

**Exterior 100 IP68™**  
**Exterior 50 IP68™**



**Martin®**

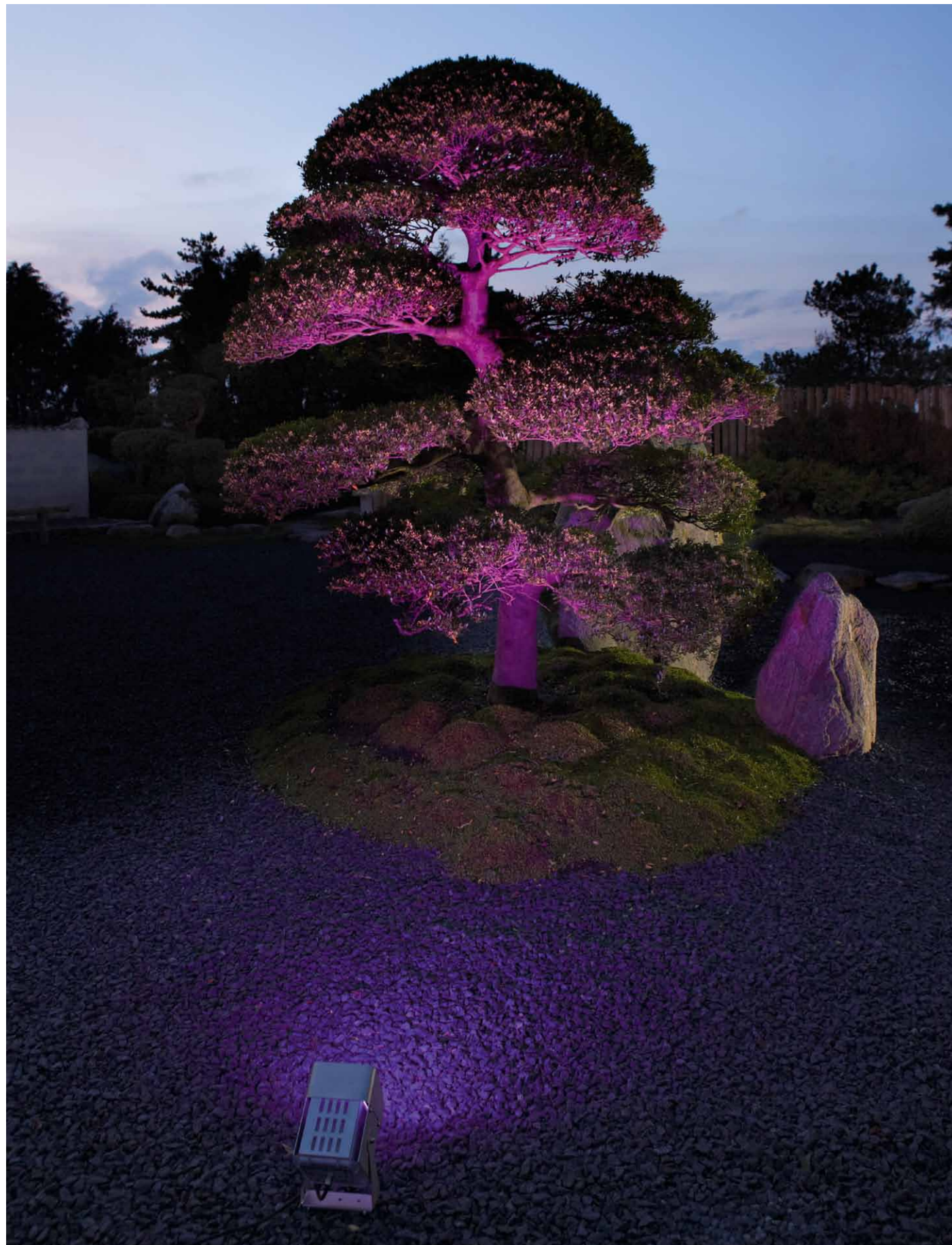
## Lighting for extreme environments

The ideal lighting tools for extreme outdoor and underwater environments, the Exterior 100 IP68 and Exterior 50 IP68 are compact and versatile lighting fixtures that are built to last.

