

# MAC ULTRA WASH

1150 W HIGH OUTPUT LED MOVING HEAD WASH

SPEC SHEET



The MAC Ultra Wash is a colossal return to everything that an incredible wash light should be. Pure and simple in concept, it's a bold, no-nonsense workhorse and the brightest wash we've ever developed. Via its 1150 W, 5800 K proprietary LED light engine, the MAC Ultra Wash delivers a jaw-dropping 63,500 lumens from a 220 mm front lens and features incredibly fast 1:10 zoom range.

Its 50,000+ hour light engine is the latest in a long line of Martin feats of innovation. No matter what the application, you can reliably count on consistent quality of light and output –show after show for many years to come. The MAC Ultra Wash also includes a powerful feature set, including uniform color mixing, variable CTO, additional color and spectral correction filters, motorized frost for a softer field, high resolution dimming and strobing.

Ideal for touring, concerts, TV shows and performing arts, the MAC Ultra Wash supports the broader production market all the way up to the most demanding stage lighting events. Martin set the standard for managing the ratio of weight, size, and power and the MAC Ultra Wash surges ahead with even superior performance.

When it comes to delivering drop-dead wash light performance and workhorse reliability, nothing comes remotely close. MAC Ultra Wash exceeds the boundaries of design as an undeniable, class-leading fixture that sets a steep bar on wash light innovation.

## KEY MESSAGES

### MARTIN'S BRIGHTEST WASH LIGHT

The MAC Ultra Wash pushes a phenomenal 63,500 lumens of output from its mighty 220 mm front lens. With our tailor-made light engine and optics designed as one unified system, MAC Ultra Wash excels on keeping output across the zoom range, resulting in an ever-bright wash field. With high luminous flux and intensity at narrow zoom angles, MAC Ultra Wash delivers the punch needed for the longest throws and highest trims - no stage or venue is too big for MAC Ultra Wash.

### SEEING IS BELIEVING

Our proprietary LED light engine is the foundation for MAC Ultra visual quality, built around the very latest technology to meet ever-stretched performance requirements. Our engine not only provides impressive metrics, but most importantly is more pleasing to the human eye. With

higher red content and 5800 K color temperature for better daylight balance, it delivers richer, more vivid colors and more natural skin-tones.

### VISUAL EXCELLENCE FOR LIFE

MAC Ultra was designed to not only deliver best-in-class output and quality in its first hour of use, but throughout its product lifetime. The minimum LED lifetime exceeds 50,000 hours and the engine delivers over 90 percent of its initial output after 20,000 hours of full output. In real-world applications, this equals rock-solid performance and stability. Our engineering team has achieved these results through a sophisticated cooling system and by never driving the 1680 W LED package at more than 70 percent of its maximum rating. This combination ensures visual excellence and peace of mind throughout the life of the product.

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## KEY MESSAGES (Cont.)

### ULTRA QUIET OPERATION

The sophisticated MAC Ultra cooling system always ensures a precise operating temperature window and sets a new standard for low acoustic levels. It's not only ideal for a range of concert and touring productions but is equally applicable for noise-sensitive broadcast and theater stage lighting applications.

### FUNCTIONAL INDUSTRIAL DESIGN

MAC Ultra features a unique and compact industrial design. Martin's patented yoke handles provide better ergonomics and safer handling of the light. To benefit stage and set designers, all connectors and the UI are placed on the same side of the unit, leaving the opposite side free from visual distraction. Follow-spot handles are also permanently incorporated, and tool-free replacement of air-inlet filters is easier than ever to access.

## FEATURES

### LIGHT SOURCE

- 1150 W proprietary LED light engine
- 84 x 20 W white LEDs
- Minimum LED lifetime: >50,000 hours (see specs for further details)

### PHOTOMETRIC DATA

- Light Engine Luminous Output: 90,000 lumens
- Fixture Luminous Output: 63,500 lumens
- Peak Luminous Intensity: 5,000,000 cd
- CCT: 5800 K K (+/- 250 K)

### OPTICS

- 220 mm Front Lens
- 1:7 zoom range (6.8° - 47.5° beam angle)

### DYNAMIC EFFECTS

- 0 - 100% continuous dimming and strobe effects
- Choice of four dimming curves
- CMY color mixing
- Color temperature control (5800-2850 K)
- Color wheel with six interchangeable dichroic filters, including a Spectral Enhancement Filter
- 1:10 Zoom (hyper zoom); 1:7 Zoom (native zoom)
- Motorized frost
- Iris
- Variable edge control
- Pan: 540°
- Tilt: 268°
- P3 videomapping of fixture color and/or intensity (10 segments)
- Pre-programmed effects: Two ranges of pre-programmed FX

