on-center pixel spacing, 14' overall stock length. Connected strings maintain even pixel spacing.

White TPE pixel enclosures, fully sealed for maximum fixture life and IP66 rated for outdoor applications.

VRGB–P360–21–8"–BB–WCW

←1.1"→          ←——1.8"——→

←————————— 8" —————————→
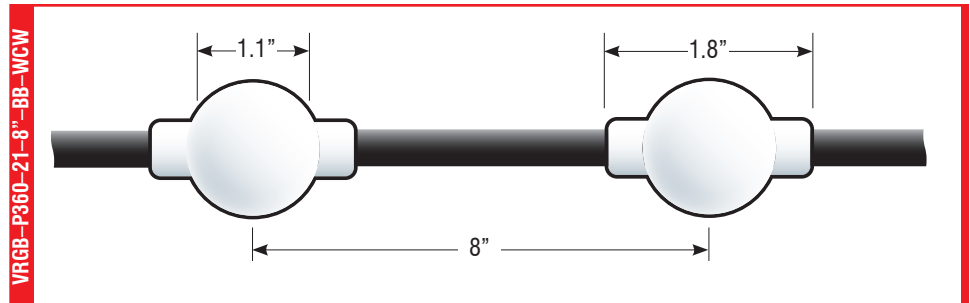
## Technical Specifications*

| | | |
|---|---|---|
| OUTPUT | LUMEN MAINTENANCE | 50,000+ hours |
| | LED CHANNELS | Red, Green, & Blue |
| | GRAYSCALE | 256, 8-bit |
| ELECTRICAL | INPUT VOLTAGE | 12V DC |
| | POWER | 0.7W / pixel |
| CONTROL | INTERFACE | 1-Wire DMX512 |
| | CONTROL SYSTEM | VPD, Color Mimic, or compatible third-party DMX controller |
| PHYSICAL | TEMPERATURE RANGES | -20ºC – 50ºC / -4ºF – 122ºF |
| | HUMIDITY | Any |
| SAFETY | ENVIRONMENT | Dry, damp, wet locations; IP66 |
| | ETL LISTED | |

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

## Build-to-Order Configurations - Contact Vivid RGB Lighting for details

Minimum Order Quantity:     200 pixels per configuration
Production Lead Time:        8 weeks after deposit

## Fixture Code Logic: VRGB-P360–##–X"–CC–MMM

> VRGB-P360 = Pixel360 Module Style
> ## = Number of pixels on a string
> X" = On-Center Spacing between pixels (minimum spacing 4" on center)
> CC = Cable & Connector Colors
> MMM = Component Colors - PCB, Under Mold, Overmold
> +UV = Additional UV Protection

## Typical Wiring Instructions

Input cables connect to controller and power supply providing a common ground between them.

Extension cables extend distances between components.

