

# VC-Grid 15

CREATIVE LED VIDEO TILE WITH 15MM PIXEL PITCH

SPEC SHEET



## HIGHLIGHTS

- Wide range of pixel pitches to suit every application
- Easy cabling, mapping and configuration
- Bright and fully calibrated for optimal consistency

## OVERVIEW

The VC-Grid 15 is a small, 240 x 240 mm RGB LED video module with a 15 mm pixel pitch. Useful in creating customized LED video solutions with maximum artistic flexibility and a minimum of effort, the VC-Grid's compact size makes it extremely suitable for integration into stage designs, set elements, creative ceilings, lobbies and much more. Used with or without a front diffuser, multiple VC-Grids can be combined in a countless variety of ways for ultimate design freedom. A combined power/data cable allows VC-Grids to be daisy-chained for easy setup and less cabling.

## KEY MESSAGES

### FLEXIBLE MOUNTING

The VC-Grid are lightweight and compact RGB LED modules, which can be arranged in many creative shapes combined with VC-Strip as well. The VC-Grid can be fastened to a surface or structure using pillar bolts or by using dedicated mounting frames for simplified and uniform installation. The VC-Grid comes in four different pixel pitch variants to cover a wide range of applications. Used with or without a front diffuser, multiple VC-Grids can be combined in a countless variety of ways for ultimate design freedom.

### EASY INFRASTRUCTURE

The VC-Grid are daisy-chained with a hybrid power and data cable for easy installation. The VC-Grid can be controlled via the Martin P3 protocol for easy mapping and integration with other Martin LED Video products onto the same control system. For small or pure lighting applications, the VC-Grid also accepts RDM/DMX, enabling even more versatile use.

### OPTIMAL PERFORMANCE

All VC-Grids feature advanced color & brightness calibration & color-matching even between different fixture types. The entire system is fully synchronized, ensuring all elements work cohesively without visible latency. The fixtures can be specified for noise sensitive applications as they are completely silent and the power supply can be mounted away from the fixtures.

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## FEATURES

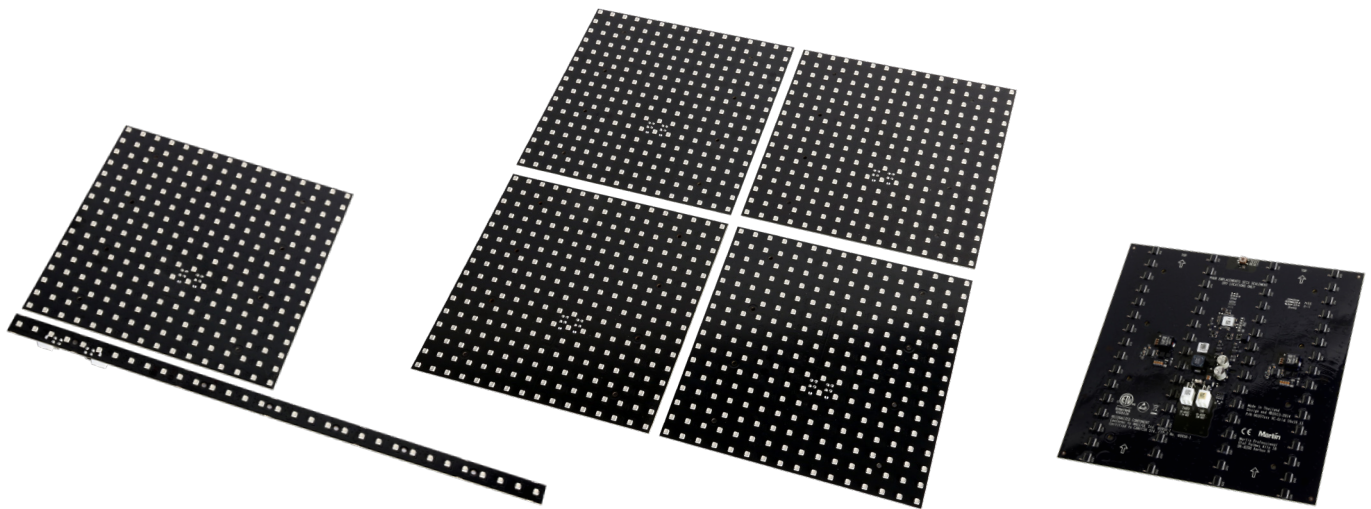
- 256 individually controllable pixels
- 5000 nits of brightness
- High-quality 16-bit per color image processing technology
- Pixel-level brightness and color calibration for optimal image quality
- P3/DMX controllable (automatic protocol detection)
- Intuitive mapping and addressing via P3 System Controller
- Combined power/data input (single cable for power and data input)
- Combined power/data thru (to daisy-chain multiple VC-Grids)
- Supported by integrated power and data processor (P3 PowerPort 1500) and simple cabling system

