



GLENAIR UK
TEST LABORATORY

MISSION-CRITICAL
**INTERCONNECT
SOLUTIONS**

Glenair®



UK Test Laboratory

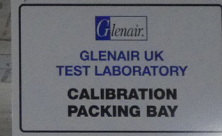
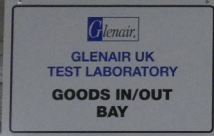
A UKAS Accredited Testing Laboratory No. 29564

SEPTEMBER 2026





GLENAIR UK
TEST LABORATORY



Glenair UK Test Laboratory

Comprehensive test plans, reports and documentation in accordance with customer requirements

Our ISO 17025:2017 Accredited Test Laboratory is a state-of-the-art facility, designed to support the rigours of qualification and production testing. From Mechanical & Dynamic through to Environmental, Electrical & more, the Glenair UK Test Laboratory is well prepared to meet any / all programme needs.

SERVICES OFFERED

Mechanical & Dynamic Testing

Vibration Testing - Sinusoidal & Random - Bump / Classical Shock & Bounce - Traditional Shock Testing - Tensile / Compression

Climatic Testing

Damp Heat - Steady State & Cyclic - Temperature - Dry Cold & Heat - Climatic Sequence - Thermal Shock (Rapid Change in Temperature) - Change of Temperature

Miscellaneous Testing & Capabilities

Sealing (Helium Leak Detection) - Fluid Contamination / Immersion - Hyperbaric Chambers - RF & High Speed Data Capabilities - Optical Testing - Thermocouple Calibrations

Conditioning Tests

Salt Mist / Salt Spray - Thermal Vacuum Bakeout (Outgassing) - Vacuum (High Altitude)

Materials Testing & Analysis

Plating Thickness - Destructive (Sectioning) - Plating Thickness - Non-Destructive (XRF) - Raw Material Identification & Comparison (XRF) - Optical Line Roughness (Ra) / ISO 1302 - Material Hardness (Rockwell, Brinell, Vickers & Knoop)

Electrical Tests

Contact Resistance (Low-Level & Rated Current) - Insulation Resistance - Dielectric Withstanding Voltage (DWV) - Voltage Proof - Shell-to-Shell - Conductivity

- Mechanical / Dynamic Testing for both Electrical & Fibre Optic Components, Subsystems, and Wiring Harnesses
- Wide Variety of Materials Test & Analysis Capabilities
- Fast Turnaround on Quotes and Testing Services
- Decades of Experience
- Bespoke Test Fixturing & Method Development as Required
- Professionally Prepared Test Reports Supplied for Every Project
- Extensive Range of Testing Capabilities for all Styles of Test Programmes



29564

MECHANICAL AND DYNAMIC TESTING

Vibration - Sinsoidal:	Bump / Classical Shock & Bounce:
(Temperature: -65°C -260°C) Frequency Range: 5 - 2650 Hz Peak Thrust: 35.6kN Approximate Peak Force: 100gn Maximum Peak-to-Peak Displacement: 50mm Mounting Plate: 406.5mm Diameter	Half Sine Severity: Up-To 100gn Lab Equipment Model SC100 (Bounce)
Vibration - Random:	Tensile & Compression:
(Temperature: -65°C -260°C) Frequency Range: 5 - 2650 Hz Peak Thrust: 35.6kN Approximate Peak Force: 70grms Maximum Peak-to-Peak Displacement: 50mm Combinations / Others "Sine on Random" "Random on Random" "Simulated Gunfire" Frequency Range: 5 - 2000 Hz Mounting Plate: 406.5mm Diameter	Force Test Rig MI-23 Maximum Load: 50kN / 11240 LBF Maximum Extension: 1070mm Available Load Cells: 250N, 1000N, 2.5kN & 50kN Speed Range: 0.0001 mm/min to 500 mm/min Force Test Rig MI-1 Maximum Load: 30kN / 6744 LBF Maximum Extension: 870mm Available Load Cells: 1000N Speed Range: 0.001 mm/min to 508 mm/min Force Test Rig MI-32 Maximum Load: 2.5kN / 562 LBF Maximum Extension: 500mm Available Load Cells: 1000N Speed Range: 1.0 mm/min to 1000 mm/min
Shock:	
Half-Sine and Trapezoidal Maximum Acceleration: 600g Maximum Load Capacity: 227kg Table Size: 650mm x 810mm	

