DW Windsor

Vaio

Specification guide

Vaio

Vaio is a linear, fully encapsulated LED system with the unique capability of creating a continuous line of light when laid end to end.

Available in seven different colours, including warm and cool white and also RGB, its robust construction and clean low profile design allows for installation in a wide variety of applications including areas exposed to vehicle traffic as well as walkways, public squares and architectural applications.

Suitable for flush or surface mounting and exterior and interior applications, Vaio offers specifiers an extremely versatile feature lighting solution.

Key features

- Vaio can provide a continuous line of light
- Easy to use IP68 plug and socket connector system
- Available in five different standard lengths (250, 500, 750 & 1000mm) and two heights (30 or 40mm)
- Each RGB unit is complete with individually addressable DMX driver

Technical data

White Monochrome		Height: 40mm*		Height: 30mm	
		Lumens/m	Lumens/W	Lumens/m	Lumens/W
Eco (3,5W/m)	Diffused	76	22	137	39
	Clear	156	45	163	47
Plus (7W/m)	Diffused	173	25	287	41
	Clear	339	48	338	48
Power (15W/m)	Diffused	438	29	692	46
	Clear	801	53	822	55

The given data are typical values. Due to tolerances of the production process an the electrical components, light output values may vary

Options

Unit type:

Monochrome Vaio
ECO version: 3.5W/m*
PLUS version: 7W/m
POWER version: 15W/m

RGB Vaio
ECO version: 9W/m
PLUS version: 17W/m

Standard unit length options:

Mono-colour Vaio
- 250mm
- 500mm
- 750mm
- 1000mm

RGB Vaio
- 500mm
- 1000mm

Unit height options:

- 30mm
- 40mm*

Lamp colour options:

- Cold white 6100K
- Neutral white 4100K
- Warm white 2800K
- Yellow
- Red
- Green
- Blue
- RGB (Programmable Multi-colour)

Other:

24v DC power supplies available as required on project-by-project basis

Materials

Body:

Extruded Anodised Aluminium

Glazing options:

Integral opaque surface with below finish options:
- Diffused*
- Clear

Connections:

IP68

* Standard options

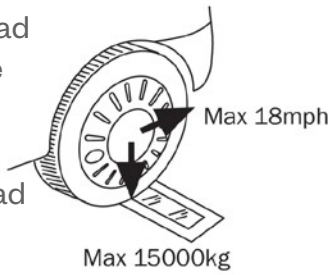
Technical data

Product codes:

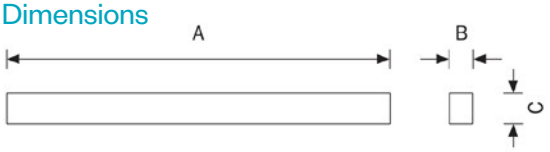
Monochrome	RGB	Vaio LED	Example
1. Model			VAI
E	E	Eco	
PL	PL	Plus	
PO		Power	PO
2. Lamp			
R		Red LEDs	
CW		Cold White LEDs (6100K)	
NW		Neutral White LEDs (4100k)	NW
WW		Warm White LEDs (2800k)	
B		Blue LEDS	
A		Yellow LEDS	
G		Green LEDS	
	RGB	RGB LEDS	
3. Size			
250		250	
500	500	500	
750		750	750
1000	1000	1000	

Loading

Can withstand the load of a 15000kg vehicle travelling at 18mph. The unit can also withstand a direct load of 588 kN.



Dimensions



Dimensions (mm)			Weight (kg)
A	B	C	
250/500*/750	30	40	1.7kg (max)
1000*		30	

* RGB 500 & 1000mm lengths only

Monochrome Vaio installation guide

Design rules

- Current through cables may not exceed 4A.
    - Each Vaio string has to be fused (4A surge fuse).

- The first unit in a Vaio string has to receive 24VDC
    - When the distance between the vaio string and power supply becomes large, you can:
        - Increase the output voltage of the power supply.
        - Enlarge the cable section.

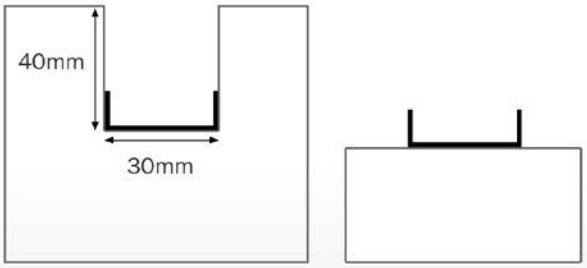
- A maximum of 15 1000mm Vaio (Eco & Plus units) can be placed in one string.
    - Although a string of 15 Vaio will not generate currents above 4A, the voltage drop becomes important placing Vaio in one string.

