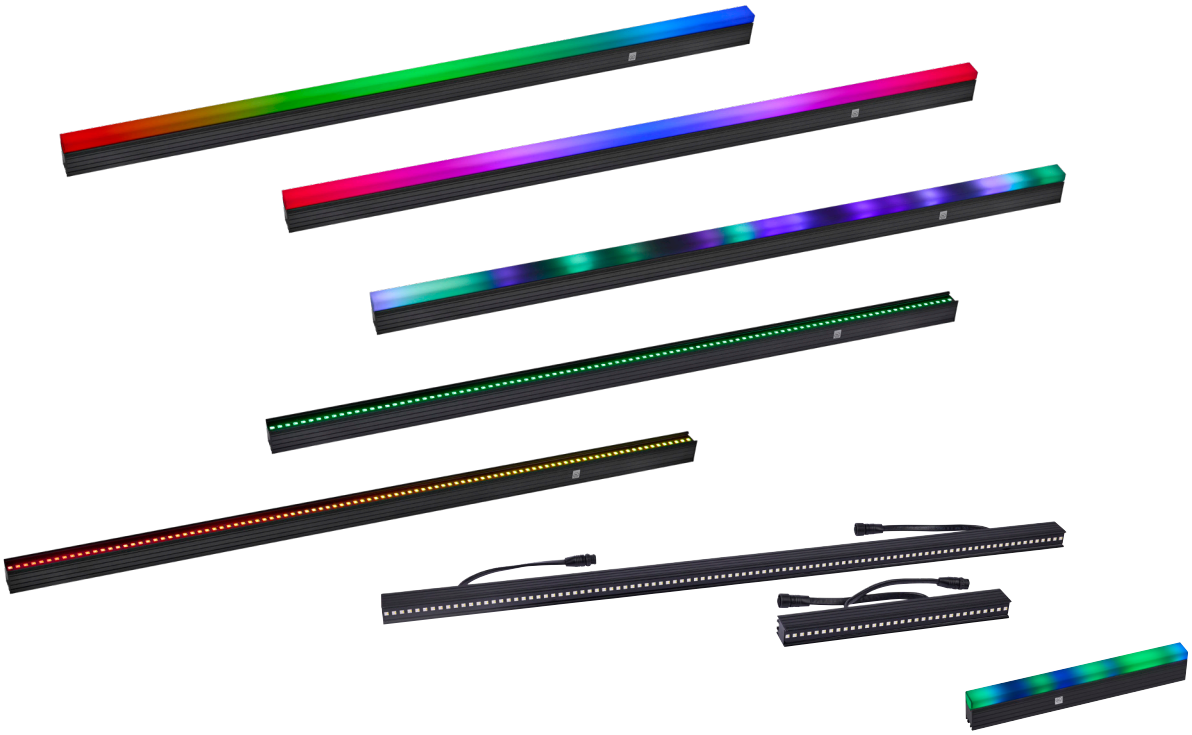
VDO SCEPTRON™ XB

HIGH-OUTPUT PIXEL-BATTEN

SPEC SHEET



OVERVIEW

The VDO Sceptron XB is a compact, high-performance LED pixel-batten, designed for both lighting and creative video applications. Building on the legacy of the Martin VDO Sceptron family, it inherits all of its benefits such as user-friendly mapping through Martin's P3 System Controller, the ability to exchange diffusers and lenses, and a wide range of available rigging accessories. The VDO Sceptron XB raises the bar with significantly boosted lumen output, enhanced cabling freedom, and the ability to be controlled as a lighting fixture via Art-Net and sACN, and as a creative video element via P3, or both simultaneously. With best-in-class performance, unmatched versatility, and a future-proof design, VDO Sceptron XB is ideal for lighting designers, rental houses, and installation professionals while setting a new standard for powerful, flexible lighting and creative video applications.

