

Extube™



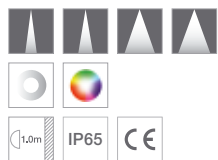
Extube™

The Extube Series is a modular system of IP65-rated linear LED luminaires designed for the dynamic illumination of facades, bridges and structures

FEATURES

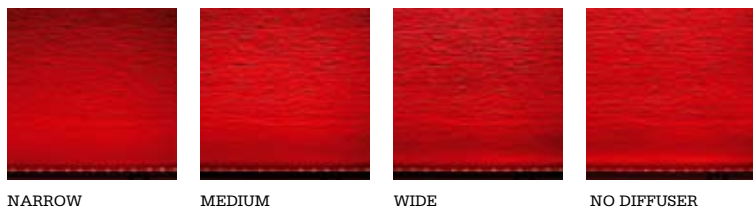
- 12 or 48 LEDs in four colours: Red, Green, Blue and White
- RGBW colour mixing
- Weatherproof rating: IP65
- Choice of optical diffuser films – narrow, medium, wide
- Simple click-together system: cable-less loop-through of power and data
- No need for any external power supply, it's all built-in
- Easy installation: slides onto DIN rail
- Tiltable for precise optical aiming
- Slim, inconspicuous design
- Available in two lengths: 300 mm (12 in.)/1200 mm (47.2 in.)
- Choice of DMX control modes: RGB, RGBW, HSI, HSIC
- Auto-addressing during set-up





CHOICE OF OPTICAL SYSTEMS

The Extube comes with a choice of narrow, medium and wide diffuser options, or it can be used without diffuser for an even narrower beam. A narrow diffuser is supplied as standard, and for projects, the product can be supplied from the factory as specified. The diffusers are also available as accessories, allowing the luminaire to be reconfigured on site if necessary. The Extube is each supplied with two tiltable brackets for precise optical aiming.



NARROW MEDIUM WIDE NO DIFFUSER

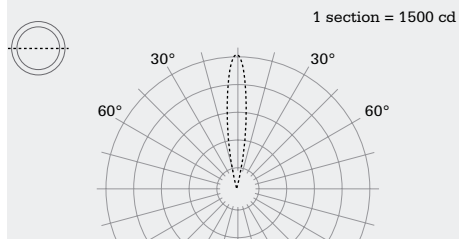
TRUE WHITE AND BETTER SATURATED COLOURS

With four coloured diodes (Red, Green, Blue and White) instead of the usual three, Martin is able to offer a broader and finer range of colours. With the usual three colours, you are not able to make the white light quality which the Extube does, and the white also helps to create softer, subtler pastels.



EXTUBE 1200, VERY NARROW

19° beam angle

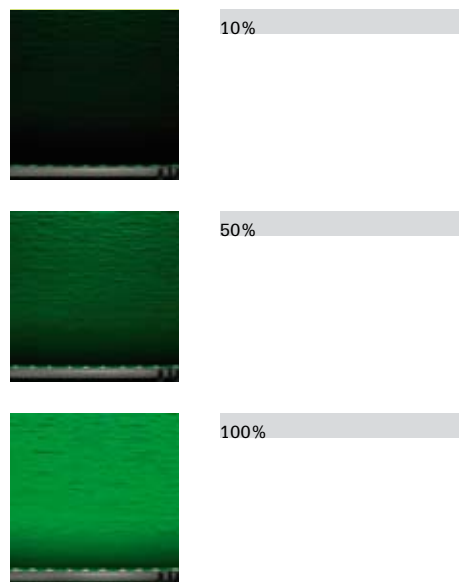


m	ft.	19°	E [lux]	E [fc]
1	3		7600	844
2.5	8		1216	119
5	16		304	30
7.5	25		135	12
10	33		76	7

Half-peak \varnothing : $0.33 \times \text{distance (m, ft)}$
 Illuminance: $7600 / \text{distance}^2$ (lux, fc)
 Total Output: 1200 (lumens)

0-100% INTENSITY CONTROL

The ability to dim a luminaire is appreciated by designers who want balance of brightness or the ability to allow structures and landscapes to respond intelligently to the availability of natural light

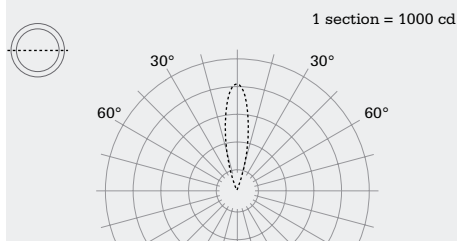


CONSISTENT COLOUR

Martin set out to solve what has been one of the major drawbacks of LED lighting: colour consistency. A central feature is the ability to create even and consistent colours. Pixel boards for the Extube are individually measured and calibrated, guaranteeing standardized brightness and colour performance.