## ORDERING INFORMATION

- VC-Grid™ 16x16 15 RGB ..... P/N 90357540

### RELATED ITEMS

- Martin P3™ PowerPort 1500 ..... P/N 90721040
- Martin™ IP66 PSU 240 W external power supply unit.. P/N 90760330
- Martin P3-050™ System Controller ..... P/N 90721090
- Martin P3-150™ System Controller ..... P/N 90721015
- Martin P3-300™ System Controller ..... P/N 90721060
- Martin P3-PC™ System Controller..... P/N 90721030



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## ORDERING INFORMATION ACCESSORIES

### MOUNTING FRAMES:

- VC-Grid 15/30/60 Mounting Frames, set of 10..... P/N 91611560

### INPUT CABLES:

- P3 via P3 PowerPort 1500**
- Power+Data Adapter XLR4-PCB, 0.25 m (0.9 ft.) ..... P/N 91616035
- DMX via Martin IP66 PSU**
- Power+Data Adapter XLR5+Martin PSU-XLR4, 0.25 m (0.9 ft.)..... P/N 91616039
- DMX via Generic PSU**
- Power+Data Adapter XLR5+Power-XLR4, 0.25 m (0.9 ft.)..... P/N 91616037
- DMX via P3 PowerPort 1500**
- Power+Data Adapter XLR5+XLR4-XLR4, 0.25 m (0.8 ft.)..... P/N 91616038

### LINK CABLES:

- Power+Data Cable PCB-PCB, 200 mm (7.9 in.) ..... P/N 91616025
- Power+Data Cable PCB-PCB, 400 mm (15.8 in.) ..... P/N 91616026
- Power+Data Cable PCB-PCB, 600 mm (23.7 in.) ..... P/N 91616027
- Power+Data Cable PCB-PCB, 800 mm (31.5 in.) ..... P/N 91616028

- Power+Data Cable PCB-PCB, 1000 mm (39.4 in.) .... P/N 91616029

### EXTENSION CABLES:

- Power+Data Cable XLR4-XLR4, 1 m (3.3 ft.) ..... P/N 91616030
- Power+Data Cable XLR4-XLR4, 2.5 m (8.2 ft.) ..... P/N 91616031
- Power+Data Cable XLR4-XLR4, 5 m (16.4 ft.) ..... P/N 91616032
- Power+Data Cable XLR4-XLR4, 10 m (32.8 ft.) ..... P/N 91616033
- Power+Data Cable XLR4-XLR4, 25 m (82.1 ft.) ..... P/N 91616034

### OUTPUT/THROUGHPUT CABLES:

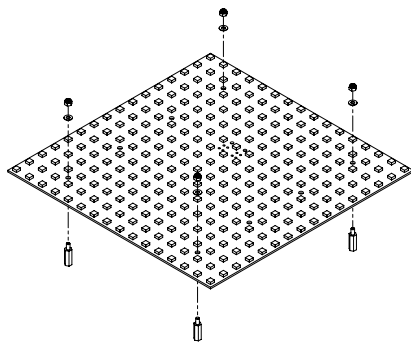
- Power+Data Adapter PCB-XLR4, 0.25 m (0.9 ft.) ..... P/N 91616036
- Power+Data Adapter XLR4-XLR5, 0.25 m (0.9 ft.)..... P/N 91616040

### CABLE WITHOUT CONNECTORS:

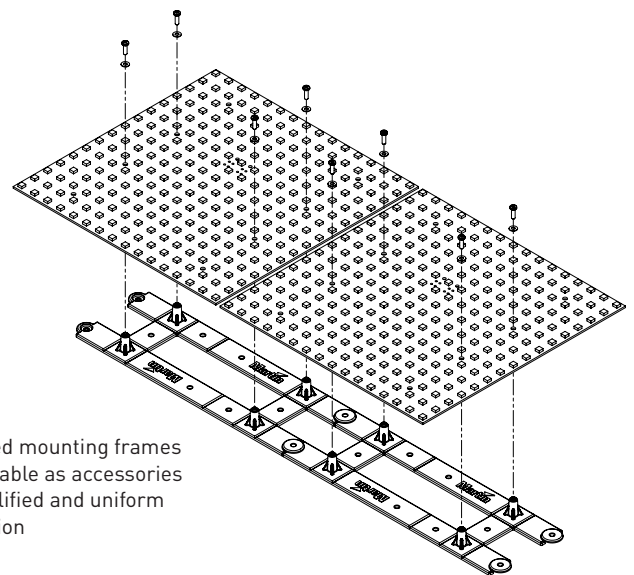
- Power+Data Cable, Rental, 100 m (328.1 ft.) ..... P/N 91616045
- Power+Data Cable, Install CMX, 100 m (328.1 ft.)..... P/N 91616060
- Power+Data Cable, Install LSZH, 100 m (328.1 ft.)... P/N 91616017

