

# DIAMOND

## Fiber Optic Components

### X-BEAM

(Harsh environment)

#### CABLE ASSEMBLIES AND ADAPTERS

The Diamond X-BEAM is a genderless tactical fiber optic connector which uses lens based expanded beam technology for ease of cleaning and mating in outdoor applications. The X-BEAM expands and collimates the transmission signal at the mating point. The expanded beam technology reduces the impact of both misalignment as well as endface contamination. The lens system encloses and protects the fiber end face allowing the connector to be quickly cleaned and mated in the field without special tools. Genderless construction helps simplify use under adverse conditions.

The X-BEAM connector is an ideal choice for use within harsh environments such as field-deployable communications, mobile diagnostic units, avionics, security systems and much more. The Diamond X-BEAM connector is available with up to 4 channels and can be terminated on most types of Single Mode or Multimode cable constructions.

#### FEATURES AND BENEFITS

- ▶ Rugged construction  
*Highly reliable optical connections*
- ▶ IP 67 rated enclosure, IEC 60529 compliant
- ▶ Intermateable with connectors compliant with MIL-DTL83526/20/21
- ▶ High tolerance connector housings  
*Easily mated, repeatable, low loss connections*
- ▶ Integrated expanded beam lens system  
*Protects the fiber endface and improves optical performance in harsh environment applications*
- ▶ Genderless design  
*Simplifies mating*
- ▶ Keyed, self aligning, connector housing  
*Aides in "blind mating" applications*

#### AVAILABLE AS

- ▶ Terminated connector

#### SPECIFICATIONS

		UNITS	TEST CONDITIONS
Insertion Loss (IL) SM	typ. 0.9 max. 1.6	dB	IEC 61300; $\lambda = 1300/1550$ nm
Return Loss (RL) SM	typ. 30	dB	IEC 61300; $\lambda = 1300/1550$ nm
Insertion Loss (IL) MM	typ. 0.7 max. 1.3	dB	IEC 61300; $\lambda = 1300$ nm; CPR 18dB
Return Loss (RL) MM	min. 18	dB	IEC 61300; $\lambda = 1300$ nm
Vibration, sinusoidal	10-500	Hz	3 directions, 10g acceleration
Free fall	500 falls		on concrete; severity 1.2m
Coupling endurance	2500 couplings		According to field experience
Operating temperature	-55/+85*	°C	
Storage temperature	-55/+85*	°C	
Damp heat, cyclic	+55*	°C	
Cable retention	800	N	IEC 61300-2-4

\* May be further limited by cable specifications



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Specifications subject to change  
without notice

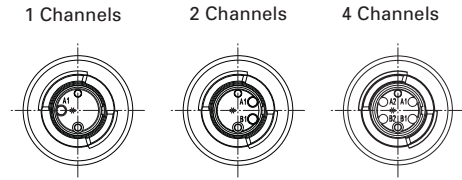
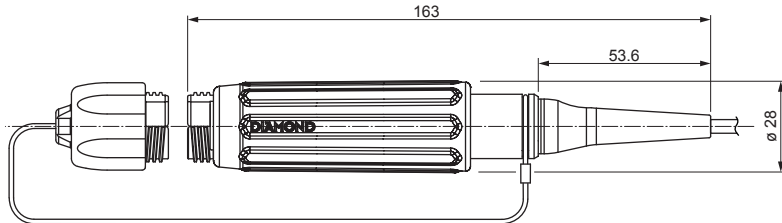
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## CONNECTOR TYPES AND DIMENSIONS

X-BEAM OLC (Optical Lenses Connector), 1 to 4 channels

Available types: **X-BEAM OLC 2 x**  
**X-BEAM OLC 4 x**

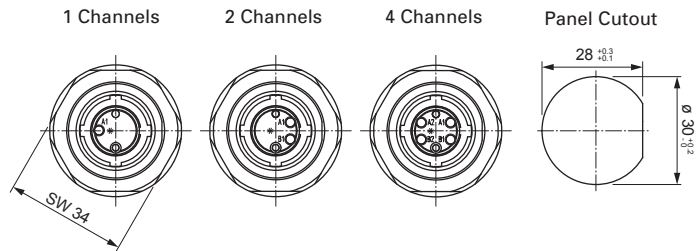
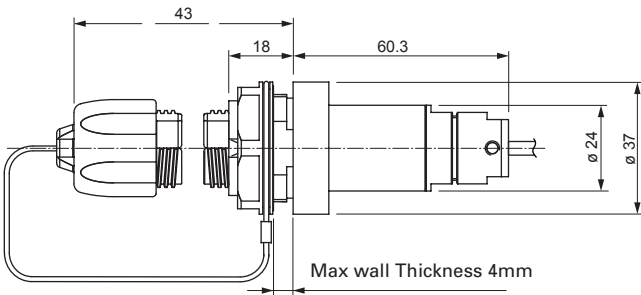
Housing material: Metal/plastic (Black)



X-BEAM OLB (Optical Lenses Bulkhead), 1 to 4 channels

Available types: **X-BEAM OLB 2 x**  
**X-BEAM OLB 4 x**

Housing material: Metal (Black)



**NOTE** Other configuration available upon request.

## ORDER INFORMATION

Please contact your nearest local Diamond representative or fill in the contact form available on the [www.diamond-fo.com](http://www.diamond-fo.com) website.