KEY MESSAGES

FAMILIAR USABILITY, SIMPLIFIED INTEGRATION

VDO Sceptron XB features the same form factor as its predecessor model and generates the same type of effect so it can be easily integrated into designs with the same confidence for successful outcomes as previous applications. It is also completely compatible with all its predecessor diffuser and rigging accessories.

PRECISION LIGHT QUALITY AND COLOR BOOST TECHNOLOGY

VDO Sceptron XB's enhanced light quality (CRI / TM-30 / TLCI) makes it ideal for illuminating people and spaces with precision. Martin's integrated Color Boost Technology ensures 3 to 7 times more brightness in colors. The series also renders much richer and deeper saturated colors by utilizing Extended Gamut Color Calibration.

SIGNIFICANTLY ENHANCED LUMEN OUTPUT

VDO Sceptron XB more than triples white lumen output of its predecessor model, allowing it to work as a "lighting fixture" and not just a "decorative LED strip", while output on colors has increased even more.

EASIER TO DEPLOY AND CONTROL

For the ultimate in flexibility, VDO Sceptron XB can be used as a lighting fixture using Art-Net and sACN, as a creative video element using Martin P3 control, or both at the same time using P3 Mix. It features the latest generation of control options, including FX Macros, color temperature control and tint control. It is also supported by both indoor (P3 PowerPort 2000) and outdoor (P3 PowerPort 500 IP Rental) power supply accessories, while offering more cabling freedom, featuring longer and split cable runs.

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FEATURES

- Extremely compact and lightweight
- More than triple the output of VDO Sceptron 10
- Colors boosted 3 to 7 times higher than in VDO Sceptron 10
- RGBW LEDs (higher output and higher light quality (CRI / TM-30 / TLCI))
- Full Gamut Pixel Calibration (pixel-to-pixel and fixture-to-fixture consistency, even when products from different manufacturing batches are being used together)
- Art-Net, sACN & Martin P3 control (usable as a lighting fixture and as a creative video element)
- Easy mapping and addressing through P3 System Controller or Companion Desktop
- P3 Mix channel enabling switching and fading between "lighting mode" and "video mode"
- IP65-rated for temporary outdoor use
- Stand-alone mode for applications without a Controller
- Wide range of optical accessories, including diffusers and lenses offering many different uses and looks
- Lens and Glare Shield accessories enabling usage as lighting fixture
- Versatile rigging accessories, allowing easy mounting of fixtures in many different configurations
- Indoor and outdoor power+data solutions available (P3 PowerPort family)

ORDERING INFORMATION

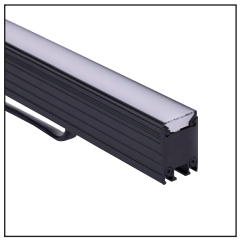
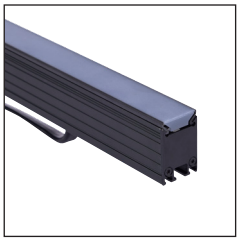
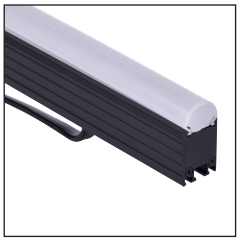
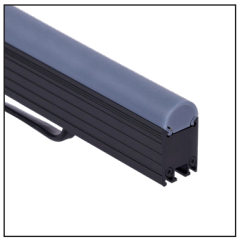
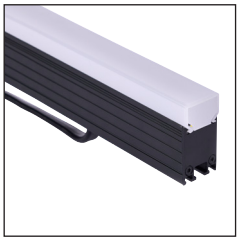
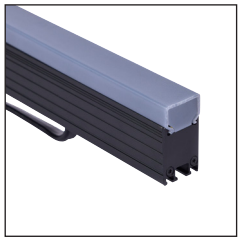
- VDO Sceptron XB 1000 mm, in cardboard box....P/N MAR-90357902
- VDO Sceptron XB 320 mm, in cardboard box.....P/N MAR-90357901
- Flightcase for 10 x VDO Sceptron XB 1000 mm / 30 x VDO Sceptron XB 320 mm.....P/N MAR-91515066
- Flightcase Extender for 10 x VDO Sceptron XB 1000 mm / 30 x VDO Sceptron XB 320 mm .....P/N MAR-91515067
- VDO Sceptron Flightcase to XB Foam Upgrade Kit .....P/N MAR-91515068