EXTUBE 1200, NARROW

27° beam angle

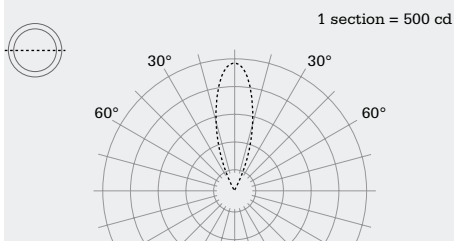


m	ft.	27°	E [lux]	E [fc]
1	3		4100	456
2.5	8		656	64
5	16		164	16
7.5	25		73	7
10	33		41	4

Half-peak Ø: 0.48 × distance (m, ft)
 Illuminance: 4100 / distance² (lux, fc)
 Total Output: 1200 (lumens)

EXTUBE 1200, MEDIUM

33° beam angle

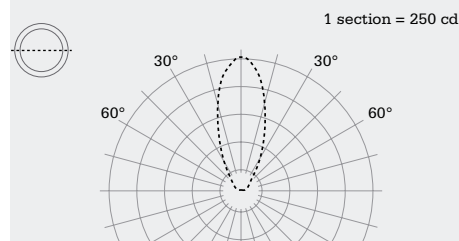


m	ft.	33°	E [lux]	E [fc]
1	3		2400	267
2.5	8		384	38
5	16		96	9
7.5	25		43	4
10	33		24	2

Half-peak Ø: 0.59 × distance (m, ft)
 Illuminance: 2400 / distance² (lux, fc)
 Total Output: 1100 (lumens)

EXTUBE 1200, WIDE

40° beam angle



m	ft.	40°	E [lux]	E [fc]
1	3		1300	144
2.5	8		208	20
5	16		52	5
7.5	25		23	2
10	33		13	1

Half-peak Ø: 0.73 × distance (m, ft)
 Illuminance: 1300 / distance² (lux, fc)
 Total Output: 1100 (lumens)

OPTIMIZED PERFORMANCE FROM HEAT MANAGEMENT

The lifetime and brightness of LEDs are dependent on how heat is removed from them. We have optimized the performance of the Extube to balance maximum performance with ambient temperature. If the ambient temperature is too high, the output from the LEDs is automatically decreased. This extends the lifespan of the diodes, and ensures that output is maintained at the optimum level.

ACCESSORIES

To build long lines of light, various Power Connection Kits and Extension Kits are available. Optional diffusers are available for reconfiguration of the beam angles. A DIN rail set is also available as an accessory.

INTERLOCK FOR CONTINUOUS LIGHT

The Extube is built up around modular, interconnectable units and a simple, click-together system, with cable-less loop-through of power and data. Interlock up to 26 m (85.3 ft.) at 230-240 V, or 13 m (42.7 ft.) at 110-120 V, per power input.

TWO SIZES WITH 12 OR 48 LEDs

The Extube is available in two lengths, 300 mm (11.8 in.) or 1200 mm (47.2 in.), with 12 or 48 LEDs in four colours and the possibility of creating one long, seamless line of light

APPLICATIONS

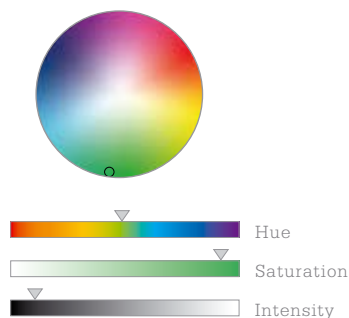
The Extube is not only for architectural and commercial applications, where its use is obvious. In addition to being ideal for illuminating bridges and buildings, lines of light or high-end clubs and lounges, it will also fit perfectly into the TV and Theatre market as well as the touring market, as a decorative lighting effect.

IP65 WEATHER-PROTECTION RATING



With a weather protection rating of IP65, the Extube is perfect for outdoor use and the dynamic illumination of facades, bridges and structures, especially in humid or saline environments. The Extube operates flawlessly from -20 to +40 degrees Celsius. The fixture offers easy installation for applications that require a self-contained luminaire.

INTUITIVE COLOUR CONTROL



The Extube offers greater intuitive control of colour, with four distinct control modes. In addition to RGB (three channel) and RGBW (four channel) colour fine-tuning, HSI (Hue, Saturation, Intensity) lets you set the effect you want by scrolling through hues, altering their saturation and changing their intensity. HSI-C adds colours temperature control to the intuitive benefits of HSI.

