

## Bright Green Matrix™ - Installation Guide

Version: 2 03/08/09

Applies to part numbers: BGT-M1-625, BGT-M1-1250, BGT-M1-1875, BGT-P30-20, BGT-P60-20, BGT-P100-20, BGT-P150-20  
Available for download at: [www.brightgreentechnology.com](http://www.brightgreentechnology.com)

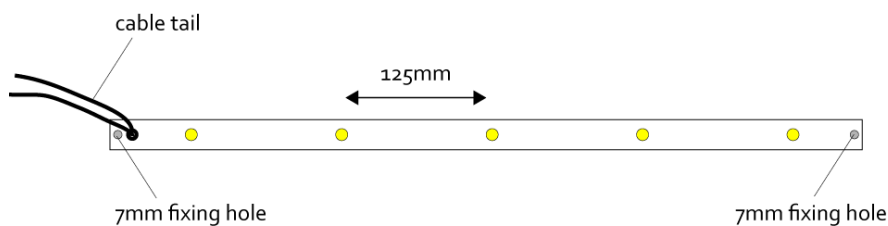
### Tools required for install:

- Drill
- Screwdriver
- Pliers
- Tape measure

### Components required for install:

- Bright Green Matrix™ sticks
- 18AWG or equivalent cable and 18-14AWG T-tap connectors or alternatives
- Gel filled connectors or alternatives
- M6 screws and washers (suitable for 7mm fixing hole)
- M4 screws for fixing power supplies
- BGT power supplies

### General stick layout



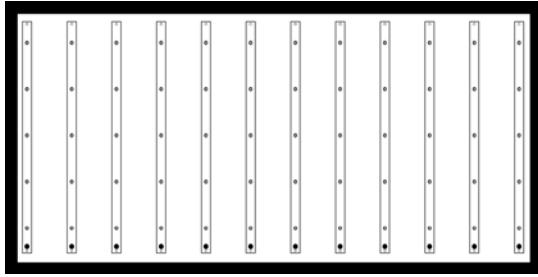
The red cable tail is 20V positive

### 1. Plan layout

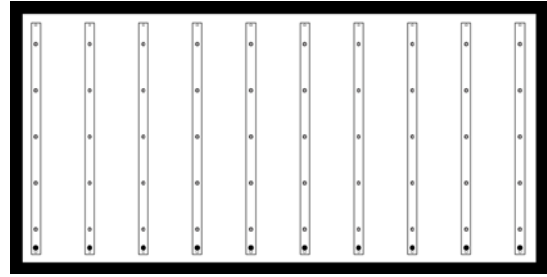
Bright Green Matrix™ is designed for flexibility; there are a number of ways to configure a given sign. Whilst the spacing of the LEDs in each stick is set at 125mm, other variables can be configured to achieve the display qualities required:

Variable	Effect
Combination of stick lengths to use	Installation time, cost
Separation of sticks	Brightness, power use, image quality
Configuration – horizontal/vertical	Installation time, image quality
Distance between the sticks and the graphic face	Image quality
Grouping of power supply connections	Installation time, number of supplies required
Location of power supplies	Installation time
Diffuser/print material	Brightness, image quality

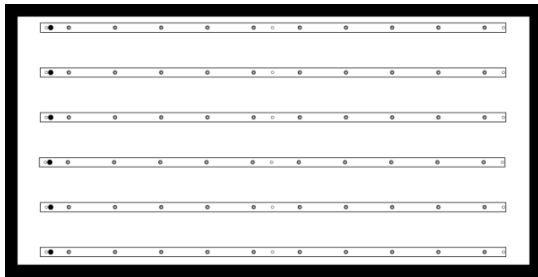
## Typical layouts



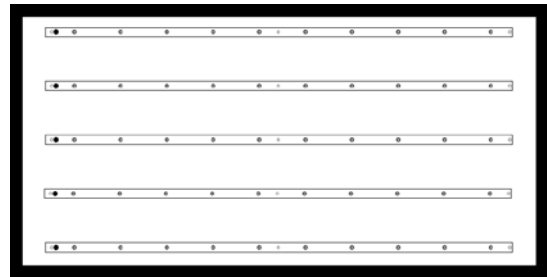
Vertical array with 125mm spacing  
12 x 625 sticks



