

# Fiber Optic Lighting

## XPO SERIES

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### Building Your XPO System

For design flexibility, nothing beats XPO Series light bars

The modular XPO system offers a range of components that combine to create showcase lighting to suit your exact needs. XPO gives you all the advantages of fiber optic lighting in a sleek, custom-built system. And though XPO is primarily a showcase lighting system, you'll find that it also works for a variety of accent applications, because the conduit-based system frees you to put light exactly where you want it.

On the following pages, you'll find all the components needed to design your custom XPO system. Please take a few minutes to review "The Rules of XPO" on pages 178 and 179 – they'll save you time by illustrating certain spacing and placement limitations. Once you've determined the basics for your application, our experienced lighting designers will be happy to help you finalize the design.

#### How to begin

Begin with XPO's basic conduit. This "chaseway" is like a plumbing system for the fiber optic cable, so you'll need to lay out a structure that goes everywhere the light needs to be. Don't forget to plan where the illuminator(s) will be located and how the fiber optic tails will be routed. As a general rule, we recommend keeping the illuminators within 15' of the XPO light bars to maintain high light output. Swivel, right-angle and "T" connectors transform the conduit into a complete system, and allow connected lengths to rotate in different directions.

#### Choose your light

Once you've determined the overall structure of your XPO system, you'll need to choose the right XPO light modules for your desired lighting effect; these modules can be placed almost anywhere along the conduit to produce the lighting effect you want.

- Where you want general lighting, place groupings of wash point modules. Light levels in these areas can be controlled by fiber choice, or by custom-spacing of the wash points.
- Where you want spot-lighting, place individual Adjustable Accent Modules. These adjustable spot lights can tilt up to 38° in all directions and accept any of the six XPO lenses. XPO lenses are available in two profiles, with beam spreads ranging from 8° to 54°.

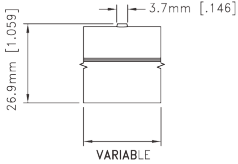
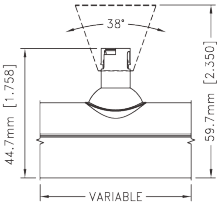
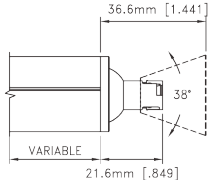
#### Choose your mounting

Select the mounting components that suit your needs. Mounting clips hold the XPO bar parallel to their mounting surface, while bushings and flanges attach the bar to a perpendicular mounting surface. Once again, our lighting designers can advise you on the best choices for your particular application, so feel free to contact us with any questions. We look forward to helping you build an XPO light bar system that fulfills your exact lighting needs.

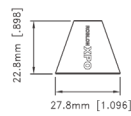
# Fiber Optic Lighting

## XPO SERIES

### Light Modules

SPECIFICATIONS		CAT. NO. XP- XW - FX - S - NL -
	<p><b>Component:</b> Wash Module</p> <p><b>Fiber Type:</b> PMMA or Glass</p> <p><b>Fiber Sizes:</b> 0.75mm, 1.0mm, 1.5mm, 2.0mm</p> <p><b>Ferrule Type:</b> XPO Wash Termination</p> <p><b>Lens Type:</b> No Lens</p> <p><b>Beam Angle</b> 54°</p> <p><b>Focus:</b> Fixed</p> <p><b>Primary Material:</b> ABS Plastic</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div> <p><b>Description:</b> XPO Series (Roblon) fixed-focus wash point with no lens, accepts PMMA or glass fiber up to 2.0mm; typical spacing of 25mm on center; custom spacing available.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>
SPECIFICATIONS		CAT. NO. XP- XF - AD - S - NL -
	<p><b>Component:</b> Adjustable Accent Module</p> <p><b>Fiber Type:</b> PMMA or Glass</p> <p><b>Fiber Sizes:</b> 2.0mm, 3.0mm, 4.5mm</p> <p><b>Ferrule Type:</b> XPO Fitting Termination</p> <p><b>Lens Type:</b> Accepts All XPO Lenses, Sold Separately</p> <p><b>Beam Angle</b> See XPO Lenses for Information</p> <p><b>Focus:</b> Adjustable</p> <p><b>Primary Material:</b> ABS Plastic</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div> <p><b>Description:</b> XPO Series (Roblon) adjustable-focus accent module for use with all XPO lenses; tiltable 38° in all directions; accepts PMMA or glass fiber up to 4.5mm; typical spacing of 50mm on center; custom spacing available.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>
SPECIFICATIONS		CAT. NO. XP- XF - AD - EC - NL -
	<p><b>Component:</b> End Cap Accent Module</p> <p><b>Fiber Type:</b> PMMA or Glass</p> <p><b>Fiber Sizes:</b> 2.0mm, 3.0mm, 4.5mm</p> <p><b>Ferrule Type:</b> XPO Fitting Termination</p> <p><b>Lens Type:</b> Accepts All XPO Lenses, Sold Separately<sup>54°</sup></p> <p><b>Beam Angle</b> See XPO Lenses for Information</p> <p><b>Focus:</b> Adjustable</p> <p><b>Primary Material:</b> ABS Plastic</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div> <p><b>Description:</b> XPO Series (Roblon) end-cap mounted adjustable-focus accent module for use with all XPO lenses; tiltable 38° in all directions; accepts PMMA or glass fiber up to 4.5mm.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>

