



# QBeam Expanded Beam Connectors

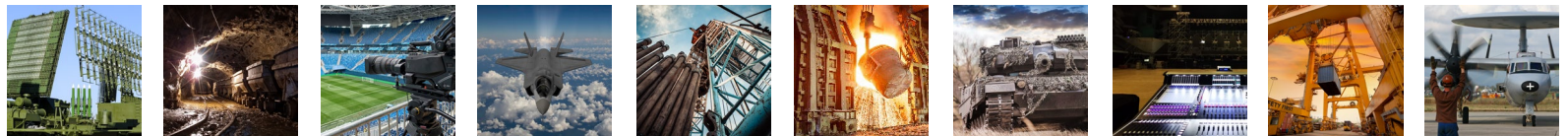


Proudly Designed, Manufactured  
& Assembled in the USA



QPC is ISO 9001:2015 and  
AS9100D Certified

Military    Aerospace    Defense    Industrial    Oil & Gas    Mining    Energy    Marine    Entertainment    Audio    Broadcast



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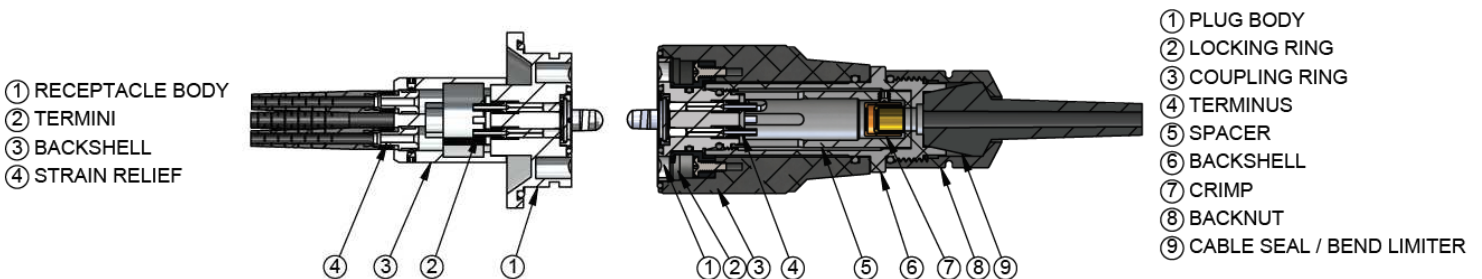


The QPC QBeam Expanded Beam Fiber Optic Connectors use non-physical contact fiber optic termini that are fully sealed behind anti-reflective coated drum lenses and a protective BK-7 Window. These lenses expand the beam to many times its original size aiding optical alignment and minimizing the effects of dust, debris, vibration, and other environmental conditions. Because there is no wear on the optical surfaces / end faces of the termini during use, the QBeam connector has excellent durability, in excess of 10,000 mating cycles, providing a long service life interconnect solution.

QBeam is a hermaphroditic connector allowing multiple plug-to-plug cable assemblies to be combined to extend the length of the system. These connectors are available with four channels of multimode fiber.

QBeam Connectors are used in Military and Defense Applications.

- 2Ch & 4Ch Hermaphroditic Twist-Lock Expanded Beam / Lensed Connector System
- Plug & Receptacle: Aluminum / Stainless Steel Construction
- Receptacles: Jam Nut and Flange Mount, with Low Profile Cable Backshells (3.6mm – 6.5mm) or for 2mm / 3mm Simplex Cables
- Multimode Fiber (62.5/125µm & 50/125µm)
- Cable OD up to 6.5mm
- Intermateability: Amphenol CTOS 976 Series Product Line
- Sealed to IP68



