

Exterior Dot-HP



Martin by HARMAN Exterior Dot-HP is a bright, outdoor-rated dot designed to create media facades or perimeter lighting on large buildings and structures for long-distance viewing. This high-performance exterior LED dot for large venues allows for long fixture runs with variable pixel pitches for flexible designs. A creative tool for lighting designers, the Exterior Dot-HP is available in two versions – RGB color mixing or cool white – with a number of front designs for a variety of unique looks. It is driven by the Martin P3 System Controller family for easy setup and video display. The Exterior Dot-HP is also compatible with RDM/DMX for smaller setups.

[How processing works for LED video](#)

High-intensity calibrated video dot

Rugged IP66 housing for permanent outdoor installations

Easy setup and long cable runs for clean installation

GALLERY



FEATURES

- 100 lumen per dot calibrated
- Available in clear front, diffuser dome and directional lens variants
- RGB or cold white LED engine
- Flexible mounting system allows for customized solutions
- Local integral in-built diagnostics tool
- High-quality 16-bit per color image processing technology
- Pixel-level brightness and color calibration for optimal image quality
- P3/RDM/DMX controllable (automatic protocol detection)
- Intuitive mapping and addressing via P3 System Controller
- Combined power/data input over single cable
- Supported by integrated power and data processor (P3 PowerPort 1500 or P3 PowerPort 1000 IP) and simple cabling system

TECHNICAL SPECIFICATIONS

Physical

Diameter: 72 mm (2.9 in.)
Height with clear front: 34 mm (1.4 in.)
Height with dome front: 49 mm (2 in.)
Height with directional front: 43 mm (1.7 in.)
Weight, clear front and dome front models: 300 g (0.7 lbs.)
Weight, directional front models: 350 g (0.8 lbs.)

Control and Programming

Control options: Martin P3™ System Controller via Martin P3™ PowerPort 1500, Martin P3™ PowerPort 1000 IP and/or RDM/DMX
Protocol detection: Automatic
Control modes: RGB (RGB variants), white intensity (CW variants), basic
DMX channels: 3/10
Setting and addressing: Martin P3™ System controller or RDM-compliant DMX controller
Control resolution: 16-bit (P3) or 8-bit (DMX) control of each color
Calibration: Color and intensity for each Dot
DMX compliance: USITT DMX512-A
RDM compliance: ANSI/ESTA E1.20
Firmware update: Via Martin P3™ System Controller

Control/User Interface
Device status: Multi-color visual indication
Device test and reset: Magnetic button to call up fixture status and test fixture

Optics

Options
Clear Front
Dome front
Directional front (TIR lens)
LED manufacturer, Exterior Dot-HP RGB: Osram
LED manufacturer, Exterior Dot-HP CW: Seoul
Minimum LED lifetime: 50 000 hours (to >70% luminous output)*
**Figure obtained under manufacturer's test conditions:*

Photometric Data
Color resolution: 16 bits per color (48 bit per pixel)
Dot pitch: 72 mm - 500 mm (center-to-center)

Viewing angle
Clear front: 103° x 103° (half-peak)
Dome front: 125° x 125° (half-peak)
Directional front: 22° x 22° (half-peak)

RGB Dots

Total output, calibrated mode
Clear front: 90 lumens, 36 cd
Dome front: 62 lumens, 18 cd
Directional front: 72 lumens, 270 cd

Total output, non-calibrated mode
Clear front: 120 lumens, 48 cd
Dome front: 80 lumens, 24 cd
Directional front: 96 lumens, 360 cd

Cool White Dots

Total output, calibrated mode
Clear front: 160 lumens, 62 cd
Dome front: 110 lumens, 32 cd
Directional front: 120 lumens, 590 cd

Total output, non-calibrated mode
Clear front: 210 lumens, 82 cd
Dome front: 142 lumens, 41 cd
Directional front: 160 lumens, 775 cd
Preliminary data, figures are approximate

Video Processing
Brightness control
Gamma correction and control
Color temperature control
Color space control
Calibration processing
Synchronization

Signal Protocol
P3 (via Martin P3™ PowerPort) or RDM/DMX

Construction

Base: Cast aluminum
Color: Electrostatic powder-coated (custom colors available by special order) (custom colors available on project basis)
Protection rating: IP66
Impact resistance: IK05
Corrosion resistance: C5-M (very high corrosivity / marine, ISO 12944)
RoHS compliant

Installation

Orientation: Any
Mounting points: Direct surface mount, optional mounting plate or optional mounting profile

Connections

Power and data input: 6-pin custom (BBD) IP66-rated
Power and data thru: 6-pin custom (BBD) IP66-rated
Hot-pluggable

Electrical

Nominal input voltage: 48 VDC +/- 4%
Power supply options: Martin P3™ PowerPort 1500, P3™ PowerPort 1000 IP, Martin™ IP66 PSU or generic 48 VDC PSU
Typical total power consumption, calibrated mode: 5 W at full intensity, full white
Typical total power consumption, uncalibrated mode: 7 W at full intensity, full white

Thermal

Cooling: Convection
Maximum ambient temperature (Ta max.): 55° C (131° F)
Minimum ambient temperature (Ta min.): -20° C (-4° F)
Total heat dissipation (calculated, +/- 10%): 20 BTU/hr.