End caps provide a waterproof termination at the end of each string.
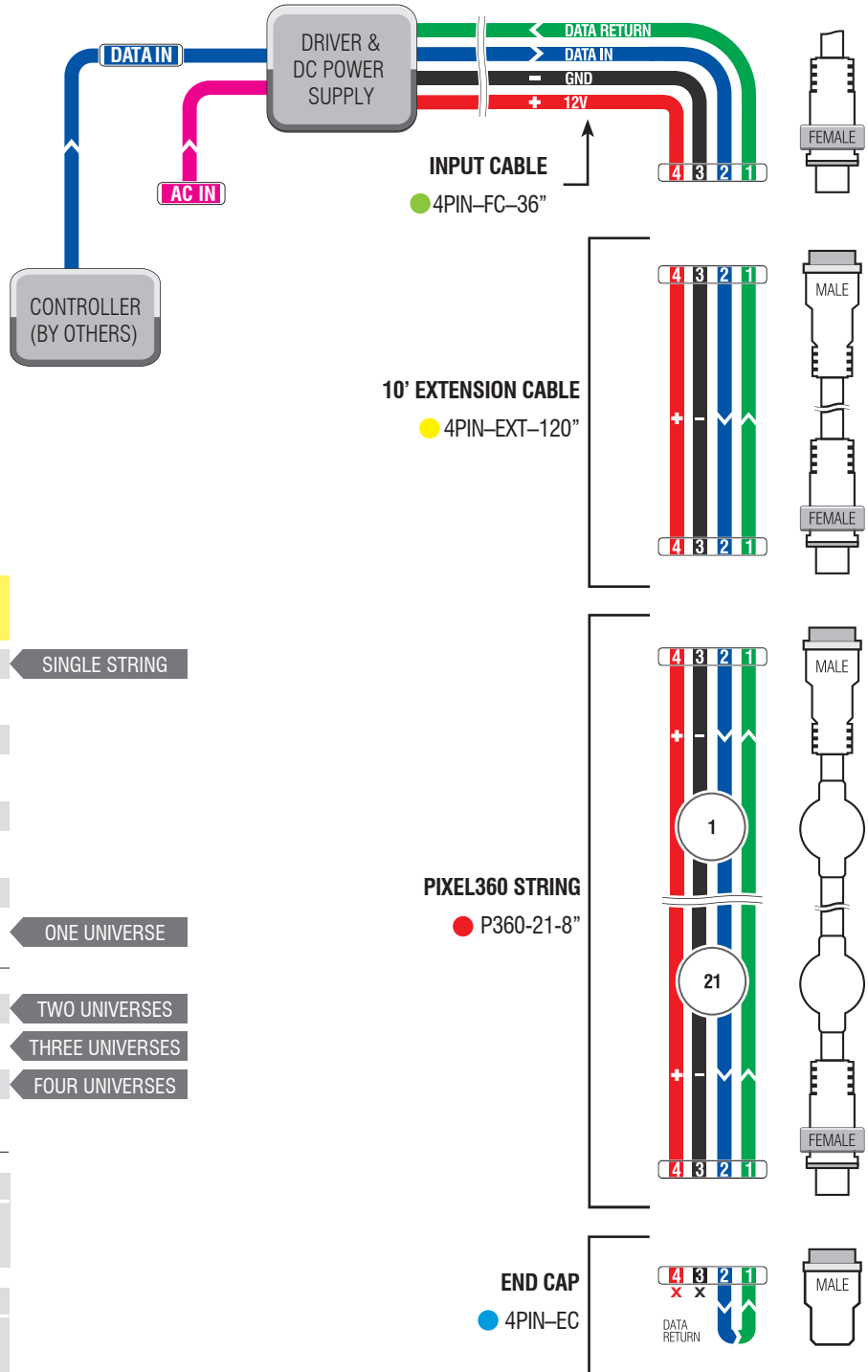
### Pixel360 String Power

• Use total watts to determine necessary power supply capacity.

• Maximum power draw is 0.7 W per pixel at 12 V DC.

| STRINGS | AMPS @ 12V | TOTAL WATTS | |
|---|---|---|---|
| 1 | 1.25 A | 15.00 W | SINGLE STRING |
| 2 | 2.50 A | 30.00 W | |
| 3 | 3.75 A | 45.00 W | |
| 4 | 5.00 A | 60.00 W | |
| 5 | 6.25 A | 75.00 W | |
| 6 | 7.50 A | 90.00 W | |
| 7 | 8.75 A | 105.00 W | |
| 8 | 10.00 A | 120.00 W | ONE UNIVERSE |
| 16 | 20.00 A | 240.00 W | TWO UNIVERSES |
| 24 | 30.00 A | 360.00 W | THREE UNIVERSES |
| 32 | 40.00 A | 480.00 W | FOUR UNIVERSES |

**NOTES**
Figures in this chart allow for 5% headroom.
Typical per-pixel wattage is **0.67 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.

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

DATA IN

DRIVER & DC POWER SUPPLY

AC IN

DATA RETURN
DATA IN
— GND
+ 12V

CONTROLLER (BY OTHERS)

4 3 2 1

**INPUT CABLE**
● 4PIN–FC–36"

FEMALE

4 3 2 1
MALE

**10' EXTENSION CABLE**
● 4PIN–EXT–120"

+ —
FEMALE
4 3 2 1

4 3 2 1
MALE

**PIXEL360 STRING**
● P360-21-8"

+ —
1
21
+ —
FEMALE

4 3 2 1

**END CAP**
● 4PIN–EC

4 3 2 1
x x
DATA RETURN

MALE

## System Accessories
& Part Numbers

Vivid RGB Lighting's **12-Volt** products use our **4-PIN** accessory cables and products. Please contact customer support with product compatibility concerns.