## Specifications:

<b>Insertion Loss:</b> <b>MM (50/125µm)</b>	0.75-2.0dB Max.
<b>MM (62.5/125µm)</b>	0.75-2.0dB Max.
<b>Operating Temperature:</b>	-40°C to +85°C
<b>Vibration:</b>	10 to 2000Hz / 10g
<b>Mating Durability:</b>	10,000 Cycles
<b>Impact:</b>	8 Impacts @ 8FT (2.5MT), EIA/TIA-455-2
<b>Shock:</b>	50g for 11ms, EIA/TIA-455-14, Condition A
<b>Salt Spray</b>	500 Hours
<b>IP Rating:</b>	IP68 - Dust Tight; No ingress of dust; complete protection against contact; Water Immersion Beyond 1 Meter Testing Conditions & Duration – Plug with Dust Cover and Mated Plug / Receptacle, 3 Meters for 24 Hours
<b>Material &amp; Plating Specification:</b>	Matte Black Hard Anodize: 6061-T6 Aluminum; Anodize per MIL-A-8625 TYPE III CLASS 2, .0022/.0018 Thick (50% Penetration), Metal Finishing; Bead Blast for Matte Finish; Matte Black  Stainless Steel: 303 Stainless Steel; Passivate Per QQ-P-35

## Specifications Notes:

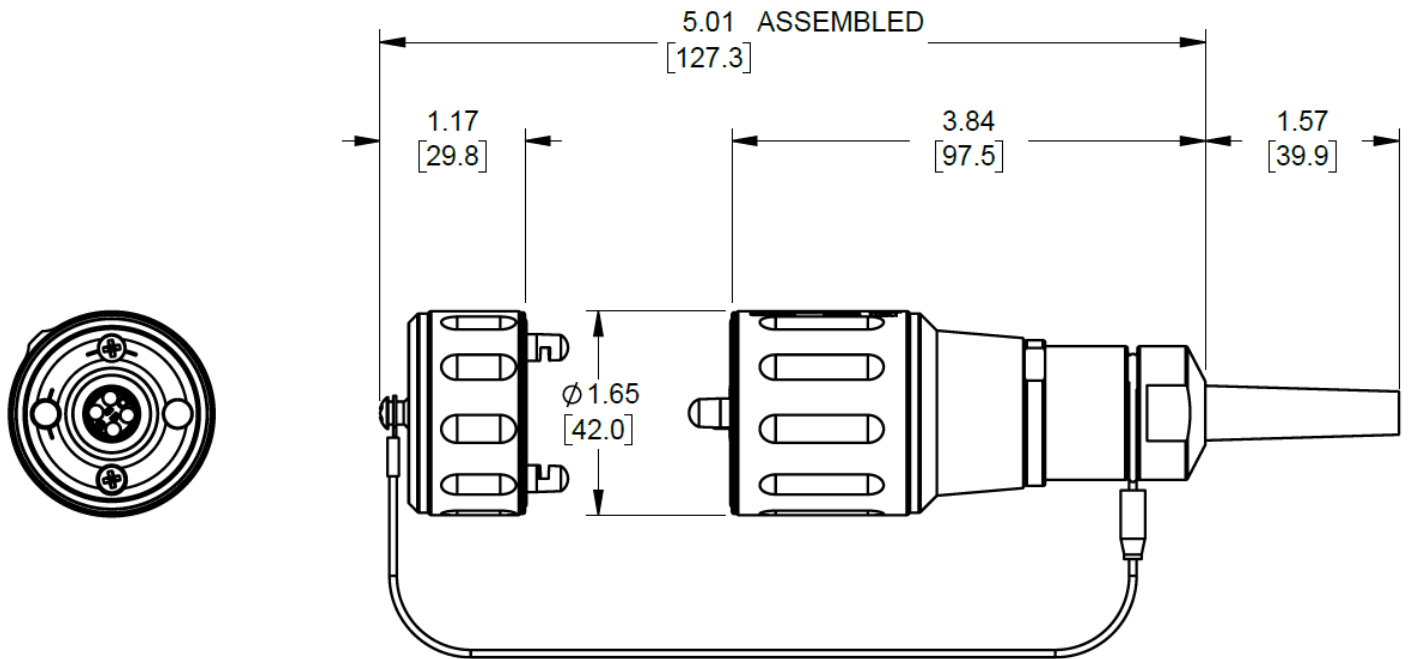
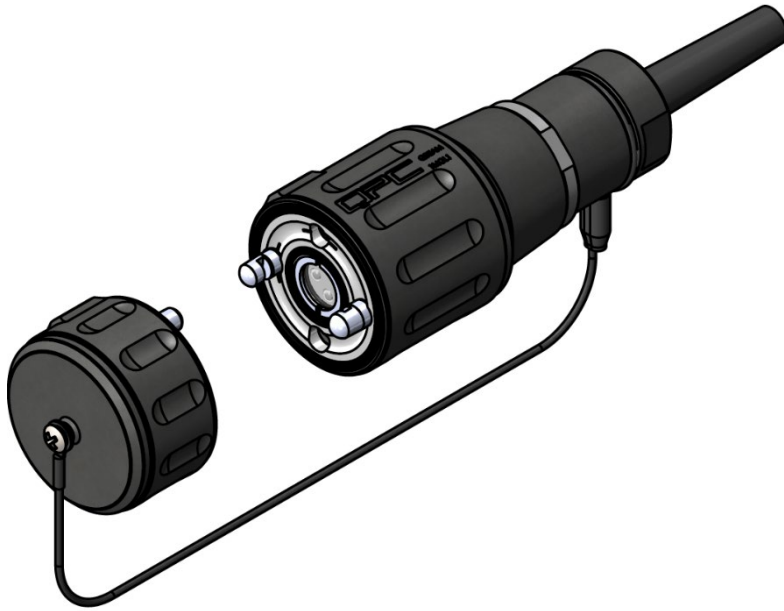
\* All Dimensions in this document are shown in Inches (Millimeters)