### Adjustable Accent Module Lenses

SPECIFICATIONS		CAT. NO. XP- AC - 28 - 20 - 1530 -
	<p><b>Component:</b> 15°-30° Lens for Accent Modules</p> <p><b>Fixture Size: Lens</b> 28mm diameter</p> <p><b>Type:</b> 20mm Domed Glass Lens</p> <p><b>Beam Angle:</b> 8°-22°</p> <p><b>Primary Material:</b> ABS Plastic</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div> <p><b>Description:</b> XPO Series (Roblon) lens assembly with 20mm domed glass lens for use with all XPO accent modules; 15°-30° beam spread.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>

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SPECIFICATIONS		CAT. NO. XP - AC - 28 - 20 - 3045 -
	<p><b>Component:</b> 30°-45° Lens for Accent Modules</p> <p><b>Fixture Size:</b> 28mm diameter</p> <p><b>Lens Type:</b> 20mm Domed Glass Lens</p> <p><b>Beam Angle:</b> 28°-37°</p> <p><b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) lens assembly with 20mm domed glass lens for use with all XPO accent modules; 30°-45° beam spread.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>
SPECIFICATIONS		CAT. NO. XP - AC - 28 - NL - 60 -
	<p><b>Component:</b> 60° Lens for Accent Modules</p> <p><b>Fixture Size:</b> 28mm diameter</p> <p><b>Lens Type:</b> No Lens</p> <p><b>Beam Angle:</b> 54°</p> <p><b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) lens assembly with no lens for use with all XPO accent modules; 60° beam spread.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>
SPECIFICATIONS		CAT. NO. XP - AC - 28 - NL - B0 -
	<p><b>Component:</b> Black-Out Lens for Accent Modules</p> <p><b>Fixture Size:</b> 28mm diameter</p> <p><b>Lens Type:</b> No Lens</p> <p><b>Beam Angle:</b> No Light Output</p> <p><b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) lens assembly with covered (black-out) canopy for use with all XPO accent modules; allows individual accent modules to be “turned off”.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>

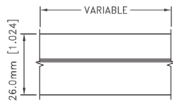
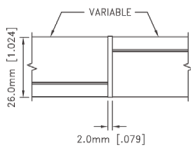
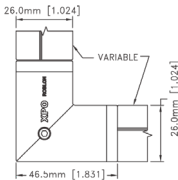
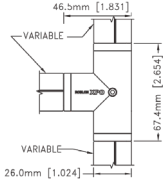
## Adjustable Accent Module Mini Lenses

SPECIFICATIONS		CAT. NO. XP - AC - 15 - 12 - 3045 -
	<p><b>Component:</b> Mini 30°-45° Lens for Accent Modules</p> <p><b>Fixture Size:</b> 15mm diameter</p> <p><b>Lens Type:</b> 20mm Domed Glass Lens</p> <p><b>Beam Angle:</b> 28°-37°</p> <p><b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) mini lens assembly with 12mm domed glass lens for use with all XPO accent modules; 30°-45° beam spread; reduces overall profile of XPO system.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>
SPECIFICATIONS		CAT. NO. XP - AC - 15 - NL - 60 -
	<p><b>Component:</b> Mini 60° Lens for Accent Modules</p> <p><b>Fixture Size:</b> 15mm diameter</p> <p><b>Lens Type:</b> No Lens</p> <p><b>Beam Angle:</b> 54°</p> <p><b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) mini lens assembly with no lens for use with all XPO accent modules; 60° beam spread; reduces overall profile of XPO system.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>