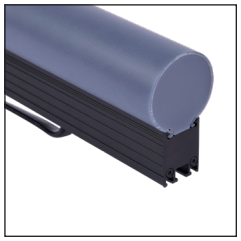
INCLUDED ITEMS

- Square Diffuser
- Square Smoked Diffuser
- 2x Cable Clip
- Safety Cable Attachment Eyelet
- Multi-Language Safety and Installation Manual

RELATED ITEMS

- P3-175 System Controller .....P/N MAR-90721100
- P3-275 System Controller .....P/N MAR-90721101
- P3-PC System Controller .....Free download from www.martin.com
- Martin Companion Firmware Upload, Addressing and Stand-Alone Programming Software .....Free download from www.martin.com



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HIGH-OUTPUT PIXEL-BATTEN

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ACCESSORIES

- Magnetic Test Tool, set of 10 ..... P/N 91610139
- VDO Sceptron Diffuser/Lens Removal Jaws..... P/N 91611836

RIGGING ACCESSORIES

- VDO Sceptron Sliding Brackets, set of 10 ..... P/N 91610123
- Super Lightweight Half Coupler Rigging Clamp, black..... P/N 91602018
- VDO Sceptron Low Profile Half Coupler..... P/N 91611790
- VDO Sceptron Linear Aligners, set of 10..... P/N 91610124
- VDO Sceptron Linear Coupler ..... P/N 91611843
- VDO Sceptron Parallel Couplers, 30/40/50 mm, set of 10 ..... P/N 91610125
- VDO Sceptron Parallel Couplers, 60/70/80 mm, set of 10 ..... P/N 91610138
- VDO Sceptron Spigot Adapter, 28 mm ..... P/N 91611791
- VDO Sceptron Floorstands, set of 2 ..... P/N 91611792
- VDO Sceptron Pivot Coupler ..... P/N 91611793
- VDO Sceptron Hinge Coupler .....P/N MAR-91616140
- 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
- Set of 10 VDO Sceptron XB Cable Clips.....P/N MAR-91616139

DIFFUSERS AND LENSES 320MM

- VDO Sceptron Flat Diffuser 320 mm ..... P/N 91610111
- VDO Sceptron Flat Smoked Diffuser 320 mm ..... P/N 91610113
- VDO Sceptron Round Diffuser 320 mm..... P/N 91610115
- VDO Sceptron Round Smoked Diffuser 320 mm ..... P/N 91610117
- VDO Sceptron Square Diffuser 320 mm..... P/N 91610119
- VDO Sceptron Square Smoked Diffuser 320 mm ..... P/N 91610121
- VDO Sceptron Tube Diffuser 320 mm ..... P/N 91611630
- VDO Sceptron Tube Smoked Diffuser 320 mm..... P/N 91611650
- VDO Sceptron XB Graze Lens 320 mm.....P/N MAR-91616131
- VDO Sceptron XB Blade Lens 320 mm.....P/N MAR-91616133
- VDO Sceptron XB Glare Shield 320 mm.....P/N MAR-91616137