## Part Number Builder; QBeam Plugs and Receptacles:

<b>Sample Part Number:</b> <b>QBEAM-PHED-04MM-S45</b>	<b>QBEAM</b>	<b>-</b>	<b>PHE</b>	<b>D</b>	<b>-</b>	<b>04MM</b>	<b>-</b>	<b>S45</b>
<b>1 Series</b> 1 QBEAM								
<b>2 Connector Type</b> PHE - PLUG, METAL HERMAPHRODITIC DUST COVER RFE - RECP FLANGE MOUNT, METAL HERMAPHRODITIC DUST COVER RJE - RECP JAM NUT, METAL HERMAPHRODITIC DUST COVER								
<b>3 Material &amp; Finish Code</b> D - ALUMINUM, MATTE BLACK HARD ANODIZE / STAINLESS STEEL, PASSIVATED								
<b>4 Channel Count / Fiber Type</b> 02MM - 2 CHANNEL, 4x 126µm TERMINI, MULTIMODE, 850/1300nm 04MM - 4 CHANNEL, 4x 126µm TERMINI, MULTIMODE, 850/1300nm								
<b>5 Strain Relief</b> S02 - 2mm O.D. CABLE (RECEPTACLE ONLY) S03 - 3mm O.D. CABLE (RECEPTACLE ONLY) L42 - LOW PROFILE STRAIN RELIEF FOR 4X 2mm O.D. INDIVIDUAL JACKETED FIBERS (RECEPTACLE ONLY) L45 - LOW PROFILE STRAIN RELIEF FOR 3.6mm TO 4.5mm O.D. CABLE (RECEPTACLE ONLY) L55 - LOW PROFILE STRAIN RELIEF FOR 4.6mm TO 5.5mm O.D. CABLE (RECEPTACLE ONLY) L65 - LOW PROFILE STRAIN RELIEF FOR 5.6mm TO 6.5mm O.D. CABLE (RECEPTACLE ONLY) S45 - STRAIN RELIEF FOR 3.6mm TO 4.5mm O.D. CABLE (PLUG ONLY) S55 - STRAIN RELIEF FOR 4.6mm TO 5.5mm O.D. CABLE (PLUG ONLY) S65 - STRAIN RELIEF FOR 5.6mm TO 6.5mm O.D. CABLE (PLUG ONLY)								