### System Input Cable
Bare ends connect to controller and power, female end connects to strings.

Stock:

**4PIN–FC–36"**

*Custom lengths available.

**NOTE**
Numbers refer to labeled pins in connectors.



### System Output Cable
Male end connects to end of strings, bare ends provide data and power output from system.

Stock:

**4PIN–MC–36"**

*Custom lengths available.



### Extension Cables
Through extension of all pins

Stock:

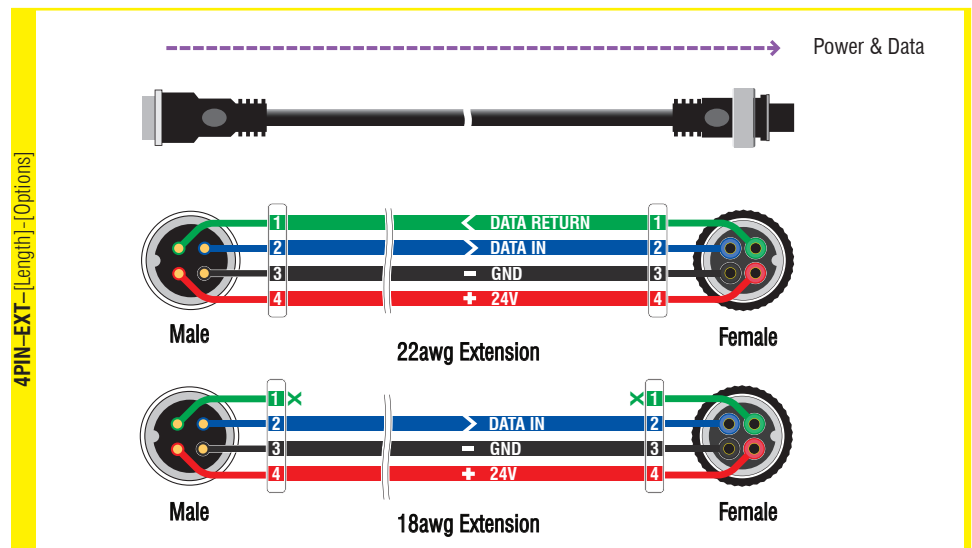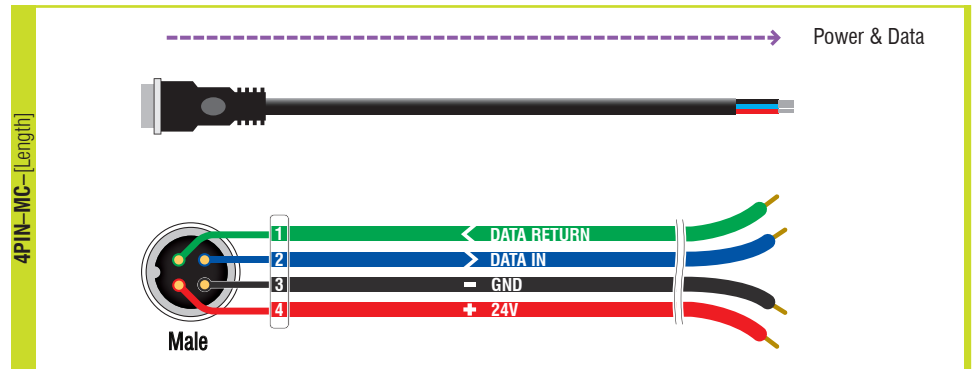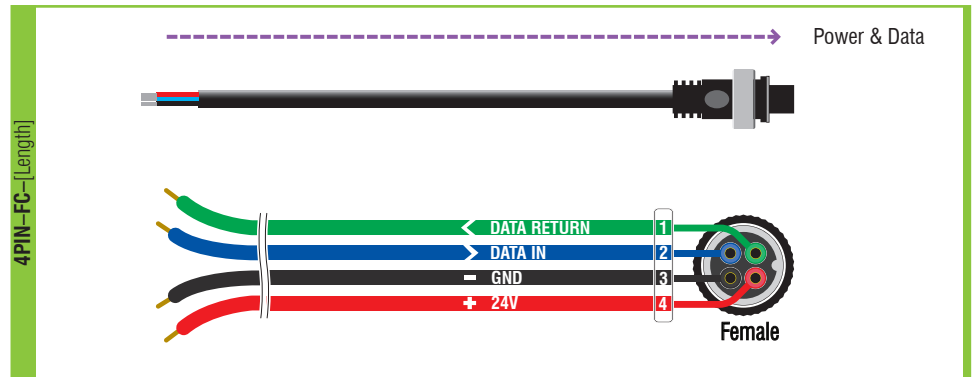| | |
|---|---|
| **4PIN–EXT–60"** | **(20awg - 5 feet)** |
| **4PIN–EXT–120"** | **(20awg - 10 feet)** |
| **4PIN–EXT–300"** | **(20awg - 25 feet)** |
| **4PIN-EXT-120"-3W** | **(18awg - 10 feet)** |
| **4PIN-EXT-300"-3W** | **(18awg - 25 feet)** |
| **4PIN-EXT-600"-3W** | **(18awg - 50 feet)** |