DIFFUSERS AND LENSES 1000MM

- VDO Sceptron Flat Diffuser 1000 mm ..... P/N 91610112
- VDO Sceptron Flat Smoked Diffuser 1000 mm..... P/N 91610114
- VDO Sceptron Round Diffuser 1000 mm..... P/N 91610116
- VDO Sceptron Round Smoked Diffuser 1000 mm ..... P/N 91610118
- VDO Sceptron Square Diffuser 1000 mm..... P/N 91610120
- VDO Sceptron Square Smoked Diffuser 1000 mm ..... P/N 91610122
- VDO Sceptron Tube Diffuser 1000 mm ..... P/N 91611640
- VDO Sceptron Tube Smoked Diffuser 1000 mm..... P/N 91611660
- VDO Sceptron XB Graze Lens 1000 mm.....P/N MAR-91616132
- VDO Sceptron XB Blade Lens 1000 mm.....P/N MAR-91616134
- VDO Sceptron XB Glare Shield 1000 mm.....P/N MAR-91616138

POWER AND DATA SUPPLY UNITS

- P3 PowerPort 2000 ..... P/N MAR-90721200
- P3 PowerPort 500 IP Rental ..... P/N MAR-90721201
- P3 PowerPort 500 IP Install ..... P/N MAR-90721202
- DCE PSU 240 IP ..... P/N MAR-90721203

DATA SPLITTER & BOOSTER FOR SPLIT OR EXTENDED CABLE RUNS

- DCE DataSplitterBooster IP ..... P/N MAR-90721204

PRE-ASSEMBLED HYBRID DCE CABLES

- DC + Ethernet Cable DCE-DCE 1m..... P/N MAR-91700100
- DC + Ethernet Cable DCE-DCE 2.5m..... P/N MAR-91700101
- DC + Ethernet Cable DCE-DCE 5m..... P/N MAR-91700102
- DC + Ethernet Cable DCE-DCE 10m..... P/N MAR-91700103
- DC + Ethernet Cable DCE-DCE 25m..... P/N MAR-91700104

BULK HYBRID DCE CABLES

- DC + Ethernet Cable 100m..... P/N MAR-91700105
- DC + Ethernet Cable LSZH 100m..... P/N MAR-91700106

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HIGH-OUTPUT PIXEL-BATTEN

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ACCESSORIES (CONTINUED)

FIELD-INSTALLABLE DCE CONNECTORS

- Field-installable Connector DCE Male..... P/N MAR-91700107
- Field-installable Connector DCE Female ..... P/N MAR-91700108

CLOSING CAPS FOR DCE CONNECTORS

- Closing Cap Male DCE Connector ..... P/N MAR-91700109
- Closing Cap Female DCE Connector..... P/N MAR-91700110

HYBRID DCE ADAPTERS

- DC + Ethernet Adapter DCE Male-Male ..... P/N MAR-91700111
- DC + Ethernet Adapter
  DCE Female-Female ..... P/N MAR-91700112
- DC + Ethernet Adapter
  EtherCON+Wires to DCE ..... P/N MAR-91700113
- DC + Ethernet Adapter DCE to EtherCON..... P/N MAR-91700114
- DC + Ethernet Adapter Bare Wires to DCE ..... P/N MAR-91700115

SPARE PARTS

- Safety Wire Bracket Assembly ..... P/N M62420451

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TECHNICAL SPECIFICATIONS

CONTROL AND PROGRAMMING

Control Protocols.....Art-Net, RDM over Art-Net, sACN and Martin P3

Protocol Detection.....Automatic

DMX Modes 1000mm Variant:
Compact, Basic, Extended 5 Segments, Extended 10 Segments, Extended 25 Segments, Extended 100 Pixels, Compact Direct, RGB, PixelMap 5 Segments, PixelMap 10 Segments, PixelMap 25 Segments and PixelMap 100 Pixels

DMX Modes 320mm Variant:
Compact, Basic, Extended 2 Segments, Extended 4 Segments, Extended 8 Segments, Extended 32 Pixels, Compact Direct, RGB, PixelMap 2 Segments, PixelMap 4 Segments, PixelMap 8 Segments and PixelMap 32 Pixels