Vertical array with 150mm spacing  
10 x 625 sticks



Horizontal array with 125mm spacing  
6 x 1250 sticks



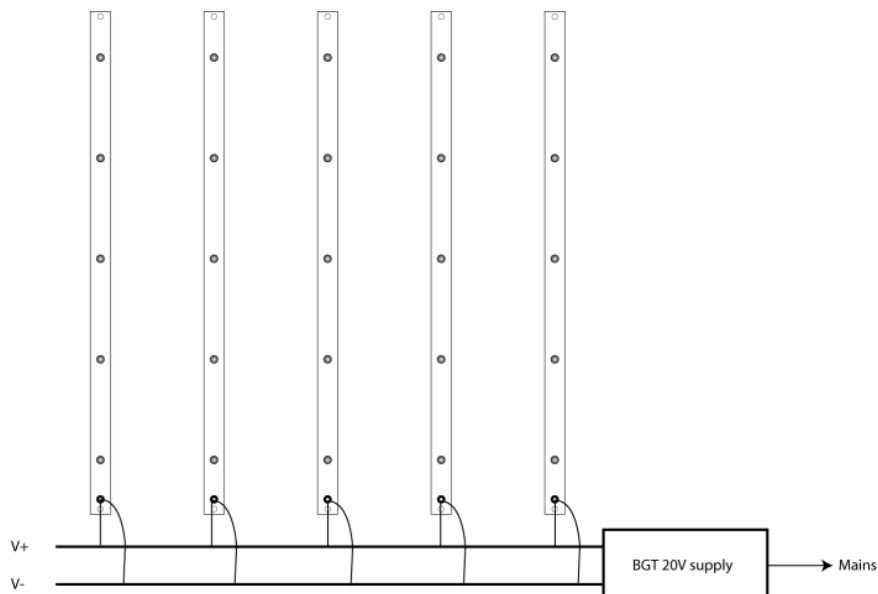
Horizontal array with 150mm spacing  
5 x 1250 sticks

For 125/125mm spacing, optimum display quality is achieved with a distance between the sticks and the display face of 125mm. A trial segment should be used to establish the exact layout for a project.

## 2. Install Bright Green Matrix™

Bright Green Matrix™ can be fitted directly to the back of the sign or mounted on brackets.

- Remove the white plastic transit bolt from one end of the stick
- Fasten the sticks into the desired locations using M6 screws/washers – use a tape measure to ensure accurate positioning
- Connect the cable tails to 18AWG supply cables using 18-14AWG T-tap connectors or alternatives, ensuring the polarity is correct.
- **The red cable tail is 20V positive**



### 3. Electrical connection

**Bright Green Matrix™ must not be connected directly to mains power.**

Bright Green Matrix™ operates at 20V DC via an AC/DC power supply. Sticks should be grouped and connected to a BGT power supplies using the recommended maximum output settings.

Code	Guide power consumption	Recommended maximum number of sticks per power supply			
		1 stick	BGT-P30-20	BGT-P60-20	BGT-P100-20
BGT-M1-625	7W	4	8	13	20
BGT-M1-1250	14W	2	4	6	10
BGT-M1-1875	21W	1	2	4	6

Power supply code	Maximum output	Recommended maximum
BGT-P30-20	30W	28W
BGT-P60-20	60W	56W
BGT-P100-20	100W	92W
BGT-P150-20	150W	140W

Recommended procedure:

- Fasten the power supply into place within the sign
- Ensure that all sticks are connected to the supply cable
- Connect the supply cable to the DC output of the power supply using gel filled connectors or an alternative connector, compatible with the current draw
- Connect the AC input of the supply to the mains, ensure all mains voltage procedures are followed
- Test and complete sign build

#### Troubleshooting

Symptom	Action
No illumination	Check mains supply Check power supplies and connectors
Group of sticks not lit	Check power supply and connectors to group
Individual stick not lit or flickering	Check connectors to stick
1 LED not lit	Replace stick
Low illumination	Check allocation of power supplies

#### Contact and Support

For further support, contact your distributor or email [support@brightgreentechnology.com](mailto:support@brightgreentechnology.com)

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Bright Green Matrix™ is patent pending

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