Examples of Capable Test Methods

Vibration

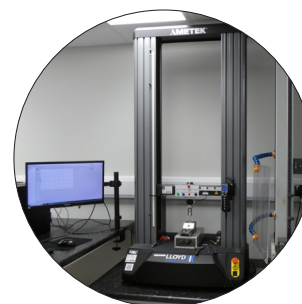
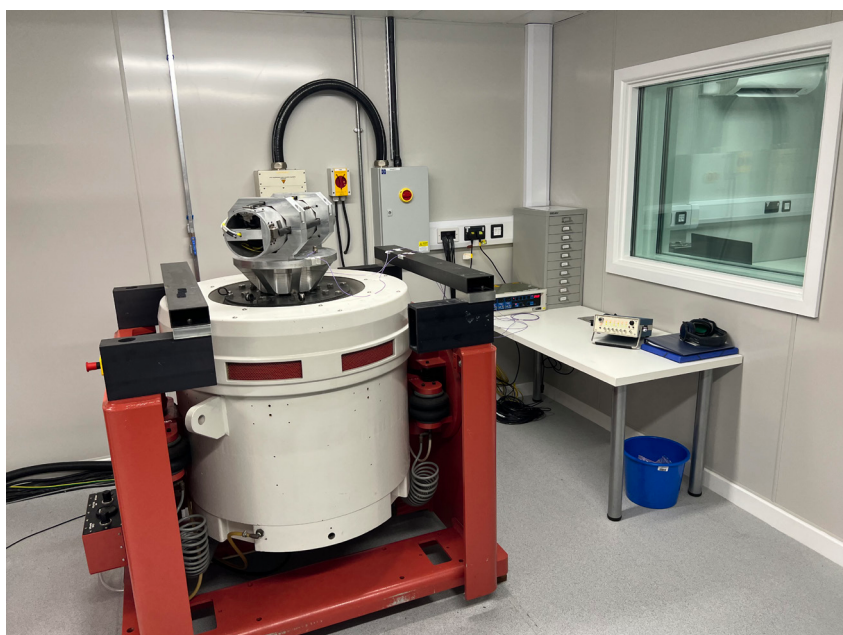
- IEC 60068-2-6
- IEC 60068-2-64
- EIA-364-28
- MIL-STD-202

Shock

- EIA-364-27
- IEC 60068-2-27

Mating Forces Durability, Contact & Insert Retention

- EIA-364-09
- EIA-364-13
- EIA-364-29
- EIA-364-35



CLIMATIC TESTING

Damp Heat Steady State:	Temperature (Dry Cold):
Temperature Range: +10°C - +85°C Humidity Range: 10 - 98% RH Chamber Size: W/D/H Chamber C-11 290mm x 200mm x 300mm Chamber C-6 410mm x 470mm x 510mm	Chamber C-15 Minimum Temperature: -86°C Maximum Chamber Size: W/D/H 490mm x 481mm x 530mm Chamber C-5 Minimum Temperature: -80°C Maximum Chamber Size: W/D/H 410mm x 470mm x 510mm
Damp Heat - Cyclic:	Temperature (Dry Heat):
Temperature Range: +10°C - +85°C Humidity Range: 10 - 98% RH Chamber Size: W/D/H Chamber C-11 290mm x 200mm x 300mm Chamber C-6 410mm x 470mm x 510mm	Chamber C-14 Maximum Temperature: +600°C Maximum Chamber Size: W/D/H 645mm x 455mm x 405mm Chamber C-2 & C3 Maximum Temperature: +300°C Maximum Chamber Size: W/D/H 450mm x 580mm x 460mm
	Climatic Sequence: A Combination of the Aforementioned Test Capabilities