*Custom lengths available.

**NOTE**
18awg extension cables do not return data.

**\*Custom / Build-to-Order**
All cables and accessories may be custom designed for your project.



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## End Caps

Seals cable end with a water tight termination and returns data stream to beginning of string.

Available in simple cap or cable loop for easy hanging.

Stock:

| 4PIN–EC |
| 4PIN–EL–5" |

\*Custom lengths available.

### 4PIN–EC

End Cap
Data Return

1
2
3 ✕
4 ✕

**Male**

### 4PIN–EL–[Length]

End Loop
Data Return

1
2
3 ✕
4 ✕

**Male**
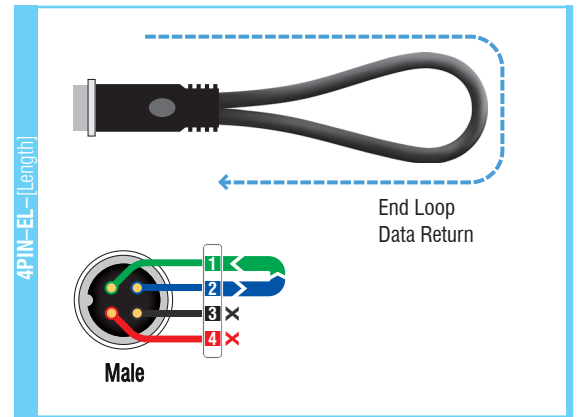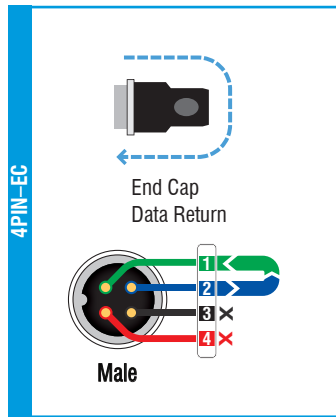
## Mid-Feed Power Input

Allows for power to be input between strings on same data stream.
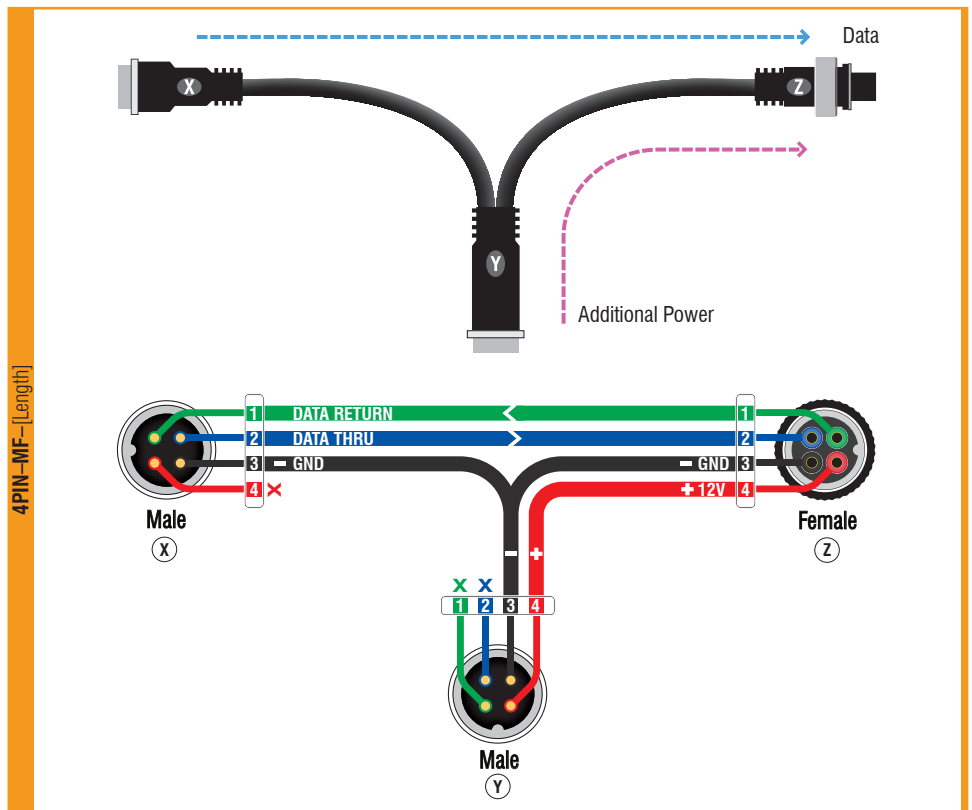
Stock:

| 4PIN–MF–9" |
| 4PIN–MF–12" |

\*Custom lengths available.

**X:** Data input from previous string

**Y:** Additional power input

**Z:** Power and data output to next string(s)

Data

X

Z

Additional Power

Y

### 4PIN–MF–[Length]

1 DATA RETURN 1
2 DATA THRU 2
3 ━ GND ━ GND 3
4 ✕ ╋ 12V 4

**Male**
Ⓧ

**Female**
Ⓩ

━ ╋

✕ ✕
1 2 3 4

**Male**
Ⓨ

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## V-Cables

Allows strings to be used in parallel on the same power and data stream.

Stock:

| 4PIN–VC–9" |
| 4PIN–VC–18" |
| 4PIN–VC–60" |

*Custom lengths available.

**A:** Output to first string sequence **(SEE NOTE)**
**B:** Output to second string sequence
**C:** Power and data input

**NOTE**

The last string of the **A** output of the V-Cable must have an end cap **(4PIN–EC or 4PIN–EL)** installed for data to return to the **B** output. If the strings attached to **A** are disconnected, data will not return and be sent to **B**.



4PIN–VC–[Length]

## T-Connector Single

Allows for power and data to be sent to each a single module. These can be linked together to created custom distribution of power and data.

Stock:

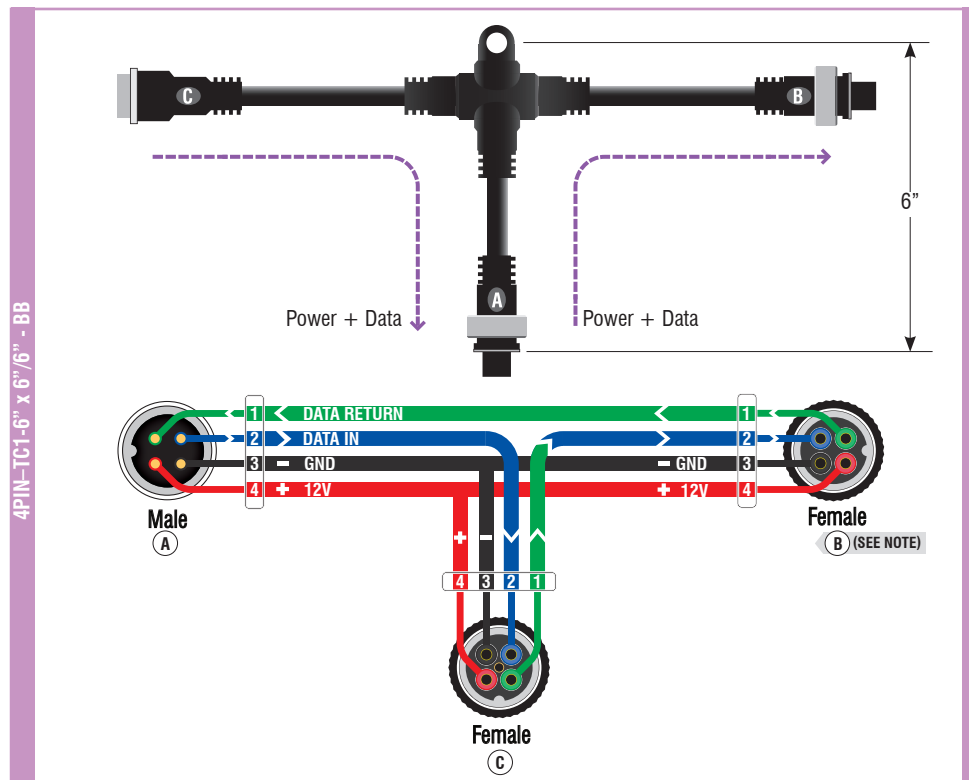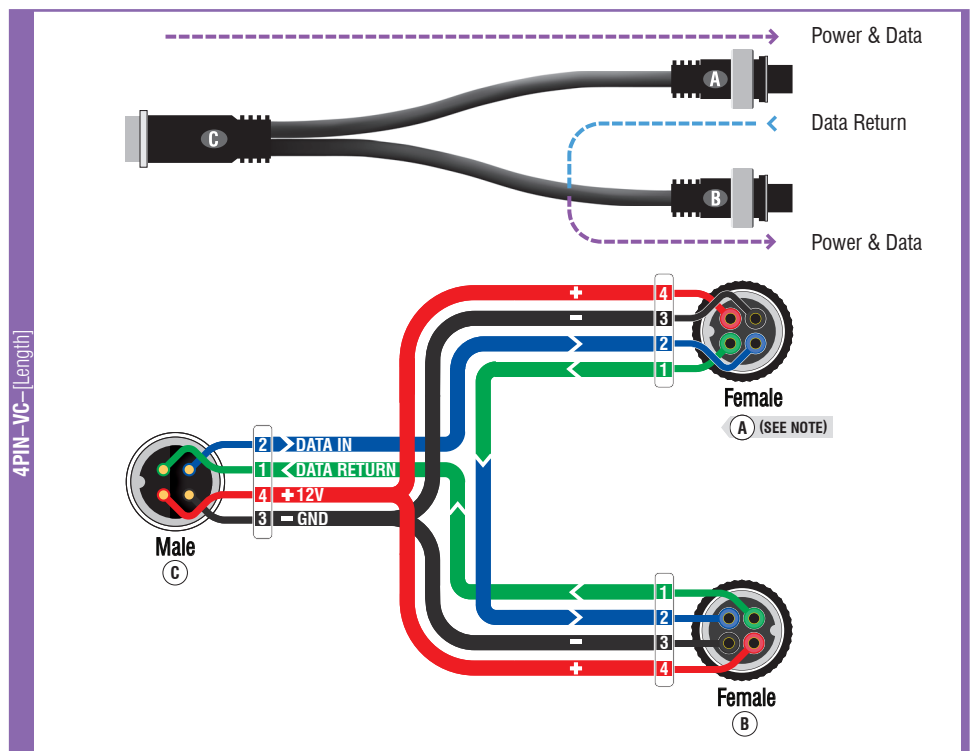| 4PIN–TC1–6" x 6"- 6"/6"- BB |

*Custom lengths available.

(see next page)

**NOTE**

The last string of the **A** output of the T-Cable must have an end cap **(4PIN–EC or 4PIN–EL)** installed for data to return to the **B** output. If the strings attached to **A** are disconnected, data will not return and be sent to **B**.

## *Custom / Build-to-Order

All cables and accessories may be custom designed for your project.



4PIN–TC1-6" x 6"/6" - BB

# VIVID RGB LIGHTING

## T-Connector Cable

Allows for power and data to be sent to each module and can be customized to your project.