Refer to system diagram for infrastructure details

## MOUNTING OPTIONS



The VC-Grid can be fastened to a surface or structure using pillar bolts through any of the twelve mounting holes



Dedicated mounting frames are available as accessories for simplified and uniform installation

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## TECHNICAL SPECIFICATIONS

### CONTROL AND PROGRAMMING

Control options	Martin P3 System Controller™ via Martin P3 PowerPort 1500™ and/or DMX
Control modes	Segment and module
Control resolution	16-bit (P3) or 8-bit (DMX) control of each color
Protocol detection	Automatic
Setting and addressing	P3 System Controller or RDM-compliant controller
DMX channels (RGB)	192 (segment mode) or 3 (module mode)
Color and intensity calibration	Pixel-level
Firmware update	Via P3 System Controller
DMX compliance	USITT DMX512-A
RDM compliance	ANSI/ESTA E1.20

### CONTROL/USER INTERFACE

Device status	Multi-color visual indication
Device test and reset	Pushbutton to call up local test patterns and reset device

### OPTICS

Minimum LED lifetime	50,000 hours (to >70% luminous output)*
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\*Figure obtained under manufacturer's test conditions

### PHOTOMETRIC DATA

Pixels	256 per module
Luminous intensity, calibrated mode	5000 Nit
Total max output	840 lumen per module
Viewing angle	120° x 120°

### P3 VIDEO PROCESSING

Color Resolution	16 bits per color (48 bit per pixel)
Color Temperature Control	2000K-11000K
Synchronization	System-wide
Frame Rate	Up to 75 frames/sec
Brightness Control	0-100% (at full color resolution)
Gamma Correction	Fully controllable
Gamma Control	Fully controllable
Color Gamut Control	Fully controllable
LED aging correction	Built-in

### CONSTRUCTION

Base	Black FR4 circuit board
Transparency through module (unmasked area)	0%
Protection rating	IP20
RoHS compliant	

### INSTALLATION

Mounting	Mounting holes in module
Orientation	Any
Maximum number of VC-Grid™ 16x16 15 modules per daisy-chain	4

### CONNECTIONS

Power & data input	4-pin Molex connector
Power & data thru	4-pin Molex connector

### ELECTRICAL

Nominal input voltage	48 VDC from Martin P3 PowerPort 1500™ or external PSU
Peak power consumption (at full intensity, full white)	60 W
Typical power consumption (with typical video content)	20 W

Figures for typical video content are indicative only and will vary.

### THERMAL

Cooling	Convection
Maximum ambient temperature (Ta max.)	45° C
Minimum ambient temperature (Ta min.)	-20° C
Peak heat dissipation (calculated, at full intensity, full white)	205 BTU/hr.
Typical heat dissipation (calculated, with typical video content)	70 BTU/hr.

Figures for typical video content are indicative only and will vary.

### APPROVALS

EU safety	EN 60950
EU EMC	EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3
US safety	ANSI/UL 60950-1
Canadian safety	CSA C22.2 No. 60950-1