DMX Channels 1000mm Variant:
8, 14, 29, 44, 89, 314, 8, 3, 15, 30, 75, 300

DMX Channels 320mm Variant:
8, 14, 20, 26, 38, 110, 8, 3, 6, 12, 24, 96

Multi-Universe Overflow.....Yes, in all DMX Modes

16-bit Controllable Parameters.....Dimming

Setting and Addressing.....Martin P3 or RDM over Art-Net

Local User Interface.....Magnet Sensor to recall test patterns and reset fixture

Fixture identification.....User-settable ID number

Art-Net Compliance.....Art-Net 1, 2, 3 and 4; including RDM over Art-Net

sACN Compliance.....ANSI E1.31 - 2018

Martin P3 Compliance:.....P3 System Controller Software 6.1.0 or newer

Ethernet Transceiver.....10/100Mbit

Firmware Update.....via Ethernet using Martin Companion or P3 System Controller

CONTROL/USER INTERFACE

Device status.....Multi-color visual indication

Device test and reset.....Magnetic pushbutton to call up local test patterns and reset fixture

OPTICS

Pixel Pitch..... 10.00 mm

Pixel Quantity 1000mm Variant..... 100 RGBW pixels

Pixel Quantity 320mm Variant..... 32 RGBW pixels

LED Type..... Single RGBW LED per pixel

Beam Angle (Half Peak)..... 122x122° (without diffuser/lens installed)

Field Angle (Tenth Peak)..... 145x145° (without diffuser/lens installed)

Beam Angle (Half Peak)..... 24x84° (with graze lens installed)

Field Angle (Tenth Peak)..... 51x130° (with graze lens installed)

Beam Angle (Half Peak)..... 16x76° (with blade lens installed)

Field Angle (Tenth Peak)..... 31x120° (with blade lens installed)

Minimum LED lifetime: >100.000 hours (to >70% luminous output)*

**Figure obtained under manufacturer's test conditions*

PHOTOMETRIC DATA

Luminous Output Mixed White.....2300 lumen / m

Luminous Output Red.....640 lumen / m

Luminous Output Green.....1940 lumen / m

Luminous Output Blue.....350 lumen / m

Luminous Output Mixed White half power mode.....1250 lumen / m

Luminous Output Red half power mode.....320 lumen / m

Luminous Output Green half power mode.....970 lumen / m

Luminous Output Blue half power mode.....175 lumen / m

Luminous Intensity Mixed White.....830 cd/m

CCT.....Variable 1,800 K - 12,850 K (+/- 200 K)

CRI (Color Rendering Index).....≥ 78

CQS (Color Quality Scale).....≥ 74

TM-30 Rf (IES TM-30-15 Fidelity Index).....≥ 77

TM-30 Rg (IES TM-30-15 Gamut Index).....≥ 92

TLCI (Television Lighting Consistency Index).....≥ 61

LED Refresh Rate.....1,001 Hz or 4,004 Hz (selectable)

Binning.....Tight color and flux binning

Calibration.....Full Gamut Pixel Calibration

Color Modes.....Direct Color Mode, Extended Gamut Mode, Calibrated Color Mode & Linear Video Mode

*** All Photometric Data measured in steady state (30 minutes warm-up time) at 25ºC ambient**

*** All Photometric Data measured at 6500 K white**

*** All Photometric Data without diffuser/lens installed**

OPTICAL ACCESSORIES

- Flat Diffuser
- Flat Smoked Diffuser
- Round Diffuser
- Round Smoked Diffuser
- Square Diffuser
- Square Smoked Diffuser
- Tube Diffuser
- Tube Smoked Diffuser
- Graze Lens
- Blade Lens
- Glare Shield

All optical accessories are interchangeable and clip onto fixtures

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TECHNICAL SPECIFICATIONS

DYNAMIC EFFECTS

Dimmer/Shutter ..... 0 — 100% continuous dimming, regular and random strobe, instant open and blackout
Dimming options ..... Choice of four dimming curves
Color mixing ..... RGBW, independently variable 0 - 100%
Color temperature control ..... Variable 1,800 — 12,850 K
Tint control ..... Variable green-magenta shift Δuv -0.05 — +0.05
Virtual Color wheel ..... 48 color presets, continuous rotation & random color
PixelMapping ..... Individual RGB control of each pixel
P3 Mix ..... Videomapping of fixture with variable crossfade between DMX control and video control
Pre-programmed effects ..... Various pre-programmed FX; featuring foreground color, background color, speed and direction control
LED Frequency control ..... Two LED PWM control modes