Examples of Capable Test Methods

Cold

- IEC 60068-2-1

Dry Heat

- IEC 60068-2-2

Damp Heat SS

- IEC 60068-2-78

Damp Heat Cyclic

- IEC 60068-2-30
- EIA-364-31



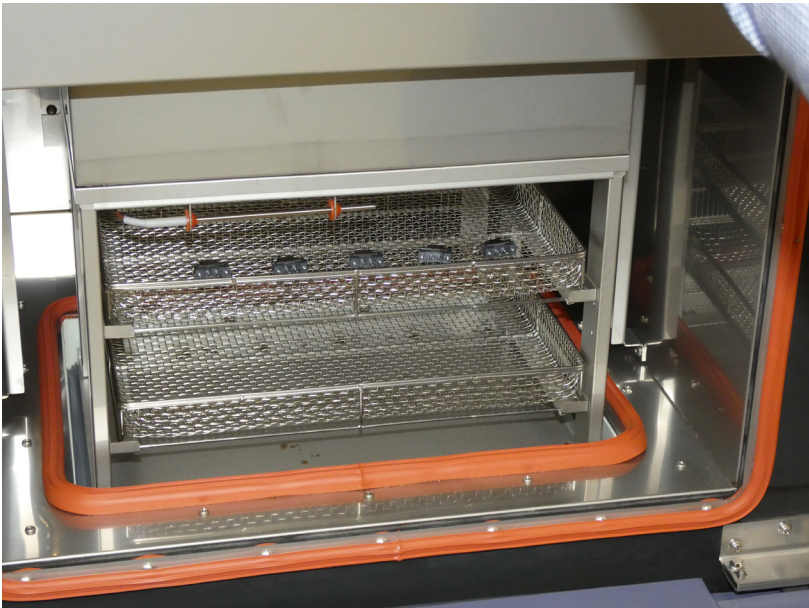
CLIMATIC TESTING

Thermal Shock (Rapid Change in Temperature):	Gradual Change of Temperature:
Automatic Transfer Chamber C-12 & C-13 Minimum Temperature: -65°C Maximum Temperature: +200°C Chamber Size: W/D/H 300mm x 230mm x 130mm Load Capacity: 4KG (2KG Per Basket) Manual Transfer Chamber C-14 & C-15 Maximum Temperature: +600°C Minimum Temperature: -86°C Maximum Chamber Size: W/D/H Refer to Dry Cold & Dry Heat	Gradual in Air Chamber C-6 & C-10 Chamber Size: W/D/H 410mm x 470mm x 510mm Maximum Rates of Change: <i>Heating: -65°C to +180°C: 11.0°C Per Minute</i> <i>Cooling: +180°C to -65°C : 5.0°C Per Minute</i> Chamber C-11 Chamber Size: W/D/H 410mm x 470mm x 510mm Maximum Rates of Change: <i>Heating: -65°C to +180°C: 3.0°C Per Minute</i> <i>Cooling: +180°C to -65°C : 4.5°C Per Minute</i> Chamber C-8 Chamber Size: W/D/H 300mm x 350mm x 300mm Maximum Rates of Change: <i>Heating: -65°C to +180°C: 6.0°C Per Minute</i> <i>Cooling: +180°C to -65°C : 3.0°C Per Minute</i>

Examples of Capable Test Methods

Thermal Cycling

- IEC 60068-2-14
- EIA-364-32
- EIA-364-110
- IEC 60512-11-1
- IEC 60512-11-4
- BS EN 2591-305



CONDITIONING TESTS

Salt Mist / Salt Spray:	Thermal Vacuum Bakeout (Outgassing):
<u>Chamber C-7</u> Maximum Chamber Size: W/D/H 1010mm x 640mm x 1140mm (450 Litres / 15.9 Cubic Feet) Temperature Range: +20°C to +60°C Data Recording Available <u>Chamber C-1</u> Maximum Chamber Size: W/D/H 715mm x 490mm x 490mm (120 Litres / 4.2 Cubic Feet) Temperature Range: +20°C to +60°C	Temperature: Ambient to +175°C Base Vacuum: 5.0E-7 mbar* (3.48E-7 Torr // 4.64E-5 Pa) * Payload / Temp Dependant * Type: Turbo Molecular System Other Notes: Temperature Recording (Accredited Cal.) <u>Outgassing Chamber OG-1</u> Type: Cylindrical, Top Loading Max Dimensions: Diameter 300mm x 350mm (24.7 Litres / 0.87 Cubic Feet) Temperature: Ambient to +125°C <u>Outgassing Chamber OG-2</u> Type: Cylindrical, Top Loading Max Dimensions: Diameter 500mm x 350mm (98.2 Litres / 3.47 Cubic Feet) Temperature: Ambient to +125°C <u>Outgassing Chamber OG-3</u> Type: Cylindrical, Top Loading Max Dimensions: Diameter 315mm x 415mm (32.3 Litres / 1.14 Cubic Feet) Temperature: Ambient to +125°C <u>Outgassing Chamber OG-4</u> Type: Cubical, Front Loading Max Dimensions: Diameter 500mm x 500mm x 500mm (125 Litres / 4.41 Cubic Feet) Temperature: Ambient to +175°C
Vacuum (High-Altitude):	
Temperature: Ambient Only * Base Vacuum: 5.0E-2 mbar (3.75E-2 Torr // 70,000m Alt.) Other Notes: Temperature Recording , Electrical Feedthrough (IR / DWV), ABS Viewport. <u>High-Altitude Chamber V-6</u> Type: Cylindrical, Front Loading Maximum Dimensions: Diameter 315mm x 415mm (28.3 Litres / 1.00 Cubic Feet) Temperature: Ambient Only * *Chamber can be loaded into the Environmental Chamber upon request	