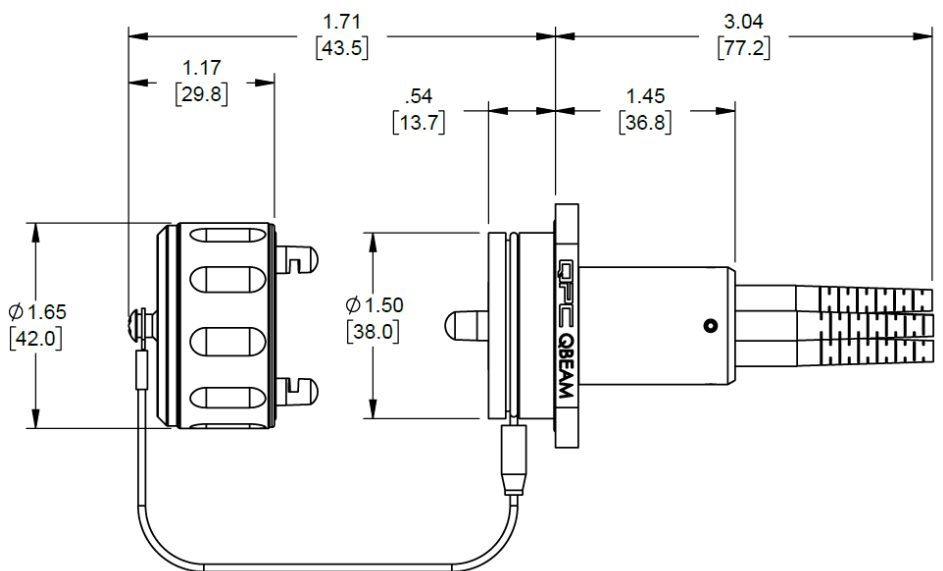
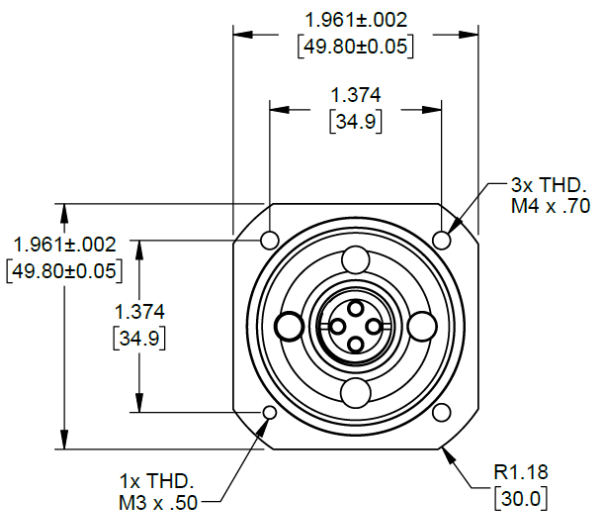
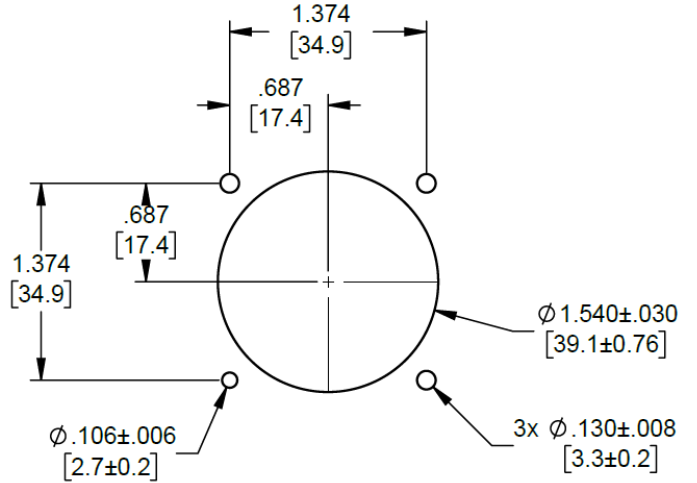
**QBeam Plug, Hermaphroditic, Metal Hermaphroditic Dust Cover:**