## ORDERING INFORMATION

- MAC Ultra Wash, SIP (in cardboard box with SIP foam flight case insert) ..... P/N 90250085HU
- MAC Ultra Wash, white finish, SIP (in cardboard box with SIP foam flight case insert)..... P/N 90250090HU

### INCLUDED ITEMS

- Two omega brackets with 1/4 turn fasteners for rigging clamp attachment
- Safety and Installation Manual



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## ACCESSORIES

### TRANSPORT AND STORAGE

- Flightcase for 2 x MAC Ultra Performance/Wash without SIP inserts ..... P/N 91515055

### CONSUMABLES

- Air filter, MAC Quantum / MAC Ultra, set of 12 ..... P/N 50400765
- CR123A 3-volt lithium battery ..... P/N 05801011

### POWER INPUT CABLES

- Power Input Cable, H07RN-F, 2.5 mm<sup>2</sup>, bare ends to TRUE1 NAC3FX-W TOP (female), 1.5 m (4.9 ft.) ..... P/N 91611797
- Power Input Cable, H07RN-F, 2.5 mm<sup>2</sup>, bare ends to TRUE1 NAC3FX-W TOP (female), 5 m (16.4 ft.) ..... P/N 91611786
- Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W TOP (female), 1.5 m (4.9 ft.) ..... P/N 91610173
- Power Input Cable, SJOOW, 12 AWG, bare ends to TRUE1 NAC3FX-W TOP (female), 5 m (16.4 ft.) ..... P/N 91610174

### POWER INPUT CONNECTOR

- Cable Connector, Neutrik powerCON TRUE1 NAC3FX-W TOP (female) ..... P/N 91611789HU

### INSTALLATION HARDWARE

- G-clamp (suspension with fixture hanging vertically downwards only) ..... P/N 91602003
- Quick Trigger Clamp (suspension with fixture hanging vertically downwards only) ..... P/N 91602007
- Half-coupler Clamp ..... P/N 91602005
- Safety Cable, SWL 60 kg, BGV C1 / DGUV 17, black ..... P/N 91604006
- Safety Cable, SWL 60 kg, BGV C1 / DGUV 17, silver ..... P/N 91604007

### RELATED ITEMS

- Martin Companion Cable (for firmware update over DMX) ..... P/N 91616091
- Martin RDM 5.5 Splitter ..... P/N 90758150
- Martin Companion Software (for firmware update over DMX): Free download from [www.martin.com](http://www.martin.com)

## TECHNICAL SPECIFICATIONS

### DYNAMIC EFFECTS

Pre-programmed effects	Two ranges of FX, independent or synchronized/combined
Color mixing	CMY, independently variable 0 - 100%
Color wheel	6 x interchangeable dichroic filters + open (incl. Spectral Enhancement Filter), indexing, continuous rotation, random color
Iris	Variable 0 - 100%, pulse effects
Zoom	Motorized
Color temperature control	Variable 5800-2850 K
Frost	Motorized
Dimmer/shutter	0 - 100% continuous dimming, regular and random strobe and pulse effects, instant open and blackout
Dimming options	Choice of four dimming curves
Pan	540°, coarse & fine control and speed
Tilt	268°, coarse & fine control and speed
P3	Videomapping of fixture color and/or intensity with variable crossfade between DMX control and video control
Focus	Motorized, range varies with zoom angle, from approx. 4.5 m (14.8 ft.) to infinity

### CONTROL AND PROGRAMMING

Control Protocols	DMX, RDM, Art-Net, RDM over Art-Net, sACN and P3
Protocol Detection	Automatic
Setting and Addressing	Display Menu, RDM, RDM over Art-Net or P3
DMX Modes	One
DMX Channels	29
16-bit Controllable Parameters	Dimming, Color Mixing + CTC, Zoom, Focus, Pan and Tilt
Fixture identification	User-settable ID number
RDM Compliance	ANSI/ESTA E1.20
Art-Net Compliance	Art-Net 1, 2, 3 and 4; including RDM over Art-Net
sACN Compliance	ANSI E1.31 - 2016
Martin P3 Compliance	P3 System Controller Software 5.1.0 or newer
DMX/RDM Transceiver	Galvanic-isolated RS-485
Ethernet Transceiver	10/100Mbit (with fail-safe bypass)
Firmware Update	USB memory device, via DMX using Martin Companion or via Ethernet using P3 System Controller
Local User Interface	Backlit LCD Display with battery-powered operation

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## TECHNICAL SPECIFICATIONS (Cont.)