P3 VIDEO PROCESSING

System processing depth ..... 16 bits per color (64 bits per pixel)
Frame rate ..... up to 60 frames/sec
Brightness control ..... 0-100% (maintaining full color depth)
Latency between first and last fixture ..... None
Gamma Curve Control ..... Yes, adjustable
Image Control Parameters ..... Hue, Saturation, Brightness, Contrast, Lowlight & Gain
Color temperature control ..... Variable 1,800 — 12,850 K
Tint control ..... Variable green-magenta shift Δuv -0.05 — +0.05
Color Gamut Control ..... Real-time

STAND ALONE PROGRAMMING

Programming Interface ..... Martin Companion Application via RDM over Art-Net
Controllable Parameters ..... All, including internal FX
Maximum Number of Scenes 20
Hold Time ..... Global or per scene
Fade Time ..... Global or per scene
Synchronization ..... Yes, including synchronization across different fixture types

CONSTRUCTION

Color ..... Matte black
Base ..... Aluminium
Protection rating IP65
Corrosion Resistance ..... ISO 12944-6: 2018; C3 High, Test regime ISO 9227, 240h

INSTALLATION

Mounting ..... Channel for M6 captive nuts on back of fixture
Mounting options ..... M6 bolts, sliding bracket, half coupler, spigot adapter, linear coupler, pivot coupler, parallel coupler or floorstand
Orientation ..... Any
Maximum vertical column height ..... 6 fixtures
Location ..... indoor or temporary outdoor use

CONNECTIONS

DC Power and Network input ..... cable tail with DCE hybrid connector (7pin)
DC Power and Network thru ..... cable tail with DCE hybrid connector (7pin)
All Connections Hot plugging compatible

ELECTRICAL

Nominal input voltage ..... 48 VDC +/- 4%
Power supply options ..... P3 PowerPort 2000, P3 PowerPort 500 IP Rental, P3 PowerPort 500 IP Install, DCE PSU 240 IP or generic 48 VDC PSU

Power Consumption 1000 mm Variant:
- Typical Full Power Mode ..... 30.0 W *
- Typical Half Power Mode ..... 16.9 W *
- Idle ..... 3.3 W *
- Hibernation ..... 1.6 W *

Power Consumption 320 mm Variant:
- Typical Full Power Mode ..... 11.0 W *
- Typical Half Power Mode ..... 6.5 W *
- Idle ..... 2.2 W *
- Hibernation ..... 1.6 W *

* Measurements made at nominal voltage. Allow for a deviation of +/- 10%.
Typical: fixture at full output white.
Idle: fixture at zero output.
Hibernation: no output, wake-up procedure required to re-use fixture.

THERMAL

Cooling ..... Convection
Maximum ambient temperature (Ta max.) ..... 50° C (122° F)*
Minimum ambient temperature (Ta min.) ..... -20° C (-4° F)*
Typical Heat Dissipation 1000 mm variant (calculated, +/- 10%) ..... 102 BTU/hr.
Typical Heat Dissipation 320 mm variant (calculated, +/- 10%) ..... 35 BTU/hr.

* At temperatures above 50° C (122° F), the fixture will automatically limit its output to prevent overheating.

* At temperatures below 0° C (32° F), the quantity of fixtures per daisy-chain needs to be reduced.