# Fiber Optic Lighting

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### System Components

SPECIFICATIONS		CAT. NO. XP - AC - CD -
	<p><b>Component:</b> Conduit <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) conduit; the backbone of the XPO System; used as mounting plane for wash point and accent modules, and as chaseway for fiber optic cables.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		CAT. NO. XP - AC - SW -
	<p><b>Accessory:</b> Swivel Connector <b>Mounting:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) swivel connector; connects two XPO conduit segments in strait line; allows connected segments to rotate in different directions.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		CAT. NO. XP - AC - RA -
	<p><b>Accessory:</b> Right Angle Connector <b>Mounting:</b> Aluminum with ABS Plastic Cover</p>	<p><b>Description:</b> XPO Series (Roblon) right angle connector; connects two XPO conduit segments at a 90° angle; allows connected segments to rotate in different directions.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		CAT. NO. XP - AC - T -
	<p><b>Accessory:</b> "T" Connector <b>Mounting:</b> Aluminum with ABS Plastic Cover</p>	<p><b>Description:</b> XPO Series (Roblon) "T" connector; connects three XPO conduit segments in "T" configuration; allows three connected segments to rotate in different directions.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>

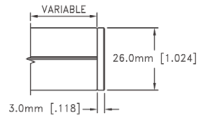
# Fiber Optic Lighting

## XPO SERIES

### SPECIFICATIONS

CAT. NO. XP - AC - EC -

AL  
BL



**Component:** End Cap  
**Primary Material:** ABS Plastic

**Description:**

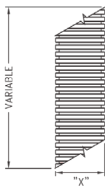
XPO Series (Roblon) end cap; provides attractive finish for exposed conduit segment ends.

**Finishes Available:**

Silver (AL), Black (BL)

### SPECIFICATIONS

CAT. NO. XP - AC - FH - BL



**Component:** Flex Hose  
**Primary Material:** Nylon

# of Fibers	Outer Diameter	Blend Radius
≤ 85:	13mm (0.511)	1.5"
86 - 164:	16mm (0.629)	1.75"
165 - 203:	18.5mm (0.728)	2"
204 - 300:	21.1mm (0.830)	2.25"

**Description:**

XPO Series (Roblon) flex hose; flexible covering for fiber tails exiting from end of conduit.

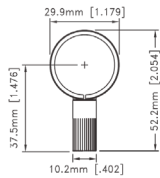
**Finishes Available:**

Silver (AL), Black (BL)

### SPECIFICATIONS

CAT. NO. XP - AC - SB -

AN  
ST



**Accessory:** Shelf Bracket  
**Primary Material:** ABS Plastic  
**Max Weight**  
**Per Bracket:** 2kg (4.4 lbs.)

**Description:**

XPO Series (Roblon) shelf bracket; supports edge of shelf (not included) to convert XPO lighting system into complete display system; four brackets required per shelf; maximum weight per bracket: 2kg (4.4 lbs); per shelf: 4 x 2kg = 8kg (17.5 lbs) (always include weight of shelf itself in calculations).

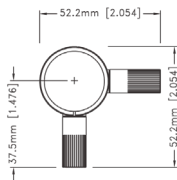
**Finishes Available:**

Silver (AL), Black (BL)

### SPECIFICATIONS

CAT. NO. XP - AC - SB2 -

AN  
ST



**Accessory:** Double Shelf Bracket  
**Primary Material:** ABS Plastic  
**Max Weight**  
**Per Bracket:** 1kg (2.2 lbs.)

**Description:**

XPO Series (Roblon) double shelf bracket; 2- piece set of interlocking brackets supports edges of two adjacent shelves at same level; maximum shelf weight per side: 1kg (2.2lbs) (always include weight of shelf itself in calculations).