Wiring guide

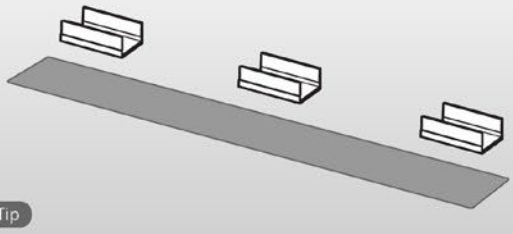
Wire Colour	Description
Brown	+ Connection
White	- Connection
Black	Not Connected

Monochrome Vaio installation guide

1 Fix mounting bracket into place.



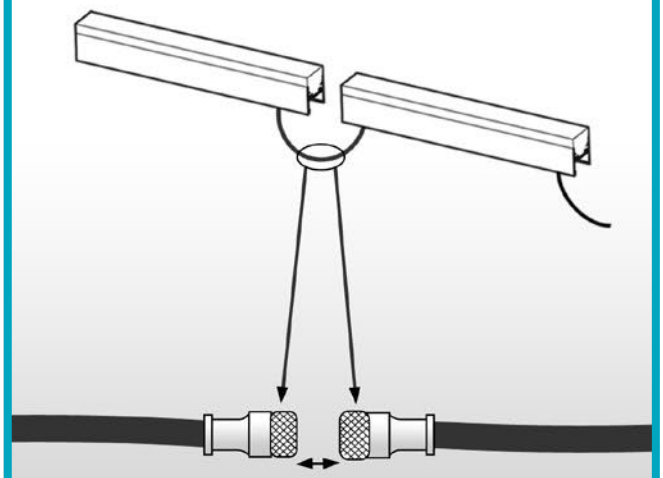
Vaio can be fitted 'inground' or 'flush' as shown above



Tip

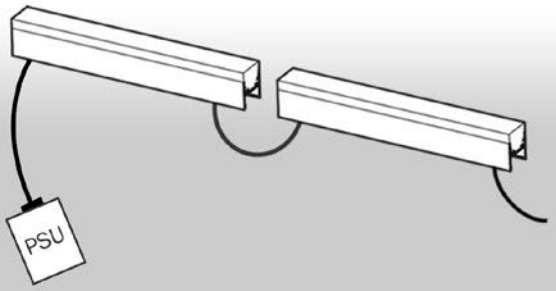
To ensure a straighter line place brackets accross two Vaio units.

2 Units can be easily connected to one another to ensure power to each unit.

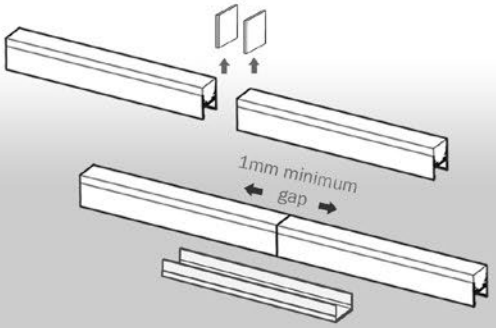


For ease of installation an IP68 twist connector is provided at each end for easy connection.

3 Connect units to appropriate power supply and ensure that last Vaio in the line is blanked of at the end to protect the connector not being used.

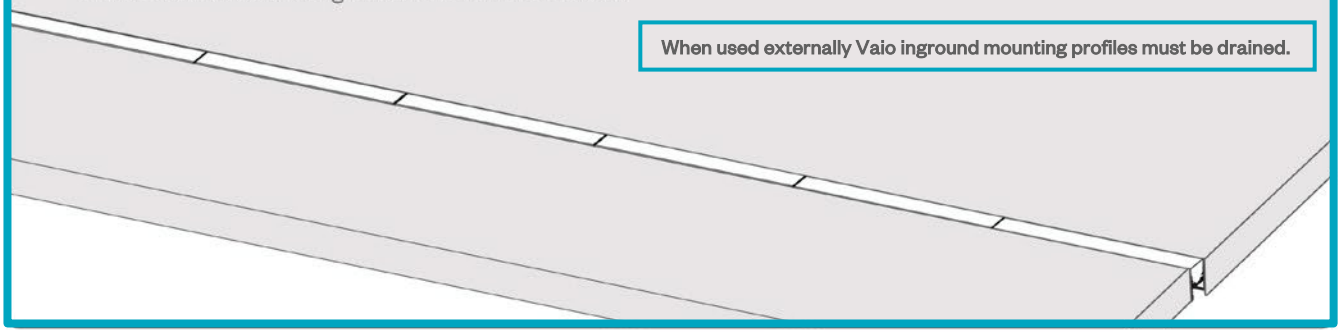


4 End caps can be removed to allow fitings to run closer together.



5 Fix Vaio into place by pushing it down onto its mountings. Make sure that cables are not crushed during this process. Use a suitable sealant or grout to finish off the surface.