Stock Configurations:

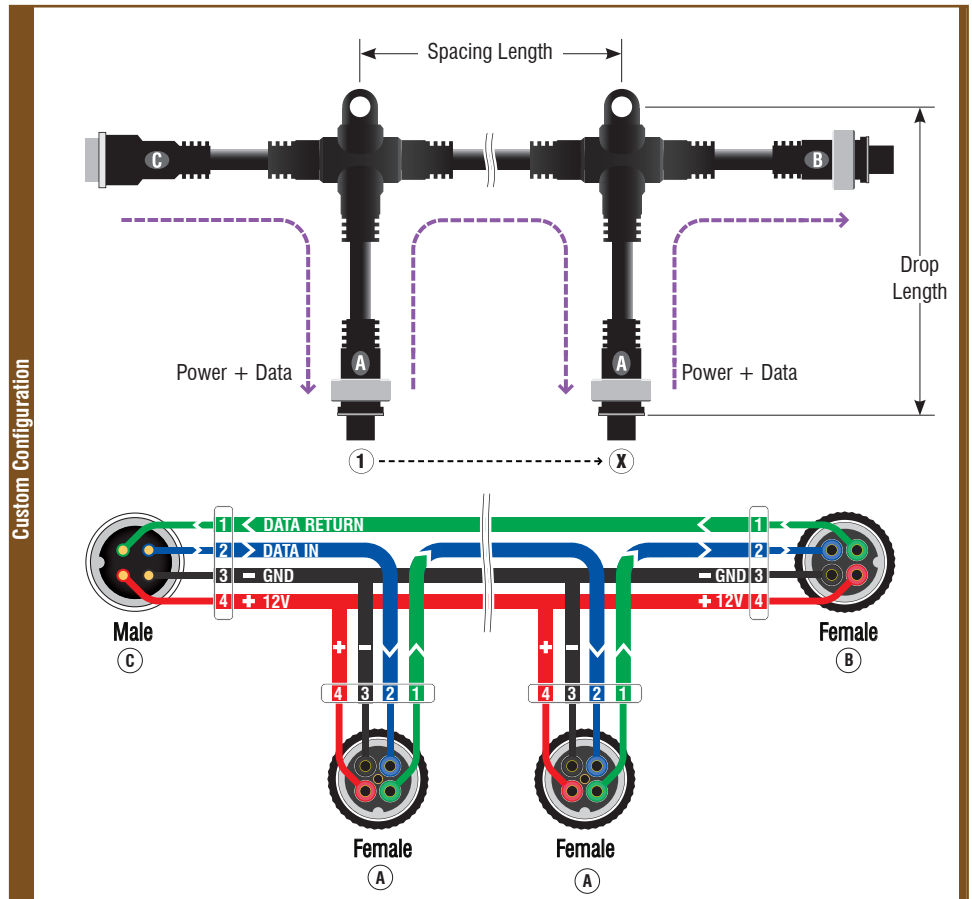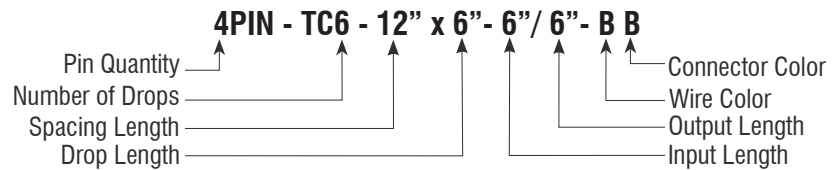| |
|---|
| 4PIN–TC3–24" x 6"- 12"/12"- BB |
| 4PIN–TC5–6" x 6"- 12"/12"- BB |
| 4PIN–TC5–12" x 6"- 6"/6"- BB |
| 4PIN–TC6–10" x 6"- 5"/5"- BB |

*Custom lengths available.

**NOTE**

T-Connector cable stock changes frequently. Call to confirm availability.

**NOTE**

The last string of the **A** outputs of the T-Cable must have an end caps **(4PIN–EC or 4PIN–EL)** installed for data to return to the next **A** output, then to **B** output. If the strings attached to **A** are disconnected, data will not return and be sent to **B.**



## T-Cable Example Code:

4PIN - TC6 - 12" x 6"- 6"/ 6"- B B

- Pin Quantity
- Number of Drops
- Spacing Length
- Drop Length
- Connector Color
- Wire Color
- Output Length
- Input Length

## Important

Our systems use 3-, 4-, and 6-PIN connectors for different control data and power voltages. **Please do not interconnect.**



### *Custom / Build-to-Order

All cables and accessories may be custom designed for your project.

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