EASY TO INSTALL AND USE

The Extube is quickly and easily installed – simply slide the Extube onto a standard DIN rail. There is no need for any external power supply, it's all built-in. When connecting units to each other, there is no need to address individual Extube units; the units will auto-address themselves during set-up.

SPECIFICATION

PHYSICAL

Length: 300 mm / 1200 mm, plus end cap 15 mm and connections cap 55 mm if installed
Width: 89 mm
Height: 90 mm including mounting bracket for DIN rail
Weight: 300 mm model 750 g, 1200 mm model 3 kg

DYNAMIC EFFECTS

Colour mixing: RGBW
Red: 0 - 100%
Green: 0 - 100%
Blue: 0 - 100%
White: 0 - 100%

PHOTOMETRIC DATA

Light source: Luxeon Rebel high power emitters
Minimum LED source lifetime (to 50% of initial output level): 20 000 hours at full intensity
Total output per 300 mm section (balanced white, 5600 K)
Very narrow (19° half-peak): 300 lm
Narrow (27° half-peak): 290 lm
Medium (33° half-peak): 280 lm
Wide (40° half-peak): 270 lm

CONTROL AND PROGRAMMING

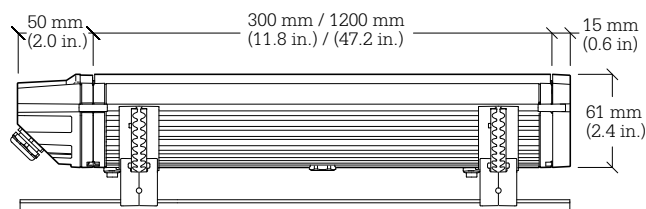
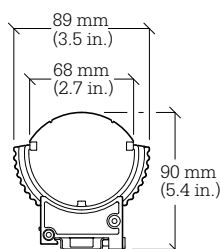
Colour control modes: RGB, RGBW, HSI, HSIC
Control: DMX
DMX channels: 3/4
Grouped pixel control options: 1 x 3 (all as one group) on 300 mm models, 1 x 12 (all as one group) or 4 x 3 on 1200 mm models
DMX address setting: Martin MUM application, cascading auto-addressing
26-bit control (internal): RGB, RGBW, HSI, HSIC
Protocol: USITT DMX512-A
Receiver: RS-485
Firmware update: Serial upload via DMX link

CONSTRUCTION

Housing: Aluminium
Finish: Clear anodized, black or white
End covers: PA6 nylon
Mounting brackets: PA6 nylon
Protection rating: IP65

INSTALLATION

Orientation: Any
Vertical aiming: +/- 90°
Mounting: 35 mm DIN top-hat rail
Maximum interconnected length per power input: 26 m at 230-240 V, 22 m at 208 V, 13 m at 110-120 V, or 11 m at 100 V



ELECTRICAL

AC power: 100-120/200-240 V nominal, 50/60 Hz
 Power supply unit: Integrated, auto-sensing multi-voltage

THERMAL

Cooling: Convection
 Maximum ambient temperature (Ta max.): 40° C
 Minimum ambient temperature (Ta min.): -20° C, power must be maintained below 0° C
 Maximum surface temperature, steady state, Ta=40° C: 75° C

APPROVALS

EU safety: EN 60598-1, EN 60598-2-1, IEC/EN 60825-1
 EU EMC: EN 55 015, EN 55 103, EN 61 000-3
 US safety: UL 1598
 Canadian safety: CAN/CSA C.22.2 No. 250



INCLUDED ITEMS

Brackets for mounting on DIN rail

ACCESSORIES



91610086
 Power connection kit (1 x input cap with 1.8 m cable tails + 1 x end cap), EU type



91610087
 Power connection kit (1 x input cap with 1.8 m cable tails + 1 x end cap), US type



91610094
 250 mm Extension Kit (output cap, cable and input cap), EU/US type



91610095
 2000 mm Extension Kit (output cap, cable and input cap), EU/US type



91610098
 Four 300 mm diffusers, Narrow



91610099
 Four 300 mm diffusers, Medium



91610100
 Four 300 mm diffusers, Wide



91602009
 DIN rail set (ten 2 m lengths)

Extube™

ORDERING

EXAMPLE SPECIFICATION

Extube, Surface Mounted, LED, IP65, RGB+W,
300 mm, Aluminium, Medium

= Extube 300 mm, Aluminium, Medium

= **90352300**

VARIABLES

Extube 300 mm	Aluminium	Narrow
Extube 1200 mm	Black	Medium
	White	Wide
		No diffuser