When used externally Vaio inground mounting profiles must be drained.

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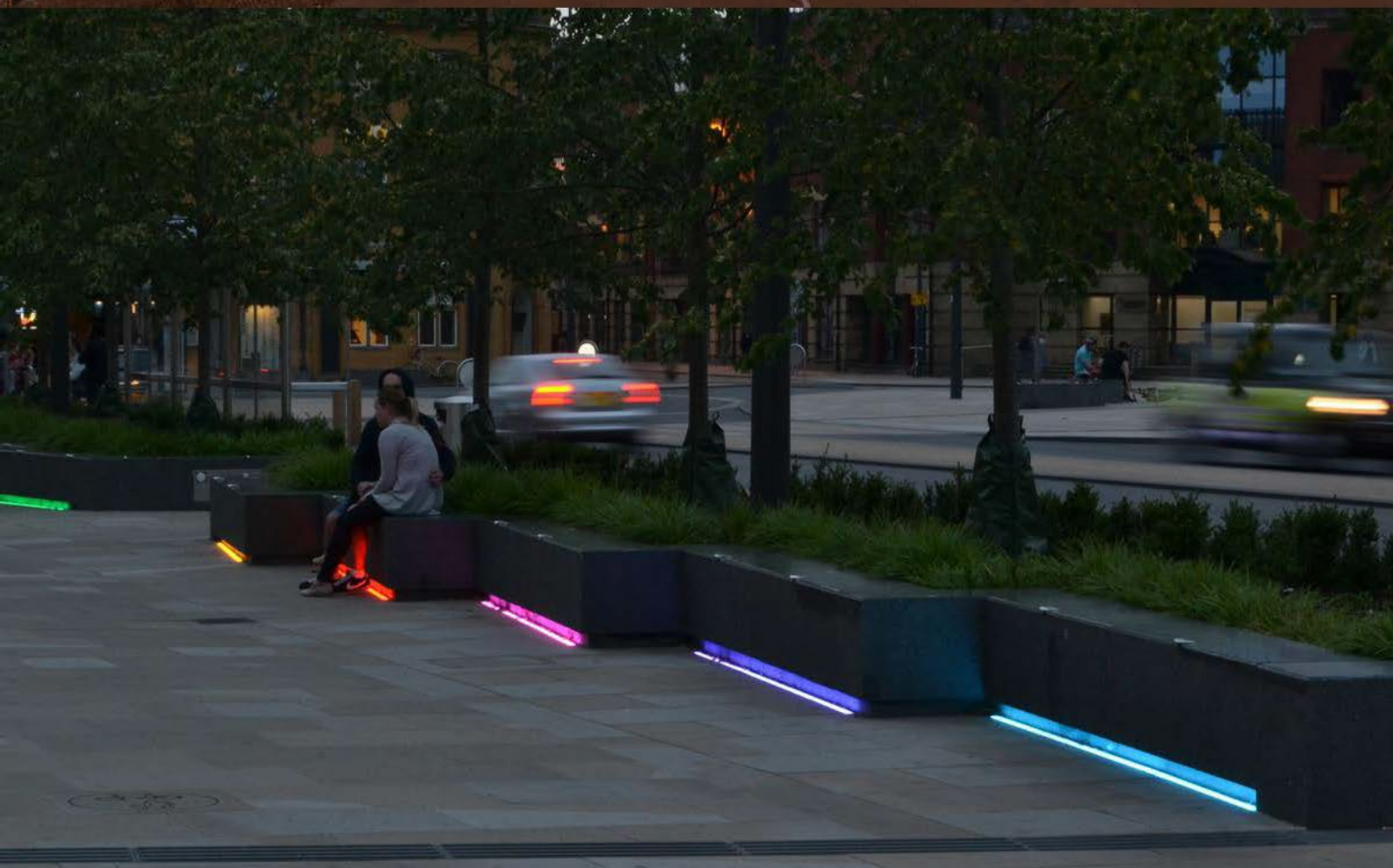


Vaio supply cable guidelines

- The following table is calculated for a power supply with an output voltage of 26V. The maximum length is calculated in order to get 22V at the end of the supply cable.