Approvals

EU safety: EN 60950-1, EN 60950-22
EU EMC: EN 55024, EN 55032 (Class A), EN 61000-3-2, EN 61000-3-3
US safety: UL 60950-1, UL 60950-22
US EMC: FCC Part 15 Class A
Canadian safety: CSA C22.2 No. 60950-1, No. 60950-22
Canadian EMC: ICES-003 Class A
Australia/NZ (pending): RCM

Accessories

Magnetic Test Tool, set of 10: P/N 91610139

Mounting hardware

Flange Plate for Surface Mounting, aluminum, Exterior Dot-HP: P/N 91606020

Mounting Profile Kit incl. dot bracket, screws and lock, Exterior Dot-HP, 57 mm (2.25 in.): P/N 91606021

Mounting Profile, Exterior Dot-HP / Pixline, 320 mm (12.6 in.): P/N 91611620

Mounting Profile, Exterior Dot-HP / Pixline, 1280 mm (50.4 in.): P/N 91611610

Dot Mounting Bracket for Exterior Dot-HP Mounting Profile: P/N TBA

Mounting Profile Locks, Exterior Dot-HP / Pixline, set of 10: P/N 91611725

Cables

Power + Data Input Cable, 4-pin male XLR (for P3 PowerPort 1500) to fem. BBD, 0.25 m (0.9 ft.): P/N 91616046

Power + Data Input Cable, 5-pin male XLR + wire tails (for PSU) to female BBD, 0.25 m (0.9 ft.): P/N 91616048

Power + Data Input Cable, 5-pin male XLR + male Martin™ IP66 PSU to fem. BBD, 0.25 m (0.9 ft.): P/N 91616050

Power + Data Extension Cable, Installation type CMX, BBD-BBD 1 m (3.3 ft.): P/N 91616055

Power + Data Extension Cable, Installation type CMX, BBD-BBD, 2.5 m (8.2 ft.): P/N 91616056

Power + Data Extension Cable, Installation type CMX, BBD-BBD, 5 m (16.4 ft.): P/N 91616057

Power + Data Extension Cable, Installation type CMX, BBD-BBD, 10 m (32.9 ft.): P/N 91616058

Power + Data Extension Cable, Installation type CMX, BBD-BBD, 25 m (82.1 ft.): P/N 91616059

Power + Data Extension Cable, Installation type CMX, without connectors, 100 m (328.1 ft.): P/N 91616060

DMX Leadout Adapter, male BBD to 5-pin female XLR, 0.25 m (0.9 ft.): P/N 91616051

Power+Data Adapter XLR5+XLR4-BBD 0.25 m (0.9 ft.): P/N 91616049

Power+Data Adapter BBD-XLR4 0.25 m (0.9 ft.): P/N 91616047

Connectors

Power + Data Cable Connector, BBD, male: P/N 91611750

Power + Data Cable Connector, BBD, female: P/N 91611751

Blanking caps for unused female BBD connectors, set of 10: P/N 91616052

Related Items

Martin P3™ PowerPort 1500: P/N 90721040

Martin P3™ PowerPort 1000 IP Installation: P/N 90721080

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

Ordering Information

Exterior Dot-HP RGB, Aluminum, Clear Front: P/N 90357683

Exterior Dot-HP RGB, Aluminum, Clear Front, set of 9: P/N 90357697

Exterior Dot-HP RGB, Aluminum, Dome Front: P/N 90357685

Exterior Dot-HP RGB, Aluminum, Dome Front, set of 9: P/N 90357696

Exterior Dot-HP RGB, Aluminum, Directional Front (TIR lens): P/N 90357686

Exterior Dot-HP RGB, Aluminum, Directional Front (TIR lens), set of 9: P/N 90357698

Exterior Dot-HP CW, Aluminum, Clear Front: P/N 90357688

Exterior Dot-HP CW, Aluminum, Clear Front, set of 9: P/N 90357694

Exterior Dot-HP CW, Aluminum, Dome Front: P/N 90357687

Exterior Dot-HP CW, Aluminum, Dome Front, set of 9: P/N 90357695

Exterior Dot-HP CW, Aluminum, Directional Front (TIR lens): P/N 90357689

Exterior Dot-HP CW, Aluminum, Directional Front (TIR lens), set of 9: P/N 90357693

Specifications are preliminary and subject to change without notice