**QBEAM-PHED-04MM-SXX**



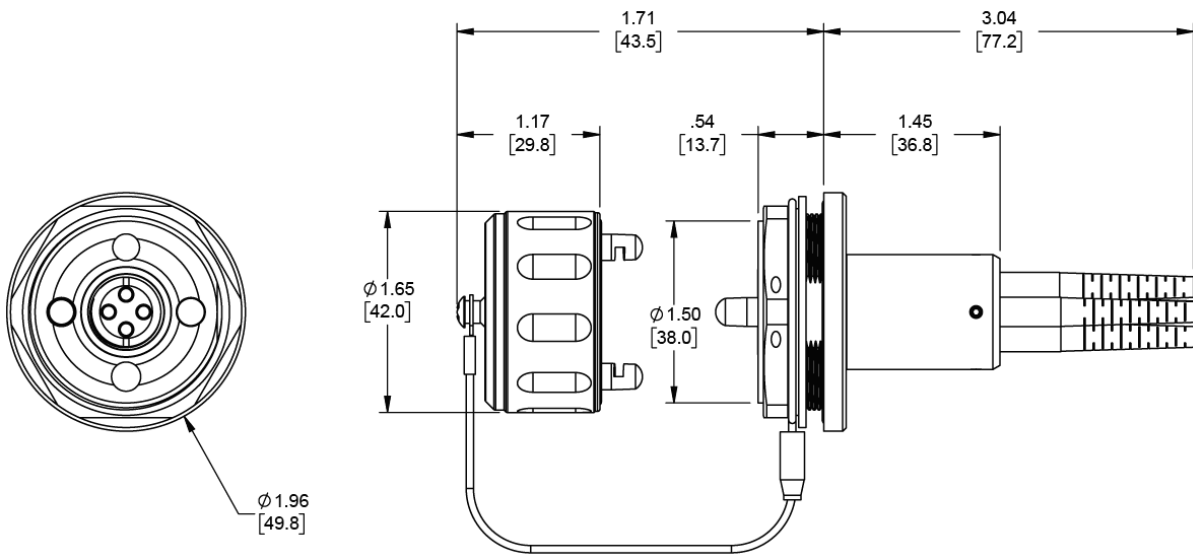
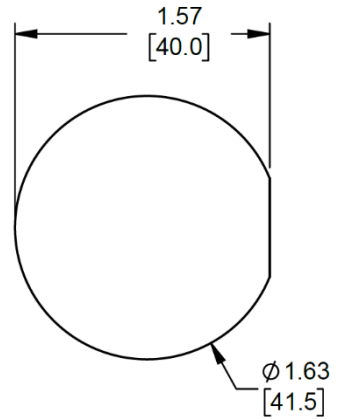
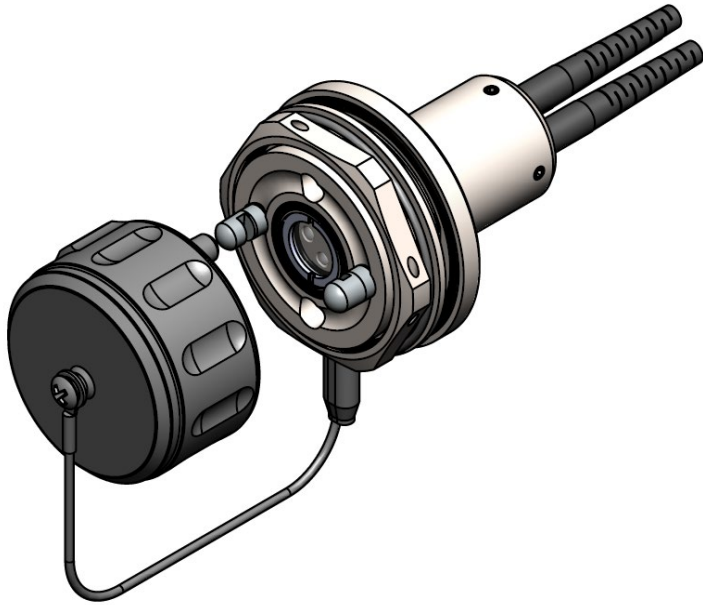
## QBeam Receptacle, Flange Mount, Metal Hermaphroditic Dust Cover:

**QBEAM-RFED-04MM-S0X**



**QBeam Receptacle, Jam Nut, Metal Hermaphroditic Dust Cover:**

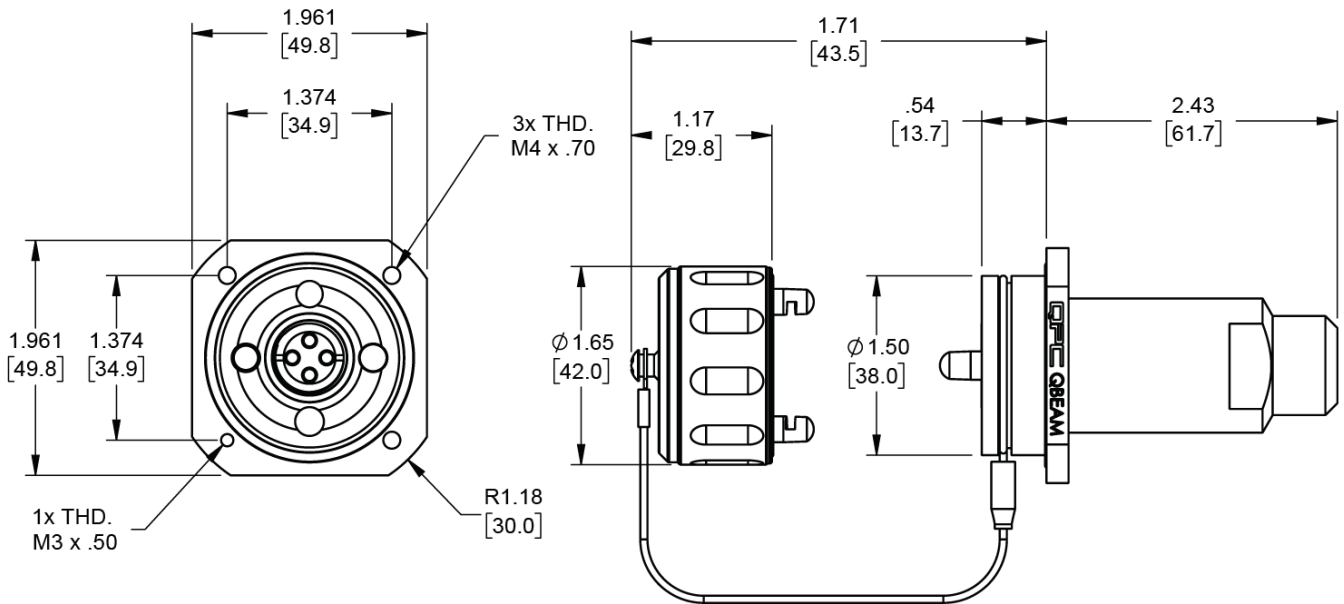
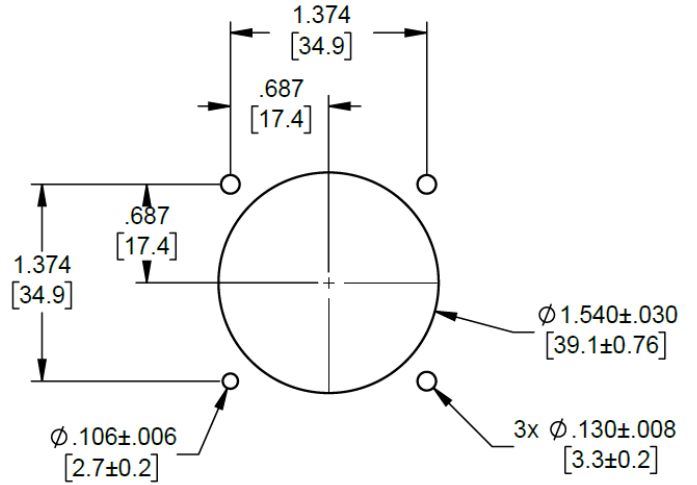
**QBEAM-RJED-04MM-S0X**