### OPTICS

Front Lens Diameter	220 mm
Light source	84 x 20 W White LEDs in a custom Martin engine
Zoom Range Beam (half-peak)	6.8° - 47.5° (1:7)
Zoom Range Field (tenth-peak)	9° - 62° (1:7)
Maximum Total LED Engine Power	1150 W
Minimum LED lifetime	>50,000 hours (to >80% luminous output)* / >20,000 hours (to >90% luminous output)*

\*Figure obtained under manufacturer's test conditions

### PHOTOMETRIC DATA

Light Engine Luminous Output	90,000 lumens
LED refresh rate	3000 Hz

#### STANDARD

Fixture Luminous Output	63,500 lumens
CRI (Color Rendering Index)	66 (+/- 3)
TM-30 Rf (IES TM-30-15 Fidelity Index)	66
TM-30 Rg (IES TM-30-15 Gamut Index)	95
CCT	5800 K (+/- 250 K)
Peak Luminous Intensity	5,000,000 cd

#### WITH SPECTRAL ENHANCEMENT FILTER AT 5300 K

Fixture luminous output	49,000 lumens
CRI (Color Rendering Index)	78 (+/- 3)

#### WITH CTO AND CYAN AT 3200 K

Fixture luminous output	19,500 lumens
CRI (Color Rendering Index)	90 (+/- 3)

\* All Photometric Data measured in steady state (30 minutes warm-up time) at 25°C ambient.

### CONSTRUCTION

Housing	High-impact flame-retardant thermoplastic
Color	Black
Protection rating	IP20

### INSTALLATION

Mounting points	2 pairs of 1/4-turn points for 106 mm (4.17 in.) center-to-center omega brackets
Location	Dry location only, must be fastened to surface or structure
Orientation	Any
Minimum distance to combustible materials	0.2 m (8 in.)
Minimum distance to illuminated surfaces	4.75 m (15.6 ft.)

### CONNECTIONS

DMX and RDM data in/out	5-pin locking XLR
AC mains power input	Neutrik TRUE1 socket, accepts TRUE1 NAC3FX-W (TOP) connector

Ethernet (Art-Net, sACN and P3) in/out, including fail-safe bypass	Neutrik etherCON
Firmware from flash memory	USB 2.0 port

### ELECTRICAL

AC power	200-240 V AC nominal, 50/60 Hz
Power Supply Unit	Auto-ranging electronic switch mode
Typical half-cycle RMS inrush current at 230 V, 50 Hz	17.0 A
Power Factor	0.99 @ 208 V / 230 V / 240 V
Max current draw	8.0 A @ 208 V, 6.7 A @ 230 V / 240 V
Typical current draw	6.6 A @ 208 V, 6.0 A @ 230 V, 5.7 A @ 240 V *

#### Power Consumption

Maximum	1450 W
Typical	1360 W *
Idle	100 W *
Hibernation	55 W *

\* Measurements made at nominal voltage. Allow for a deviation of +/- 10%.

Typical: full output white, no effects moving, regulated fan speed.

Idle: no output, no effects moving, regulated fan speed.

Hibernation: no output, motors de-energized, fans stopped, wake-up procedure to re-use fixture.

### THERMAL

Cooling	Forced air (temperature regulated, low noise)
Maximum Ambient Temperature (Ta max)	40° C
Minimum Ambient Temperature (Ta min)	5° C
Maximum surface temperature, steady state, at 40° C ambient	85° C (185° F)
Total heat dissipation (calculated, +/- 10%)	4950 BTU/hr.

### ACOUSTIC DATA

Sound Pressure Level (LpA) @ 1 m (default regulated fan mode, full output)	37.6 dB(A)
Sound Pressure Level (LpA) @ 1 m (constant fan mode low)	34.5 dB(A)

### WARRANTY

Fixture	2 years
Light Engine	5 years

### ENVIRONMENTAL

RoHS	Compliant
REACH	Compliant
WEEE	Compliant
Proposition 65	Compliant
Efficacy (max output)	48 lm/w
LWR*	1,628 lm/kg (738 lm/lb)

LWR = Lumen-to-Weight Ratio

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## TECHNICAL SPECIFICATIONS (Cont.)