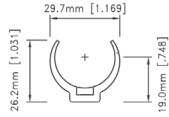
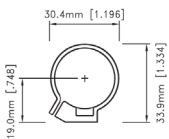
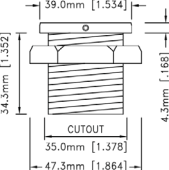
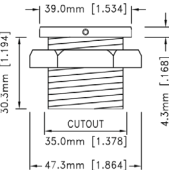
**Finishes Available:**

Silver (AL), Black (BL)

# Fiber Optic Lighting

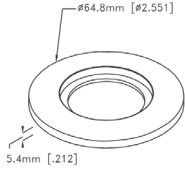
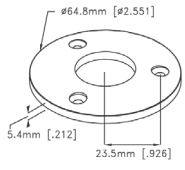
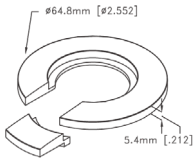

## XPO SERIES

### Mounting Components

SPECIFICATIONS		CAT. NO.	XP - AC - MC -
	<p><b>Accessory:</b> Mounting Clip <b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) mounting clip; attaches XPO segment to parallel mounting surface; XPO conduit “snaps” into clip allowing for free rotation of light bar.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div>
SPECIFICATIONS		CAT. NO.	XP - AC - BR -
	<p><b>Accessory:</b> Mounting Bracket <b>Primary Material:</b> ABS Plastic</p>	<p><b>Description:</b> XPO Series (Roblon) mounting bracket; attaches XPO segment to parallel mounting surface; XPO conduit locks into bracket keeping light bar from rotating; screws included.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL)</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL</div>
SPECIFICATIONS		CAT. NO.	XP - AC - MB -
	<p><b>Accessory:</b> Mounting Bushing - Closed End <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) mounting bushing; threaded with nut for fixing XPO segment to perpendicular surface; closed-end bushing provides additional support for XPO light bar.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL BZ</div>
SPECIFICATIONS		CAT. NO.	XP - AC - PB -
	<p><b>Accessory:</b> Mounting Bushing - Pass Through <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) mounting bushing; threaded with nut for fixing XPO segment to perpendicular surface; pass-through bushing with open end provides leeway for installation into fixed spaces.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">AL BL BZ</div>

# Fiber Optic Lighting

## XPO SERIES

SPECIFICATIONS		CAT. NO. XP - AC - FP -
	<p><b>Component:</b> Flange - Plain <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) plain flange; optional finish element for front-mount installation; fits around bushing at base of XPO conduit to provide additional stability for tall systems</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		
	<p><b>Component:</b> Flange - Screw <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) screw flange; for frontmount installation when rear surface cannot be accessed; fits around bushing at base of XPO conduit and secures light bar to mounting surface; screws included.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		
	<p><b>Accessory:</b> Flange - Key Hole <b>Primary Material:</b> Aluminum</p>	<p><b>Description:</b> XPO Series (Roblon) key-hole flange; optional finish element for rear-mount installation; twopiece flange fits around bushing at base of XPO segment to cover larger through-holes.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>
SPECIFICATIONS		
	<p><b>Accessory:</b> CTO Filter <b>Primary Material:</b> Dichroic Glass</p>	<p><b>Description:</b> XPO Series Dichroic CTO Glass Filter for use in adjustable-focus accent module; available in 4 color correction levels.</p> <p><b>Finishes Available:</b> Silver (AL), Black (BL), Bronze (BZ)</p>