These extremely rugged LED luminaires are designed for applications requiring superb color mixing or high quality white light for narrow to medium flood and spot lighting applications.



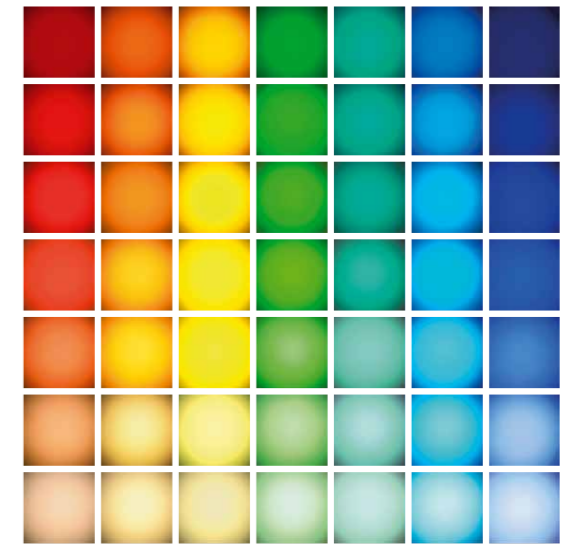
# Light fantastic



Den Japanske Have, Denmark

## LIGHT FANTASTIC

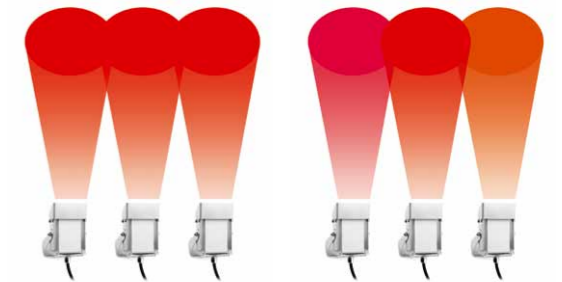
The Exterior 100 IP68 and Exterior 50 IP68 emit a quality of light that traditional RGB systems can't match. The addition of white in the Exterior 100 and 50's RGBW color mixing system allows for a wider color palette for washes of vibrant saturated shades to subtle pastels. When high-quality white light is required, cold, neutral and warm white fixtures are also available.



## COLOR CONSISTENCY

LED lighting fixtures often suffer from uneven colors due to differences caused by the manufacturing process (binning), an unevenness that can be eliminated through color calibration.

The color calibration system in the Exterior 100 and 50 - a unique feature for lighting fixtures of this size and power - means they emit like colors across all fixtures right out of the box, ensuring maximum color consistency and uniform colors for seamless overlapping.



**Calibrated**  
Color calibration ensures even colors across all units

**Non-calibrated**  
Small differences in LEDs can result in uneven colors

## NO COLOR SEPARATION, NO COLOR SHADOWS

The Exterior 100 and 50 use pre-mixed LEDs, a superior color mixing system compared to single-color chips. Color is fully blended before it leaves the lens so that individual source colors are not seen, very important for close-to-surface lighting applications such as wall-grazing.

Fully pre-mixed color also eliminates the problem of color shadowing when lighting objects or uneven surfaces, as well as the unsightly multi-color look on the face of the fixture, both problems with single-color LED fixtures.



**Single-color LEDs**  
Different single-color pixels result in color separation near the fixture and shadows

**Pre-mixed LEDs**  
Color separation and shadows are eliminated in pre-mixed LEDs

# Under, in, or out of water



## BUILT FOR ALL CONDITIONS

Built to survive the toughest conditions and any type of weather, the Exterior 100 IP68 and Exterior 50 IP68 feature an extremely durable, weatherproof construction for use in all outdoor environments.

An IP68 housing allows for underwater or semi-submerged use, and because the luminaires are designed to stay cool out of water as well, they can be mounted completely exposed.

This versatility makes the Exterior 100 and 50 useful for a wide variety of applications such as fountains, pools, waterfalls, building facades, landscaping, cruise ships, or any environment where conditions are harsh.



## DISCREET DESIGN AND LOW-VOLTAGE CABLING

An ultra-compact housing means the Exterior 100 and 50 can easily be tucked away to discreetly highlight architectural details.

Designed to disappear into their surroundings, a choice of light shields provides for glare control, further reducing the visibility of the luminaires.