### APPROVALS

Global CB Certification/IECEE ..... IEC 60598-2-17 (IEC 60598-1)  
 EU safety ..... EN 60598-2-17 (EN 60598-1), EN 62471, EN 62493  
 EU EMC ..... EN 55015; EN 55032; EN 61547; EN 55035; EN 61000-3-2,-11  
 US safety ..... UL 1573

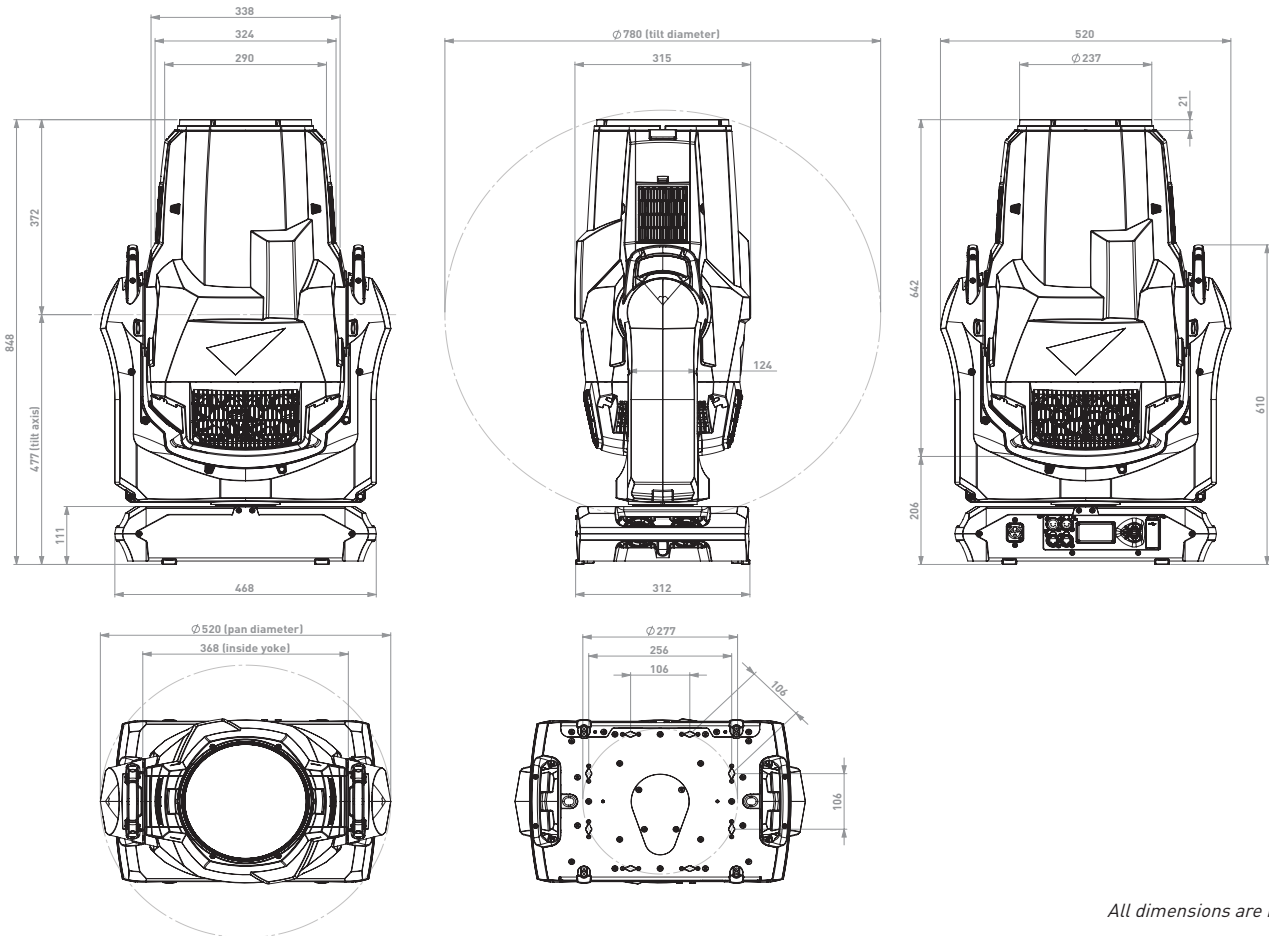
US EMC ..... FCC Part 15 Class B  
 Canadian safety ..... CSA C22.2 No. 166  
 Canadian EMC ..... ICES-003 Class B, ICES-005 Class B  
 Australia/NZ ..... RCM



## DIMENSIONS

### PHYSICAL

Length (head) ..... 642 mm (25.3 in.)  
 Length (base) ..... 468 mm (15.5 in.)  
 Width (across yoke) ..... 520 mm (20.5 in.)  
 Width (base) ..... 312 mm (12.3 in.)  
 Height (head straight up) ..... 848 mm (33.4 in.)  
 Height (maximum) ..... 867 mm (34.2 in.)  
 Weight ..... 39.0 kg (86.0 lbs.)  
 Minimum center-to-center distance in side-by-side installation ..... 810 mm (31.9 in.)



All dimensions are in mm