Number of Vaio Units (1m)	Cable section (mm2)	Mono Eco (m)	Mono Plus (m)	RGB Same Address Eco (m)	RGB Same Address Eco (m)	RGB Same Address Plus (m)
1	2.5	992	496	229	397	198
2	2.5	496	248	114	198	99
3	2.5	331	165	76	132	66
4	2.5	248	124	57	99	50
5	2.5	198	99	46	79	40
6	2.5	165	83		66	
7	2.5	142	71		57	
8	2.5	124	62		50	
9	2.5	110	55		44	
10	2.5	99	50		40	

- Greater distances can be achieved through the use of cable with larger cross sections.
Cables can be supplied in 4mm & 6mm section, please enquire for a larger table of the full range of options.

RGB Vaio installation guide

RGB driver

- The RGB drivers are DMX addressable with Remote Device Management (RDM) and the use of a Remote Addressing Device (RAD). The DMX driver 'clicks' into the Vaio extrusion for easy installation .

Design rules

- Current through cables may not exceed 4A.
    - Therefore a maximum of 10 (1000mm) Vaio units can be placed in a string.
    - Each Vaio string has to be fused (4A surge fuse).

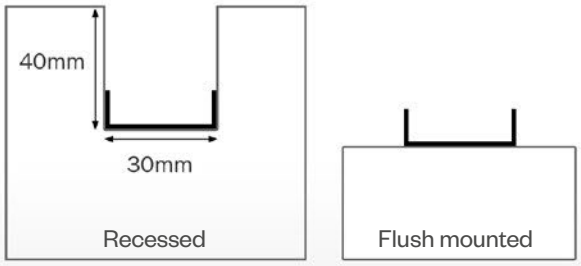
- The first Unit in a Vaio string has to receive 24VDC
    - When the distance between the Vaio string and power supply becomes too large, you can:
        - Increase the output voltage of the power supply.
        - Increase the cable section.

Wiring guide

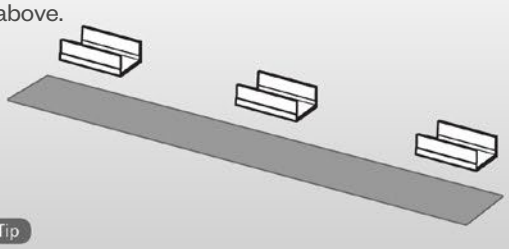
Wire Colour	Description
Brown	+24V DC
White	DMX +
Blue	DMX -
Black	Neutral (for DMX & Power Supply)

RGB Vaio installation guide

1 Fix mounting bracket into place.



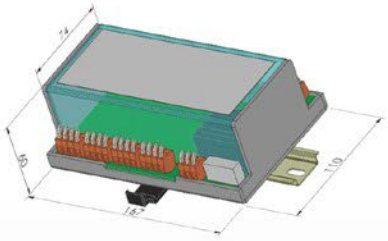
Vaio can be recessed or flush mounted as shown above.



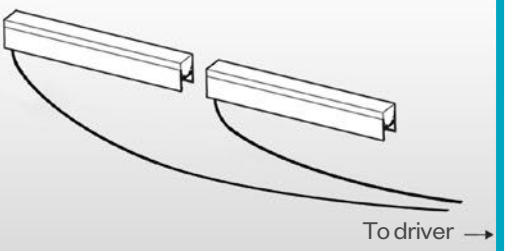
Tip

To ensure a straighter line place brackets accross two Vaio units.