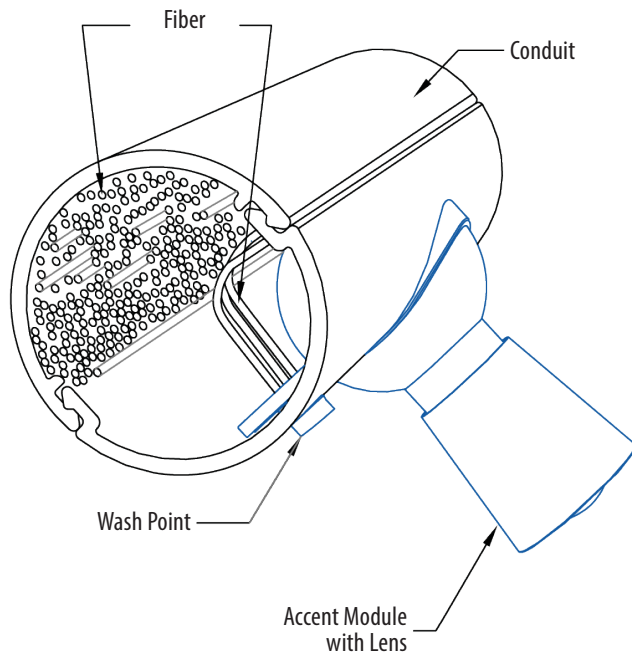
# Fiber Optic Lighting

## XPO SERIES - THE RULES OF XPO

### Fiber Requirements

Each XPO Light Module utilizes fibers of various sizes, which determines the light intensity for that module. These individual fibers require physical space within the conduit (or light bar), which has limited capacity. The larger the fiber used, the brighter the light output for that module, but also, the more space the fiber will take up within the conduit. If the capacity of the conduit is exceeded, multiple fiber tails can be used to split the total.

The table below allows you to calculate the number of tails your light bar will require by converting the size and quantities of fibers into "units". The maximum capacity of a single fiber tail is 300 units; more than 300 units will require dual tails. If your system calculates to more than 600 units, please call our office to discuss your application with one of our lighting designers.

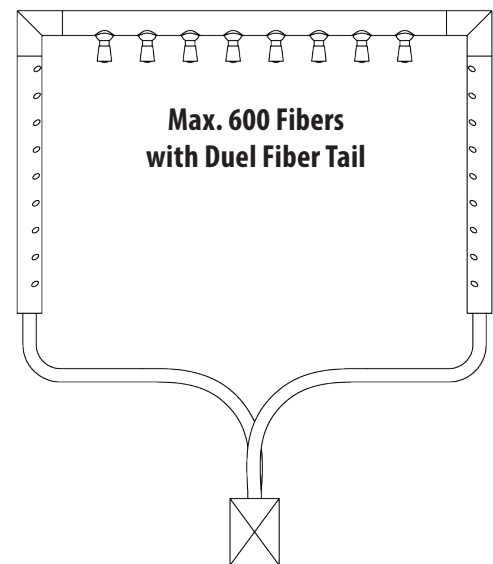
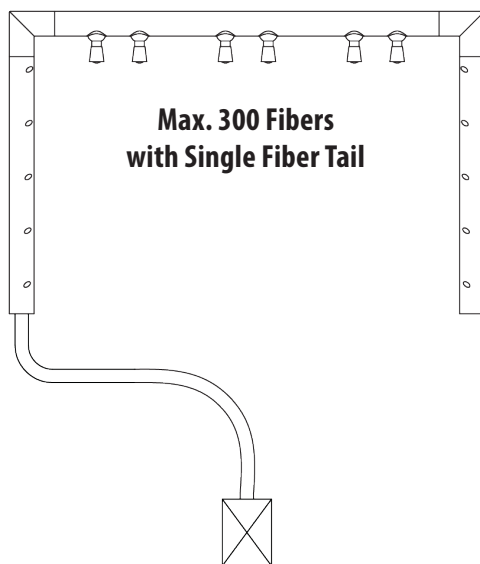


**Section View**

### Worksheet

FIBER SIZE		QTY	MULTIPLIER		TOTAL UNITS PER FIBER SIZE
WASH POINTS	0.75mm		X	1	=
	1.0mm		X	1.75	=
	1.5mm		X	3	=
	2.0mm		X	7	=
ADJUSTABLE ACCENTS	2.0mm		X	7	=
	3.0mm		X	14	=
	4.5mm		X	27	=
TOTAL UNITS PER SYSTEM* =					