Thin, low-voltage cables are not only easily hidden, they also make for a safer installation.

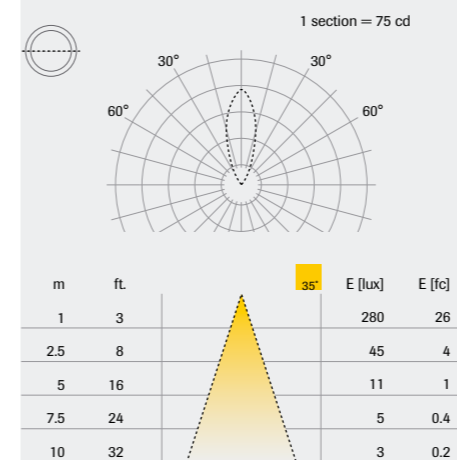


Danish Pavilion, World Expo 2010, Shanghai



### EXTERIOR 50

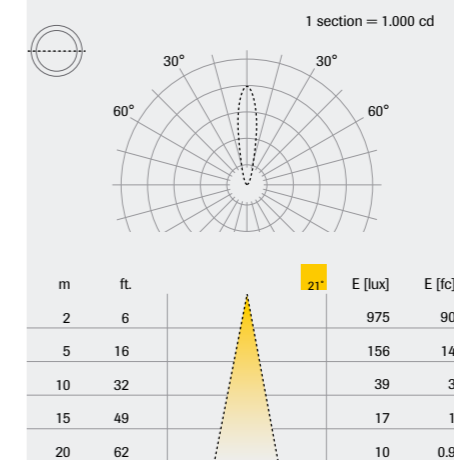
35° beam angle



Efficacy: 22 lumens per watt  
 Half-peak diameter: 0.63 x distance (m)  
 Illuminance: 280 / distance<sup>2</sup> (lux)  
 Total output: 130 (lumens)

### EXTERIOR 100

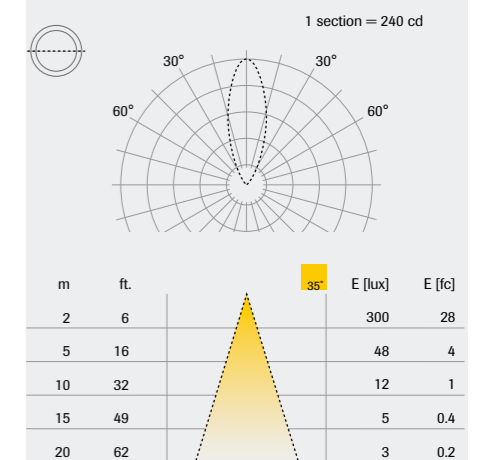
21° beam angle



Efficacy: 37.3 lumens per watt  
 Half-peak diameter: 0.37 x distance (m)  
 Illuminance: 3900 / distance<sup>2</sup> (lux)  
 Total output: 670 (lumens)

### EXTERIOR 100

35° beam angle



Efficacy: 32.7 lumens per watt  
 Half-peak diameter: 0.63 x distance (m)  
 Illuminance: 1200 / distance<sup>2</sup> (lux)  
 Total output: 590 (lumens)

# Exterior 100 IP68 and Exterior 50 IP68 Specifications

## PHYSICAL

### Exterior 50 Luminaire

Length: 130 mm (5.1 in.) including cable gland and cable exit  
Width: 88 mm (3.5 in.) including mounting/tilt adjustment fasteners and side-routed cable  
Height: 117 mm (4.6 in.) including mounting bracket  
Weight: 660 g (23.3 oz.) including mounting bracket

### Exterior 100 Luminaire

Length: 165 mm (6.5 in.) including cable gland and cable exit  
Width: 128 mm (5.0 in.) including mounting/tilt adjustment fasteners and side-routed cable  
Height: 166 mm (6.5 in.) including mounting bracket  
Weight: 1.4 kg (3.1 lbs.) including mounting bracket

### Splitter

Length: 133 mm (5.2 in.) including cable glands  
Width: 80 mm (3.1 in.)  
Height: 59 mm (2.3 in.)  
Weight: 230 g (8.1 oz.)