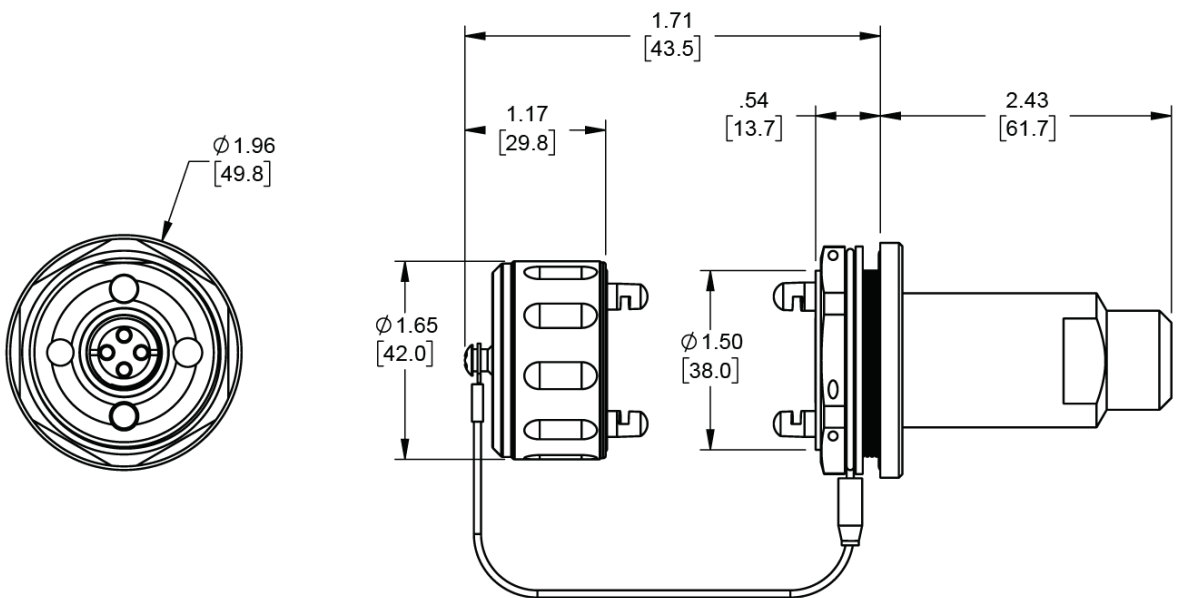
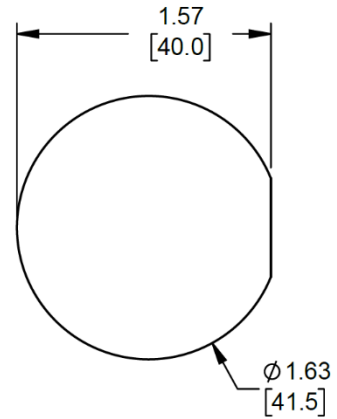
## QBeam Receptacle, Flange Mount, Metal Hermaphroditic Dust Cover, with Low Profile

**QBEAM-RFED-04MM-LXX**



**QBeam Receptacle, Jam Nut, Metal Hermaphroditic Dust Cover, with Low Profile Backshell:**

**QBEAM-RFED-04MM-LXX**



## QBeam Termini:

PART NUMBER	DESCRIPTION
QM-TRM	Terminus Assembly; QBeam; 2.5mm Ferrule OD; 126µm Multimode
QBEAM-CMP-2MM	Crimp Sleeve, 2.0mm, Nickel Plated Brass
QBEAM-CMP-3MM	Crimp Sleeve, 3.0mm, Nickel Plated Brass

## QBeam Replacement Dust Covers:

PART NUMBER	DESCRIPTION
QBEAM-DCHPD	Dust Cover; QBeam; Plug; Aluminum; Hard Anodize; Matte Black
QBEAM-DCHRD	Dust Cover; QBeam; Receptacle; Aluminum; Hard Anodize; Matte Black

## QBeam Tools:

PART NUMBER	DESCRIPTION
TK-055	QBeam Tool Kit (Includes all items below)
PT-540	Hydraulic Hand Crimping Tool
PT-541	Die Set, 0.314 Hex for Hydraulic Hand Crimper
PT-226	QBeam Lens Cover Torque Driver
PT-010	Fiber Optic Crimp Tool, 2mm & 3mm (Hex Size .178 Stepped)

# QFC

FIBER OPTIC

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