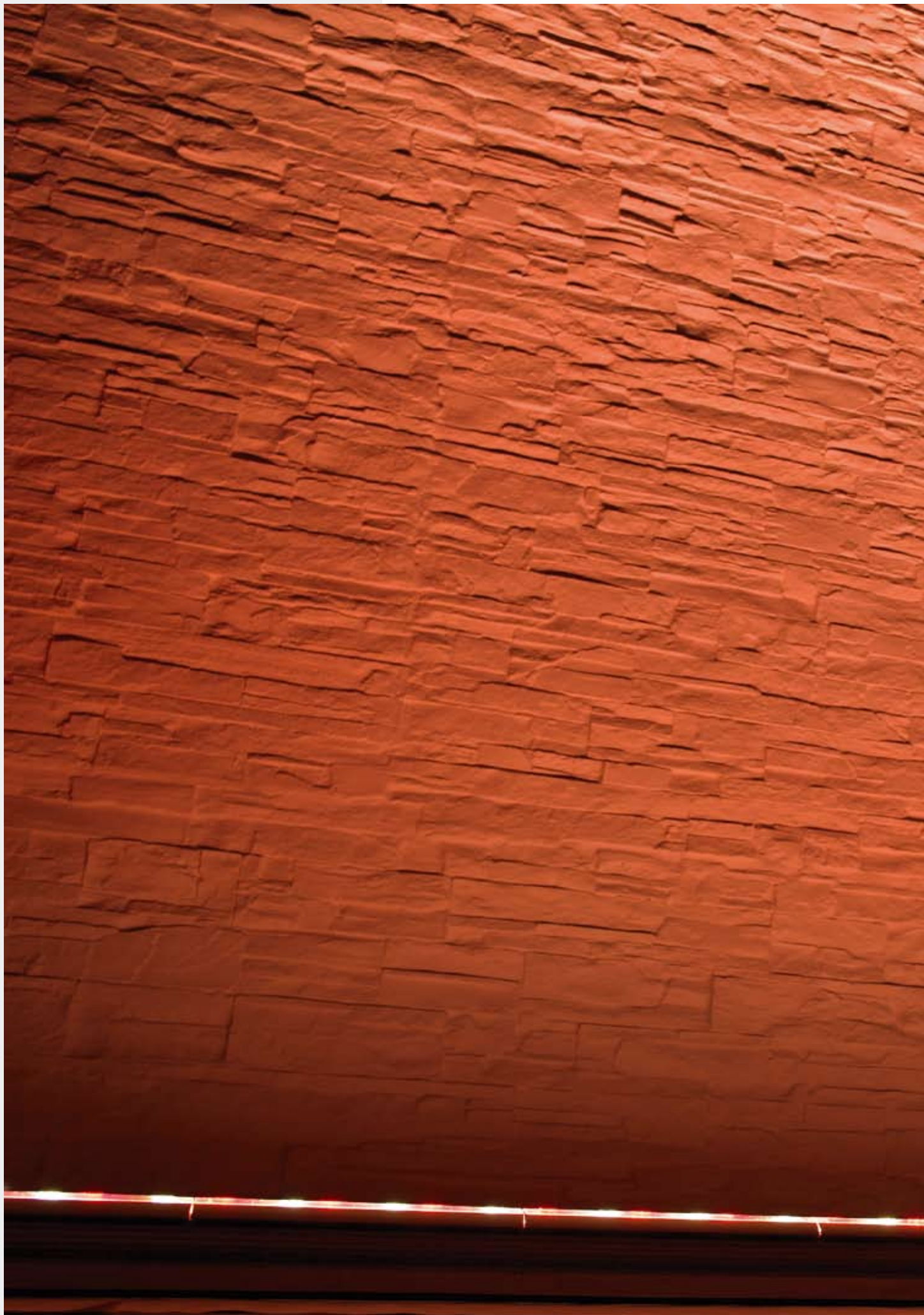


Extube 300 mm

SPECIFICATION	CODE
Aluminium	
Narrow	90352200
Medium	90352300
Wide	90352400
No diffuser	90352500
Black	
Narrow	90352201
Medium	90352301
Wide	90352401
No diffuser	90352501
White	
Narrow	90352202
Medium	90352302
Wide	90352402
No diffuser	90352502

Extube 1200 mm

SPECIFICATION	CODE
Aluminium	
Narrow	90352210
Medium	90352310
Wide	90352410
No diffuser	90352510
Black	
Narrow	90352211
Medium	90352311
Wide	90352411
No diffuser	90352511
White	
Narrow	90352212
Medium	90352312
Wide	90352412
No diffuser	90352512



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The Happy Factory, Denmark

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