### Power Supply Unit

Length: 355 mm (14.0 in.)  
Width: 146 mm (5.7 in.) including cable glands  
Height: 83 mm (3.3 in.)  
Weight: 2.8 kg (6.2 lbs.)

## DYNAMIC EFFECTS

Color mixing: RGBW (RGBW models only)  
Intensity: 0 - 100% (all models)

## OPTICS

Light source: Cree MC-E high-power emitters  
Color temperature (CW model): 6500 K  
Color temperature (NW model): 4000 K  
Color temperature (WW model): 2700 K  
Minimum LED lifetime: 50 000 hours (to >70% luminous output)\*  
*\*Manufacturer's figure obtained under manufacturer's test conditions*

## CONTROL AND PROGRAMMING

Control options: DMX, programmable default scene  
Color control modes: RGB, RGBW (RGBW models)  
Control modes: Calibrated and raw (all models)  
DMX channels: 1 (CW, NW and WW models), 3/4 (RGBW models)  
Setting and addressing: IR remote control unit, RDM-compliant controller  
Dimming resolution: 14-bit (internal)  
DMX compliance: USITT DMX512-A  
RDM compliance: ANSI/ESTA E1.20  
Receiver: RS-485  
Firmware update: Serial upload via DMX link

## CONSTRUCTION

Color: Steel grey (custom colors available upon request)  
Housing: Aluminum with micro-arc oxidation coating, stainless steel protection frame  
Mounting bracket: 1.5 mm (0.1 in.) stainless steel  
Front glass: Polycarbonate with UV and mechanical protection coating  
Protection rating: Luminaire IP68, Splitter IP65 (IP68 with sealing compound), PSU IPX7

## INSTALLATION

Orientation: Any  
Minimum distance to illuminated surfaces: 0.1 m (0.3 ft.)  
Mounting: Surface mount, 35 mm (1.4 in.) DIN rail, mounting post, ground stake

## CONNECTIONS

All cable entries: IP68 cable gland  
Internal, power and data: Quick connector terminals

## ELECTRICAL

Power supply unit: External PSU in IPX7-rated housing  
AC power (input to PSU): 100-240 V nominal, 50/60 Hz  
System power (output from PSU): 20 - 40 VDC (36 VDC nominal)  
Power consumption, steady state, all LEDs at zero intensity: 0.42 W per fixture

## TYPICAL POWER AND CURRENT

### Exterior 50 IP68 Luminaire

Calibrated RGB mode, RGBW Luminaire: 3.6 W, 0.12 A at 30 VDC  
Uncalibrated RGBW mode, RGBW Luminaire: 6 W, 0.2 A at 30 VDC  
Calibrated mode, white (CW, NW or WW) Luminaire: 5.5 W, 0.18 A at 30 VDC  
Uncalibrated mode, white (CW, NW or WW) Luminaire: 6 W, 0.2 A at 30 VDC

### Exterior 100 IP68 Luminaire

Calibrated RGB mode, RGBW Luminaire: 12 W, 0.4 A at 30 VDC  
Uncalibrated RGBW mode, RGBW Luminaire: 18 W, 0.6 A at 30 VDC  
Calibrated mode, white (CW, NW or WW) Luminaire: 17 W, 0.6 A at 30 VDC  
Uncalibrated mode, white (CW, NW or WW) Luminaire: 18 W, 0.6 A at 30 VDC

*Measurements made at nominal voltage with all LEDs at full intensity. Allow for a deviation of +/- 10%.*

## THERMAL

Cooling: Convection  
Maximum ambient temperature (T<sub>a</sub> max.): 45° C (113° F)  
Minimum ambient temperature (T<sub>a</sub> min.): -40° C (-40° F), power must be maintained below 0° C (32° F)

## APPROVALS

EU safety: EN 60598-1, EN 60598-2-1  
EU EMC: EN 55103-1, EN 55103-2, EN 61000-3-2, EN 61000-3-3  
US safety (US model), pending: UL 1598, UL 8750

## INCLUDED ITEMS

### Included with luminaire

3 m (9.8 ft.) luminaire cable (pre-installed)  
Adjustable mounting bracket

### Included with Splitter

Blanking plug for sealing unused luminaire cable gland  
Blanking plug for sealing unused hybrid cable gland  
DMX line terminators