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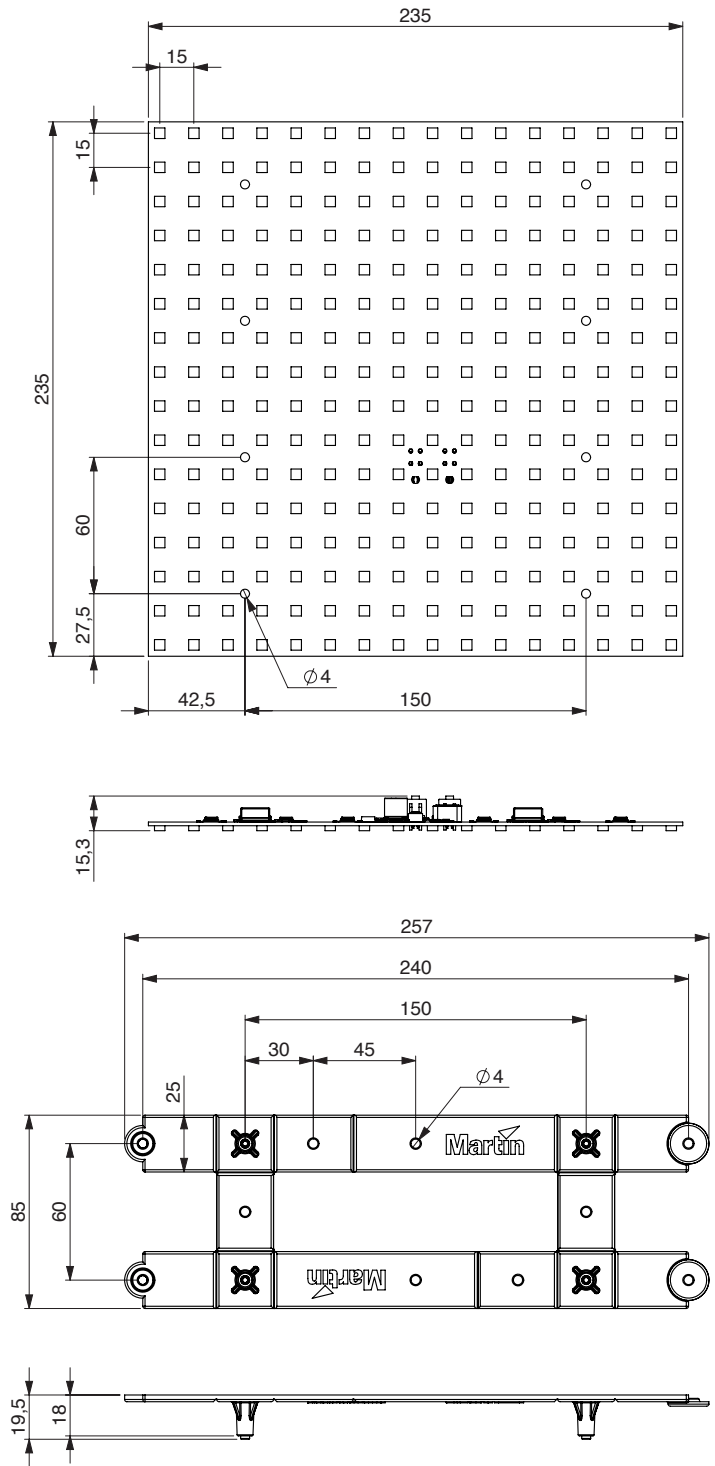
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## DIMENSIONS

### PHYSICAL

- Length..... 240 mm (9.5 in.) \*
- Width..... 240 mm (9.5 in.) \*
- Height..... 15.3 mm (0.6 in.)
- Weight..... 311 g (0.7 lbs.)

\*Including 5 mm (0.2 in.) board-to-board gap



All dimensions are in mm

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## VC-GRID/VC-STRIP FAMILY OVERVIEW

Model	Layout	Dimension*	Height	Pixel pitch	Calibrated Output
VC-Grid 15	16 x 16	240 mm x 240 mm	15,3 mm	15 mm	5000 Nit
VC-Grid	8 x 8	200 mm x 200mm	17 mm	25 mm	4000 Nit
VC-Grid 30	8 x 8	240 mm x 240 mm	15,3 mm	30 mm	2750 Nit
VC-Grid 60	8 x 8	480 mm x 480 mm	15,3 mm	60 mm	750 Nit
VC-Grid 60	4 x 4	240 mm x 240 mm	15,3 mm	60 mm	750 Nit
VC-Strip 15	32 x 1	480 mm x 19 mm	15,3 mm	15 mm	5000 Nit
VC-Strip 15	16 x 1	240 mm x 19 mm	15,3 mm	15 mm	5000 Nit
VC-Strip	16 x 1	400 mm x 20 mm	17 mm	25 mm	4000 Nit
VC-Strip	8 x 1	200 mm x 20 mm	17 mm	25 mm	4000 Nit
VC-Strip 30	16 x 1	480 mm x 19 mm	15,3 mm	30 mm	2750 Nit
VC-Strip 30	8 x 1	240 mm x 19 mm	15,3 mm	30 mm	2750 Nit
VC-Strip 60	8 x 1	480 mm x 19 mm	15,3 mm	60 mm	750 Nit
VC-Strip 60	4 x 1	240 mm x 19 mm	15,3 mm	60 mm	750 Nit

To maintain even pixel spacing across multiple VC-Grids so that they form a seamless display surface, install them with the following gaps between the edges of modules, both horizontally and vertically:

VC-Grid 16x16 15	5 mm
VC-Grid 8x8	15 mm
VC-Grid 8x8 30	20 mm
VC-Grid 8x8 60	40 mm
VC-Grid 4x4 60	40 mm

\*Dimension include board-to-board gap required to maintain pixel pitch