Examples of Capable Test Methods

Salt Spray

- IEC 60068-2-11
- EIA-364-26
- ISO 9227
- ASTM B117

High Altitude

- IEC 60068-2-13

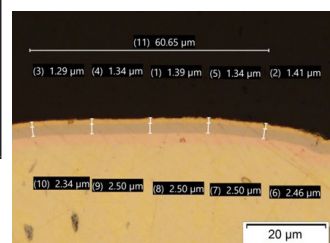
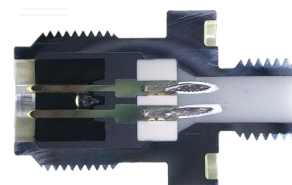
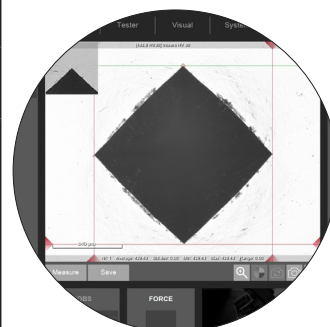
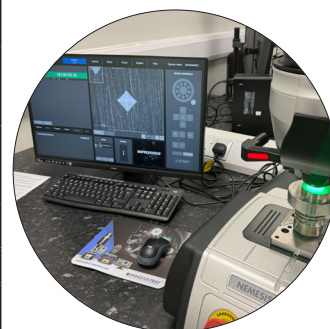
Thermal Vacuum Bakeout

- Internal Procedure with Reference to
ESCC-Q-ST-70-02C



MATERIALS TESTING AND ANALYSIS

Plating Thickness - Destructive (Sectioning):				Raw Material Identification & Comp (XRF):		
Microsectioning of samples for plating thickness assessment or feature present or not				Non-destructive measurements of raw material stock / homogenous materials (unplated). Compared against Lab grade, certified reference samples.		
Polished down to 1 micron				Available Certified References:		
Min. Resolution of Camera System: 0.01micron				Aluminium's:	Steels:	Others:
Max Sample Holder Dimensions:				AA 1100 AA 3003 AA 5086 AA 6061 AA 6082 AA 7075	SS 301	Cu Alloys Ni Alloys Ti Alloys Inconel Ferallium Haynes 25 Hast (G3, C276, B-3)
Type A1: 35mm Diameter Cylinder					SS 302	
Type A2: 40mm Diameter Cylinder					SS 303	
Type A3: 50mm Diameter Cylinder					SS 304L	
Type B1: 40mm x 70mm Cuboid					SS 309S	
					SS 310S	
				SS 317L		
				SS 321		
				SS 347		
				SS 410		
				+ More Available Upon Request		
Plating Thickness - Non-Destructive (XRF):				Optical Line Roughness (Ra) / ISO 1302:		
Non-destructive measurements of both plating thickness and composition (select types), via X-Ray Fluorescence.				3D Modelling via generation of stitched images in 3-Axis of sample features / surfaces, to assess surface topography of samples.		
Measurable Plating Types with References:				Line Roughness Measurement Capabilities:		
Layer 1: Gold Nickel-Ph Nickel-Ph Cadmium	Layer 2: N/A Copper N/A N/A	Substrate: Aluminium Aluminium Aluminium Aluminium	Thickness: 0.25 to 4.0µm 1.0 to 40µm 1.0 to 40µm 1.0 to 15µm	Ra (µm): 0.4 0.8 1.6 3.2 6.3	ISO 1302 'N' Grade: N5 N6 N7 N8 N9	
Hardness Testing:						
Material or Coating Hardness with the following methods & scales:						
Rockwell (HRA, HRBW & HRC) - ISO 6508-1 Brinell (HBW) - ISO 6506-1 Vickers (HV) - ISO 6507-1 Knoop (HK) - ISO 4545-1						
Forces: From 10qf - 250kqf						