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TECHNICAL SPECIFICATIONS

ENVIRONMENTAL

RoHS ..... Compliant
REACH ..... Compliant
WEEE ..... Compliant
Proposition 65 ..... Compliant
FSC ..... Certified cardboard inlay and outer packaging
Efficacy (max output) ..... 76.6 lm/W
LWR* ..... 1438 lm/kg (657 lm/lbs.)
* LWR = Lumen-to-Weight Ratio

APPROVALS

- Global CB Certification/IECEE: IEC 62368-1
- EU Safety: IEC 62368-1
- EU EMC: EN 55032; EN 55035; EN 61000-3-2, EN 61000-3-3
- US Safety: UL 62368-1
- US EMC: FCC Part 15 Class B
- Canadian safety: CSA C22.2 No.62368-1
- Canadian EMC: ICES-003 Class B
- Australia/NZ: RCM
- United Kingdom: UKCA
- India: BIS IS 10322(Part5/section1)

DIMENSIONS

PHYSICAL

VDO Sceptron XB, 320 mm variant:

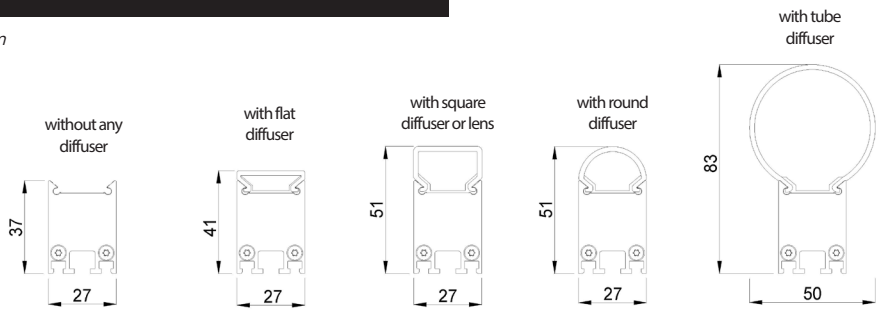
Length ..... 320 mm (12.6 in.)
Width ..... 27 mm (1.1 in.)
Height (without diffuser/lens) ..... 37 mm (1.5 in.)
Height (with included square diffuser) ..... 51 mm (2.0 in.)
Weight ..... 0.6 kg (1.3 lbs.)

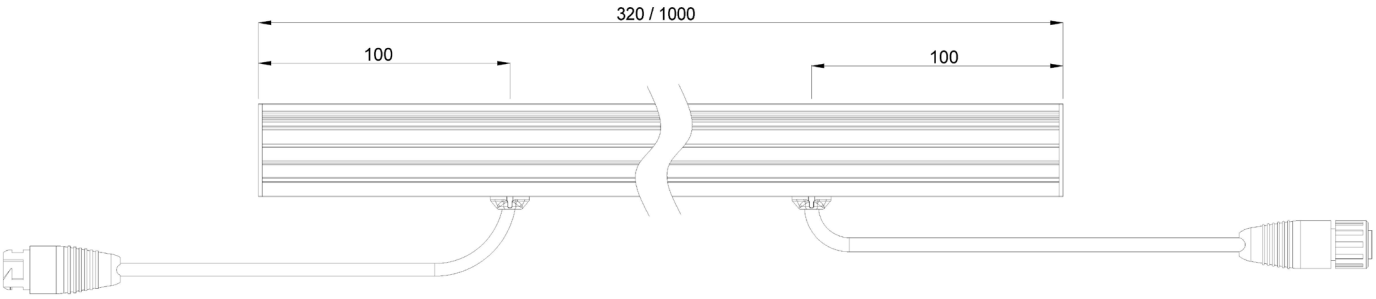
VDO Sceptron XB, 1000 mm variant:

Length ..... 1000 mm (39.4 in.)
Width ..... 27 mm (1.1 in.)
Height (without diffuser/lens) ..... 37 mm (1.5 in.)
Height (with included square diffuser) ..... 51 mm (2.0 in.)
Weight ..... 1.6 kg (3.5 lbs.)

FIXTURE / OPTICAL ACCESSORIES

All dimensions are in mm





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