\*More than 300 Units Requires Dual Fiber Tails

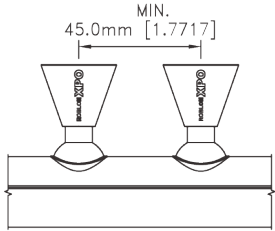




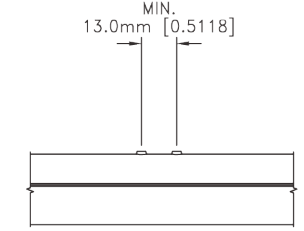
# Fiber Optic Lighting

## XPO SERIES - THE RULES OF XPO

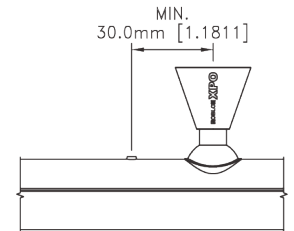
### Minimum Distance Guidelines



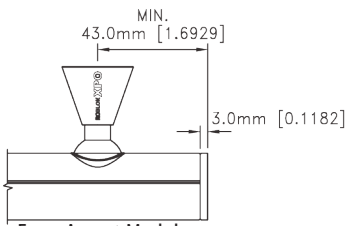
From Accent Module to Accent Module



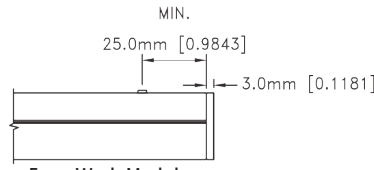
From Wash Module to Wash Module



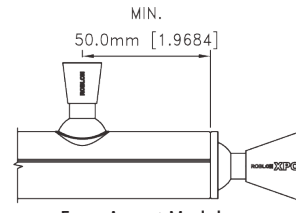
From Wash Module to Accent Module



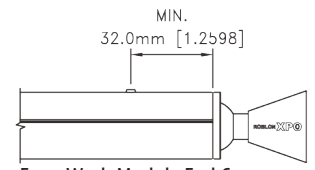
From Accent Module to End Cap



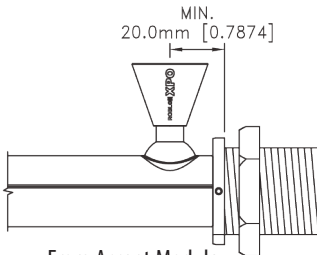
From Wash Module to End Cap



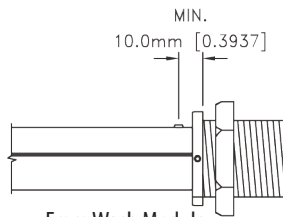
From Accent Module to End Cap Module



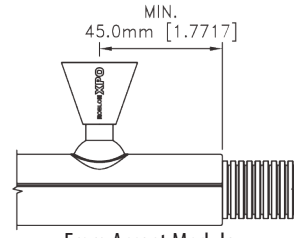
From Wash Module End Cap to Accent Module



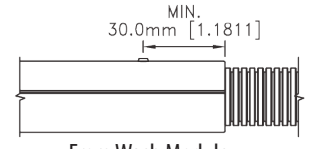
From Accent Module to Bushing



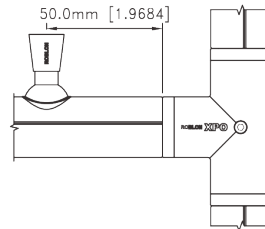
From Wash Module to Bushing



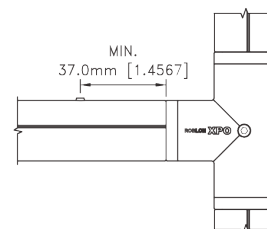
From Accent Module to Flex Hose



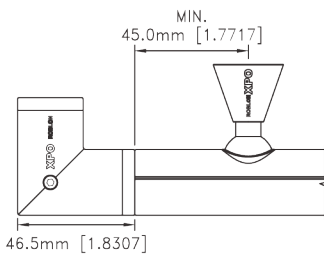
From Wash Module to Flex Hose



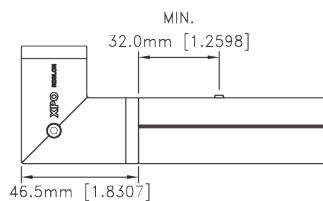
From Accent Module to "T" Connector



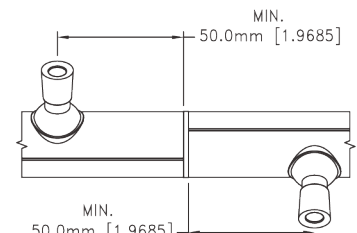
From Wash Module to "T" Connector



From Accent Module to Right Angle Connector



From Wash Module to Right Angle Connector



From Accent Module to Swivel Connector