MISCELLANEOUS TESTING AND CAPABILITIES

Sealing (Helium Leak Detection):	RF & High Speed Data Capabilities:	
Helium Leak Detectors V-1A & V-1B Minimum Detectable Leak Rate: 1×10^{-12} mbar l/s (He) (Helium Tracer Gas)	Network Analyser, Measurements Available:	
	Insertion Loss (IL) Impedance (TDR Option) Diff. Impedance (TDR)	Return Loss (RL) Cross Talk Phase Matching
Fluid Contamination / Immersion:	Vector Network Analyser N-4: Frequency Range: 9KHz to 43.5GHz	
Immersion in Fluid(s) + Exposure to Controlled Temperature(s) See C-2 & C-3 (Dry-Heat) for Size & Temperature Limits	No. of Ports: 4-Ports	
Hyperbaric Chambers:	Dynamic Range: Up-To 140dB Sweep Rate: 4ms (@401 points)	
Maximum Test Pressure: 20,000 PSI (1378 Bar) Hyperbaric Chamber H-01: Dimensions: I.D 495mm x L 580mm Hyperbaric Chamber H-02: Dimensions: I.D 152.4mm x L 580mm Hyperbaric Chamber H-03: Dimensions: I.D 152.4mm x L 580mm Other Notes: Pressure Trace Data Recording Available, Electrical Feedthrough for IR & DWV or Other Functional Test(s) Possible	DSX Cable Analyser M-16:	
	Cable Certification Insertion Loss (IL)	Up-To CAT 8 Return Loss (RL)
	Oscilloscope M-57:	
	Maximum Bandwidth: Up-To 6GHz	
	No. of Ports: 4-Ports	
	Sweep Rate: 1ms to 500s	
	Video Signal Integrity / Compliance M-63:	
	Protocol Tests: Video Pattern Testing	HDMI, HDBaseT, Display Port. HDCP Verification

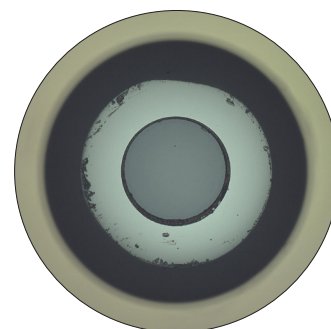


OPTICAL TEST CAPABILITIES

Optical Insertion Loss & Return Loss		
Insertion & Return Loss Testing on Single & Multi-Mode Fibre Optic Assemblies		
Optical Source, OPM & RL Meter M-62: 24-Channel Optical Tester		Return Loss Test Set M-55: Two-Way Loss Test Set + ORL
Available Launch Wavelengths: 850nm & 1300nm		Available Launch Wavelengths: 850nm & 1310nm
Typical Source Output: > -19dB (@850nm)		Typical Source Power: > -10dBm (@850nm)
Power Meter Linearity: < 0.25dB		Power Meter Linearity: < 0.10dB
RL Meter Typical Dev.: ± 2.00dB, for 14dB (@850nm)		RL Meter Typical Dev.: ± 0.5dB, for 14dB (@850nm)
RL Meter Typical Dev.: ± 1.00dB, for 20dB+ (@850nm)		RL Meter Typical Dev.: ± 1.00dB, for 45dB+ (@850nm)
Available Adapter Types		Available Adapter Types
• MT • LC & SC • MTP & MPO • SMA905	• FC • ST • Mil-T-29504	• LC & SC • FC • ST • Mil-T-29504
Available Fibre Types:		Available Fibre Types:
• 50/125µm • 62.5/125µm		• 9/125µm • 50/125µm
Other: Visual Fault Locator (VFL) available to diagnose locations of faults (factures, excessive bending, etc.) within Fibre Optic cable assemblies. Note: Additional adapter & fibre types can be acquired upon request.		

Examples of Capable Test Methods

- IEC 61300 Series (Select Methods)
- TIA-455 Series (Select Methods)



MEASUREMENT PARAMETERS AND RANGES

Insulation Resistance (IR):

Test Voltage:	Accuracy % - Max Resistances:		
1. 20V to 500VDC	1. 50GΩ	1. 100GΩ	1. 200GΩ
2. Up to 1,000VDC	2. 100GΩ	2. 200GΩ	2. 400GΩ
3. Up to 2,500VDC	3. 250GΩ	3. 500GΩ	3. 1000GΩ
4. Up to 5,000VDC	4. 500GΩ	4. 1000GΩ	4. 2000GΩ
5. Up to 10,000VDC	5. 1000GΩ	5. 2000GΩ	5. 4000GΩ
Voltage Ranged for Listed Accuracies	5% Acc.	10% Acc.	20% Acc.

