

LUX-BEAM™

Single Expanded Beam Termini
 Size 12 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 > 35X
- Reduced sensitivity to dust
- No degradation of the optical face
- Easy cleaning
- Low maintenance

Compatibility

- Cavity #12
 - MIL-DTL-38999 series III TV/CTV, EN3645
 - EN 4165 (SIM)
- Accept ARINC 801 or dia. 1.25 mm optical termini

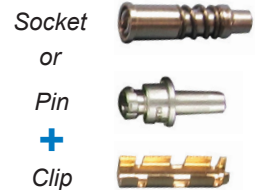
Other benefits technology

- Easy installation and replacement as a FUSE (without optical wiring)
- Realignment Patented, for compatibility with multisources connectors
- Possibility to mix with Electrical contact for Hybrid solutions

ARINC 801 TERMINI



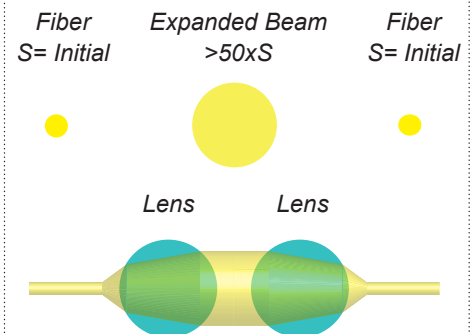
LUX-BEAM™ TERMINI



EXPANDED BEAM TERMINI



Expanded Beam Technology



Markets



C4ISR



Ground Vehicle



Military Aerospace



Commercial Aerospace



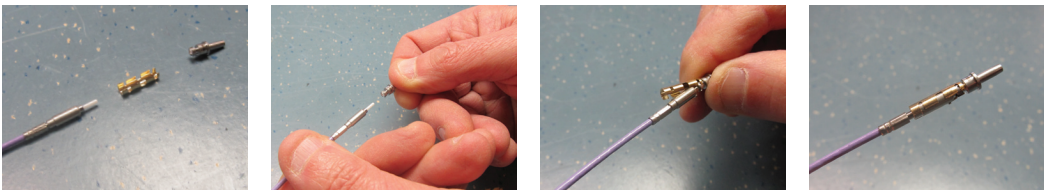
Oil and Gas

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	1000 cycles	MIL-DTL-38999	TIA-455-21
OPERATING TEMPERATURE, TEMPERATURE LIFE	125°C 1000H	EN 2591-100	EN 2591-6301
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 of 30 min / -55°C +125°C	SAE AS 13441	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
EXTERNAL BENDING MOMENT	869N	MIL-DTL-38999	TIA-455-71
VIBRATION	Random vibration 1g2/Hz 8 hours - 2 axes X and Z	EN2591	403 Table 2 - Nivel J
SHOCK	1/2 sinus - 18 shocks - 300g - 3ms	EN2591	402
INSERTION AND REMOVAL FORCE	max 98 N	MIL-PRF-29504D	3.6.9
MAINTENANCE AGING	10 insertion / removal cycles	MIL-PRF-29504D	3.6.13
CABLE RETENTION (ARINC 801)	68N	ARINC 801	TIA-455-06

Assembling your LUX-BEAM by yourself

Upgrade Standard Optical termini (ARINC 801, LC termini) to LUX-BEAM™ (expanded beam termini), with a robust retention clip



Insert LUX-BEAM™ on standard cavity #12 with standard tool



MIL DTL 38999/EN 3645 EN4165

How To Order

DESIGNATION	LXB LXB	12 12	P S	1 2	A B	R801 R125	09X
Series LXB: LUX-BEAM™, single expanded beam optical termini							
Cavity size 12: size 12 for 38999 series III							
Type of termini P: pin termini S: socket termini							
Type of fibers 1: multimode 50/125 2: multimode 62.5/125							
Wavelength A: optimised for wavelength 850nm (Multimode) B: optimised for wavelength 1300nm (Multimode)							
Rear termination R125: retention system to accept 1.25mm optical termini R801: retention system to accept Arinc 801 optical termini							
Cable - For R125 rear termination only 09X: for cable 900µm 12X: for cable 1.2mm							

Termini For LUX-BEAM™

ARINC-801 Termini

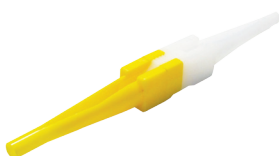
Designation	M801	M	S	1	N
Series M801: ARINC 801, Single expanded beam optical termini					
Cavity size M: size 12 for 38999 series III					
Termini type S: super Polish					
Hole Inner Diameter 1: 127 +1/-0					
Cable Structure P: loose structure cable (pull proof) N: tight structure cable (non pull proof)					

1.25mm Termini

Designation	POL	7	A
Series POL: optical termini type LC 1.25mm			
Hole Inner Diameter 7: 127 +1/-0			
Type of cable A: compatible for cable 900µm & 1.2mm			

Tools

Termini insertion & removal tool
for termini p/n **M81959/14-04**



Amphenol tool
146443



Amphenol tool
146444



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	12	P	1	A	1	D	L	0020	ST2	1	D	0	M
Type of Termini LXB: LUX-BEAM™, Single expanded beam optical termini														
Cavity size 12: size 12 for 38999 series III														
Type of termini P: pin termini S: socket termini														
Type of fibers 1: multimode fiber 50/125 2: multimode fiber 62.5/125														
Wavelength A: optimised for wavelength 850nm (Multimode) B: optimised for wavelength 1300nm (Multimode)														
Termination type 1: PC Ceramic														
Boot form D: straight boot														
Type of cable A: fiber with buffer 900µm O: fiber with buffer, outer jacket dia 1.2mm L: fiber with buffer 900µm, outer jacket dia. 1.8mm														
Length 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														
Type of Termini XXX: pigtail ST2: connector ST2 954: connector SC simplex LCS: connector LC simplex ELU: connector ARINC 801 optical termini														
Termination type 1: PC Ceramic														
Boot form D: straight boot														
Protective Cap O: standard protective cap														
Marking - : standard marking MX: specific marking														



In development: LUX-BEAM™ Size 16



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 & series II TV/CTV, EN3645
 - EN 4165 (SIM)

Other benefits technology

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

