

## LUX-BEAM™

Single Expanded Beam Termini  
 Size 16 series III for MIL-DTL-38999 / EN3645 / EN4165  
 Fiber Optics Solutions



### Description

Lux-Beam™ is a single expanded beam termini that enables upgrades from optical physical contact technology to optical contactless technology.

Designed for applications such as avionics and field communication systems, demanding a large amount of data, voice and video to be securely transmitted, this fiber optic termini provide a reliable, easy to install solution.

Lux-Beam™ is easy to clean, and is less sensitive to pollution by dust or debris. The contactless coupling of LUX-BEAM™ is not subject to degradation of performances resulting from friction of optical surfaces as it usual is on traditional butt joint termini.

With its patented pin to socket realignment feature, Lux-Beam™ is compatible with connectors from different suppliers and provides an efficient adjustment to tolerances during mating.



### Main Features

#### Expanded Beam technology

- Surface expanded bundle >140X
- Reduced sensitivity to dust
- No degradation of the optical face
- Easy cleaning
- Low maintenance

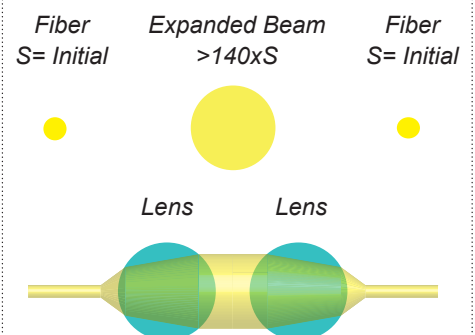
#### Compatibility

- Cavity #16
  - MIL-DTL-38999 series III TV/CTV, EN3645
  - EN 4165 (SIM)

#### Other benefits technology

- Easy installation with standard tools
- Possibility to mix with Electrical contact for Hybrid solutions

#### Expanded Beam Technology



### Markets



C4ISR



Ground Vehicle



Military Aerospace



Commercial Aerospace



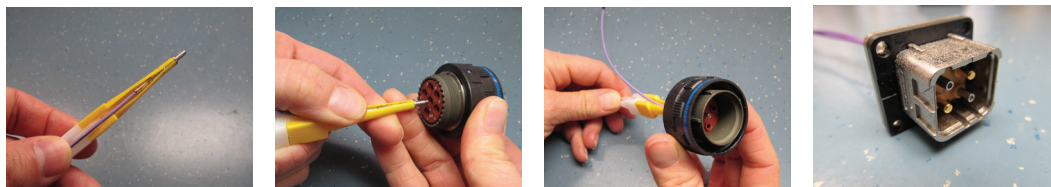
Oil and Gas

## Technical Data

SPECIFICATION	MEASUREMENT DETAILS	STANDARD	METHOD
INSERTION LOSS	2dB max multimode, 850nm 2dB max multimode, 1300nm	MIL-PRF-29504D	TIA-455-34
MATING DURABILITY	500 cycles	MIL-DTL-38999	TIA-455-21
OPERATING TEMPERATURE, TEMPERATURE LIFE	125°C 1000H	MIL-PRF-29504D	TIA-455-04
STORAGE TEMPERATURE	-40°C / +85°C	MIL-PRF-29504D	-
TEMPERATURE CYCLING	5 cycles -40°C +70°C	MIL-DTL-38999	TIA-455-03
THERMAL SHOCK	5 cycles -55°C +125°C	MIL-PRF-29504D	TIA-455-34
HUMIDITY	24 h at 50°C max 33% HUM 240 h at 40°C 90% RH	MIL-DTL-38999	TIA-455-05
SALT SPRAY	48h	MIL-PRF-29504D	TIA-455-16
VIBRATION	Connectors mated Method B: Figure 2, Table 1, level J (1g2/Hz) Duration: 8h / axe – 2 axes longitudinal and perpendicular direction. Duration of micro-discontinuity: < 1µs IL max 2dB.	EN2591-6403	-
SHOCK	Method A, severity 100 Number of shocks: 1 each way for each of the 2 directions (6 shocks in all). Duration of micro-discontinuity: < 1µs	EN2591-6402	-
INSERTION AND REMOVAL FORCE	max 22 pounds	MIL-PRF-29504D	3.6.9
MAINTENANCE AGING	10 insertion / removal cycles	MIL-PRF-29504D	3.6.13

## Assembling your LUX-BEAM by yourself

Insert LUX-BEAM™ on standart cavity #16 with Standart tool



MIL DTL 38999/EN 3645 EN4165

## How To Order

### LUX-BEAM™ in piece part

DESIGNATION	LXB LXB	16 16	P S2	A C	18X 18X
<b>Series</b> LXB: LUX-BEAM™, single expanded beam optical termini					
<b>Cavity size</b> 16: size 16 for 38999 series III					
<b>Type of termini</b> P: pin termini S2: socket termini for series II S3: socket termini for series III					
<b>Wavelength</b> A: optimised for wavelength 850nm (Multimode) B: optimised for wavelength 1300nm (Multimode) C: optimised for wavelength 850nm & 1300nm (Multimode)					
<b>Cable</b> 18X: for cable 1.8mm					

## Tools

Termini insertion & removal tool  
for termini p/n M81969/14-03



**NOTA:** To get the mounting instructions, please contact us.

## How to Order Cable Assemblies with LUX-BEAM™

### Cable Assemblies With LUX-BEAM™ To Other Termini

Designation	LXB	16	P	A	1	D	1	L	0020	ST2	1	D	O	M
<b>Type of Termini</b> LXB: LUX-BEAM™, Single expanded beam optical termini														
<b>Cavity size</b> 16: size 16 for 38999 series III														
<b>Type of termini</b> P : pin termini S2 : socket termini for series II S3 : socket termini for series III														
<b>Wavelength</b> A: optimised for wavelength 850nm (Multimode) B: optimised for wavelength 1300nm (Multimode) C : optimised for wavelength 850nm & 1300nm (Multimode)														
<b>Termination type</b> 1: PC Ceramic														
<b>Boot form</b> D: straight boot														
<b>Type of fiber</b> 1: 50/125 Multimode 2: 62.5/125 Multimode														
<b>Type of cable</b> L: Simplex cable with buffer 900µm and outer jacket dia. 1.8mm														
<b>Length</b> XXXX: length in m for L ≥ 10m, ex 0020 for L=20 meters X.XX: length in m for L < 10m, ex 5.00 for L=5.0 meters														
<b>Type of Termini</b> XXX: pigtail ST2: connector ST2 954: connector SC simplex LCS: connector LC simplex ELU: connector ARINC 801 optical termini														
<b>Termination type</b> 1: PC Ceramic														
<b>Boot form</b> D: straight boot														
<b>Protective Cap</b> O: standard protective cap														
<b>Marking</b> - : standard marking MX: specific marking														



## In development: LUX-BEAM™ Size 12



### Expanded Beam technology

- Surface expanded bundle > 50X
- Reduced sensitivity to dust
- No degradation of the optical face
- Easy cleaning
- Low maintenance

### Compatibility

- Cavity #12
  - MIL-DTL-38999 series III & series II TV/CTV, EN3645
  - EN 4165 (SIM)

### Other benefits technology

- Easy installation
- Possibility to mix with Electrical contact for Hybrid solutions