Dielectric Withstanding Voltage / Voltage Proof (DWV):

DC:	AC (RMS):
Leakage Current: 0 to 200mA	Leakage Current: 0 to 200mA RMS
Test Voltage: Up to 11,000V	Test Voltage: Up to 6,000V
Resolution: 0.1V (to 1kV), 1V above	Resolution: 0.1V (to 1kV), 1V above
Voltage Accuracy: 0.25%	Output Frequency: 20Hz to 500Hz
Current Accuracy: 0.25%	Voltage Accuracy: 0.25%
Current Source: 50mA max.	Current Source: 50mA RMS max.

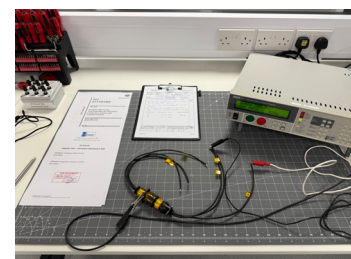
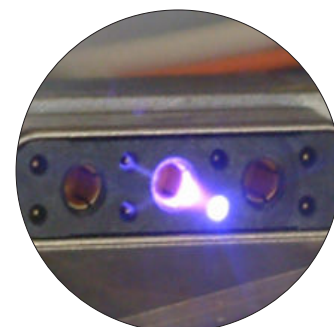
Rated Current Contact Resistance:

Resistance Range	Supply Current	Resolution	Open Terminal Voltage
mV Drop*	Up to 20 A*	*	Up to 40 V*
20 mΩ	1.0 A	0.1 μΩ	5.0 V
200 mΩ	1.0 A / 100 mA	1.0 μΩ	5.0 V
2 Ω	100 mA	10 μΩ	2.6 V
20 Ω	10 mA	100 μΩ	2.6 V
200 Ω	10 mA	1 mΩ	2.6 V
2 kΩ	1 mA	10 mΩ	2.6 V
20 kΩ	100 μA	100 mΩ	2.6 V
100 kΩ	100 μA	1 Ω	2.6 V
1 MΩ to 100 MΩ	10 μA to 100nA	10 Ω to 1 kΩ	13 V

Note*: Utilising separate power supplies & voltmeter to assess Voltage Drop.

Low-Level Contact Resistance:

Resistance Range	Supply Current	Accuracy	Voltage Clamp
500 mΩ	100 mA	± (0.3% + 0.05%)	20 mV Max.
5 Ω	10 mA	(Range + of Value)	
50 Ω	1 mA		
500 Ω	1 mA	± (0.05% + 0.008%)	6.5 V Max.
5 kΩ	100 μA	(Range + of Value)	
50 kΩ	100 μA		
5 MΩ	10 μA		



MEASUREMENT PARAMETERS AND RANGES

Parameter	Ranges / Limits	Additional Info
DC Voltage	20mV to 1kV 1kV to 11kV	N/A
AC Voltage	20V to 6kV	20 to 500Hz
DC Current	0.1µA to 1.0A 1.0A to 600A	N/A
DC Resistance	0.1µΩ to 100mΩ 100mΩ to 100MΩ 100MΩ to 4.0TΩ	4-Wire or 2-Wire
Temperature	-86°C to +600°C	N/A
Force Compression / Tension	0.1N to 50kN	N/A
Torque	0.1Nm to 15.0Nm	N/A
Humidity	10%RH to 98%RH	N/A
Pressure (Water) Hyperbaric / Hydrostatic	Ambient to 20,000psi (1379 bar)	N/A
Pressure (Air) Vacuum / Pressure	5.0 x 10 ⁻⁰⁷ mbar to 6.0bar	With Temperature up to +175°C
Optical Insertion / Return Loss	IL up to 50dB RL up to 60dB	850 & 1300nm (Multi-Mode)
Dimensional Measurements (Optical)	0.01µm to 35.0mm	N/A

Notes:

- For details regarding accuracy levels & current measurement of uncertainty budgets, contact the Test Laboratory Management Team.
- This capabilities scope highlights routine testing conducted by the Glenair UK Test Laboratory, however it should be noted that the Test Laboratory is committed to accepting new challenges wherever possible, please contact us in regards to any type of environmental testing that may not be detailed within this scope.
- Details of the current set of Accredited Test Activities (and their ranges) can be found on the schedule of accreditation for
- Glenair UK Ltd Test Laboratory (No. 29564). Any discrepancy in levels between the two will be associated to an unaccredited activity.



MISSION-CRITICAL INTERCONNECT SOLUTIONS



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Models**

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