2 Each RGB Vaio has a its own DMX driver

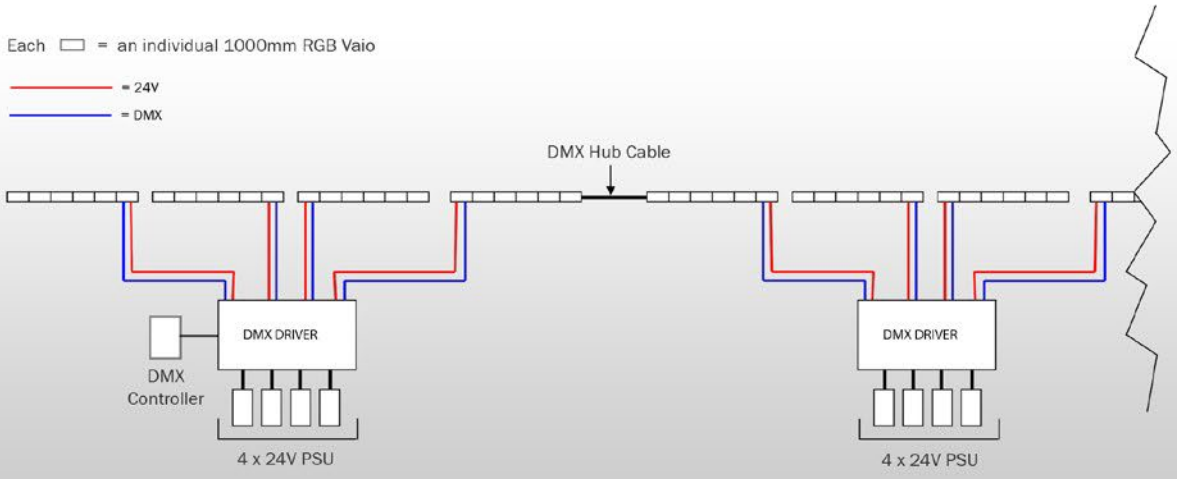


DMX driver



RGB Vaio are wired individually back to DMX Driver in cabinet.

3 The below diagram shows how continuous lines of more than 10 Vaio can be achieved.



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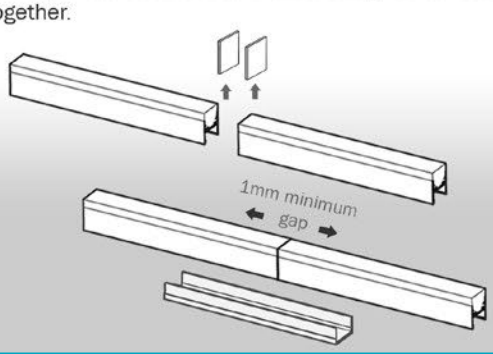
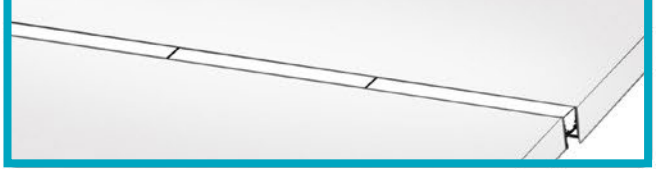


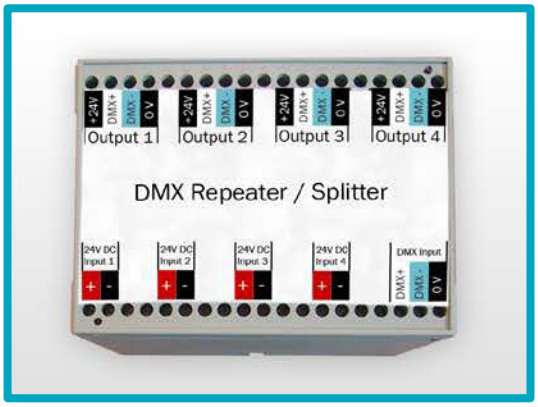
5 Fix Vaio into place by pushing it down onto its mountings. Make sure that cables are not crushed during this process. Use a suitable sealant or grout to finish off the surface.



Accessories

Power supplies

Part Numbers	Power	Output Voltage	Voltage Adjustment	Power Factor Correction (PFC)
HLG-60H-24	60W	24V	±10%	None
HLG-75H-24	75W	24V	-5~+10%	PF> 0,93
HLG-150H-24	150W	24V	-5~+10%	PF> 0,93
HLG-240H-24	240W	24V	±10%	PF> 0,93

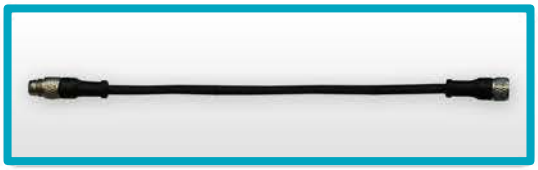


DMX splitter:

A DMX splitter box separates the power supply between different Vaio strings and boosts the DMX signal to each Vaio string. With one DMX splitter box it is possible to drive 24 Vaio LED's (1000mm).

Connecting cables

Description	Single Colour Part Number	RGB Part Number
Connecting cable (male/female) 1m	VAIEL01M	VAIEL01MRGB
Connecting cable (male/female) 2m	VAIEL02M	VAIEL02MRGB
Connecting cable (male/female) 3m	VAIEL03M	VAIEL03MRGB
Connecting cable (male/female) 5m	VAIEL05M	VAIEL05MRGB
Connecting cable (male/female) 10m	VAIEL10M	VAIEL10MRGB



DMX hub cable (male to male): VAIDMXHUB

Transmits DMX, and blocks power supply.

DMX resistor (male): VAIDMXRESIST

Transmits DMX, and blocks power supply.

Endcap connector (Male or Female): VAIECCM8

To protect the supply leads that are not being used.

Ground support frame

Made to special order. Used to boost the height of Vaio when paving or channel is deeper than 40mm. (Vaio and mounting bracket not included.)

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