### Included with PSU

Blanking plug for sealing unused data cable gland  
Two blanking plugs for sealing unused mains power or hybrid cable glands  
DMX line terminators  
Safety and installation guide

## ACCESSORIES

Exterior 50 & 100 infrared remote control: P/N 90510210  
IP68 Sealing Compound Set (for use with Splitters): P/N 90510220  
Gel-sealed cable connection box: P/N 90510230  
Exterior 50 light shield, narrow: P/N 90510270  
Exterior 50 light shield, medium: P/N 90510280  
Exterior 50 light shield, wide: P/N 90510290  
Exterior 50 & 100 luminaire cable, hybrid, with connector, 10 m (32.8 ft.): P/N 90510200  
Exterior 50 & 100 splitter link hybrid cable, 25 m (82.0 ft.): P/N 90510170  
Exterior 50 & 100 splitter link hybrid cable, 50 m (164.0 ft.): P/N 90510180  
Exterior 50 & 100 splitter link hybrid cable, 100 m (328.1 ft.): P/N 90510190  
Exterior 50 & 100 telescopic bracket: P/N 90510300  
Exterior 50 & 100 mounting bracket: P/N 90510310  
Exterior 50 & 100 ground stake: P/N 90510320  
Hybrid cables carry both power and data

## RELATED ITEMS

Martin M-PC™ Pro (up to 64 DMX universes) incl. Martin USB Duo™ interface box: P/N 90732010  
Martin M-PC™ Basic (up to 8 DMX universes) incl. Martin USB Duo™ interface box: P/N 90732070  
Martin M-PC™ Pro, license only: P/N 39808016  
Martin M-PC™ Basic, license only: P/N 39808017  
Martin USB Duo™ USB/DMX interface box: P/N 90703010

## ORDERING INFORMATION

Exterior 50 & 100™ PSU (Power Supply Unit): P/N 90510150  
Exterior 50 & 100™ Splitter: P/N 90510160  
Exterior 50™ IP68 RGBW, Medium: P/N 90510080  
Exterior 50™ IP68 CW, Narrow: P/N 90510090  
Exterior 50™ IP68 CW, Medium: P/N 90510100  
Exterior 50™ IP68 NW, Narrow: P/N 90510110  
Exterior 50™ IP68 NW, Medium: P/N 90510120  
Exterior 50™ IP68 WW, Narrow: P/N 90510130  
Exterior 50™ IP68 WW, Medium: P/N 90510140  
Exterior 100™ IP68 RGBW, Narrow: P/N 90510000  
Exterior 100™ IP68 RGBW, Medium: P/N 90510010  
Exterior 100™ IP68 CW, Narrow: P/N 90510020  
Exterior 100™ IP68 CW, Medium: P/N 90510030  
Exterior 100™ IP68 NW, Narrow: P/N 90510040  
Exterior 100™ IP68 NW, Medium: P/N 90510050  
Exterior 100™ IP68 WW, Narrow: P/N 90510060  
Exterior 100™ IP68 WW, Medium: P/N 90510070

## Photometric Data

### Exterior 50 IP68

RGBW, Medium - Efficacy: 22 lumens per watt, half peak angle: 35°, total output: 130lm

### Exterior 100 IP68

RGBW, Medium - Efficacy: 32.7 lumens per watt, half peak angle: 35°, total output: 590lm  
RGBW, Narrow - Efficacy: 37.3 lumens per watt, half peak angle: 21°, total output: 670lm  
6500K Cold white, Narrow - Efficacy: 53.8 lumens per watt, half peak angle: 23°, total output: 970lm

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Founded in 1987 and headquartered in Aarhus, Denmark, Martin lighting solutions are industry standard on tours and events, theatres, nightclubs, and major television studios around the world, as well as indoor and outdoor architecture and commercial applications. We maintain a presence in the USA, UK, Germany, Denmark, France, Italy and Singapore with associated companies in Japan, the Middle East, Hong Kong and Argentina. Martin operates the industry's most complete and capable distributor network with local partners in nearly 100 countries. Martin's parent company, Schouw & Co, is an industrial conglomerate with 2010 revenue of approximately 1.8 billion USD. For more information please visit [www.martin.com](http://www.martin.com)

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