

High Temperature Resistant GPON Equipment Test Report



Overview

But what if the GPON ONT's Optical module is consistently nearing the limits or exceeds the limits of the specs sheet?

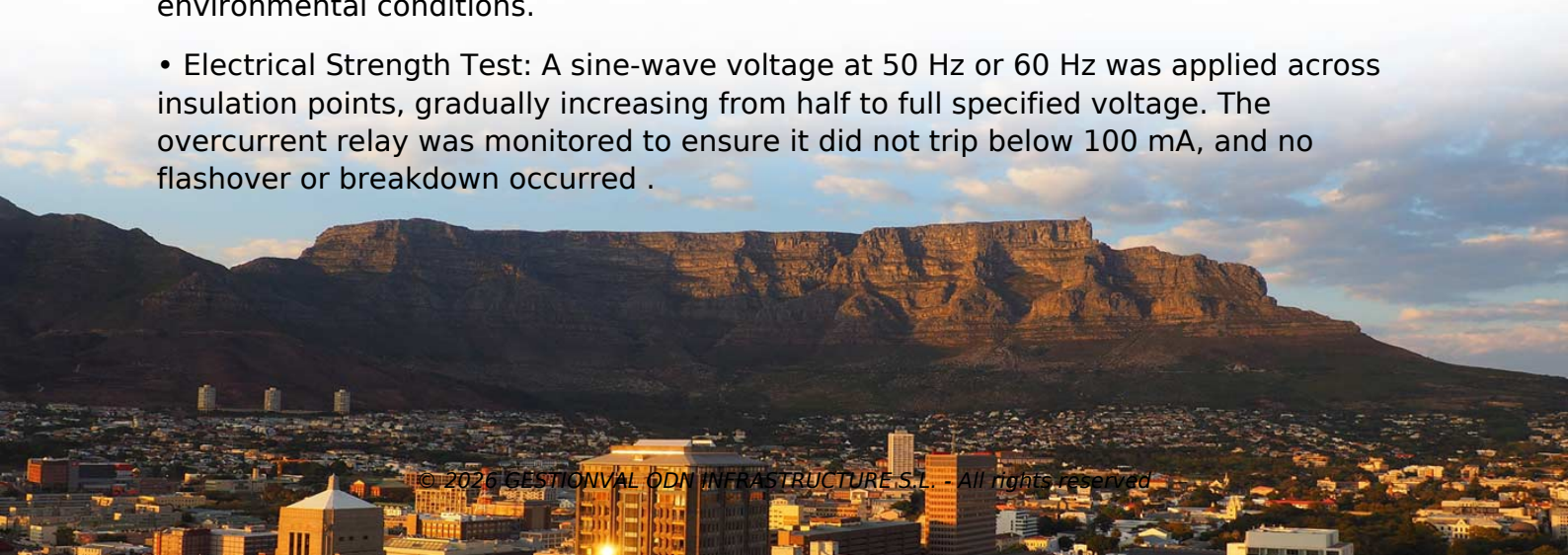
Key Takeaways

GPON equipment successfully passed high-temperature testing, maintaining full functionality and structural integrity under extreme conditions. Test Overview

The GPON equipment underwent a temperature cycle test to evaluate its high-temperature resistance. The test involved exposing the equipment to 80°C for 24 hours, followed by -40°C for 24 hours, while the device remained powered on to simulate operational conditions. This approach ensures that both the thermal stress and functional performance are assessed simultaneously.

Test Methodology

- Temperature Cycling: The equipment was placed in a controlled environment chamber, cycling between high and low temperatures to simulate extreme environmental conditions.
- Electrical Strength Test: A sine-wave voltage at 50 Hz or 60 Hz was applied across insulation points, gradually increasing from half to full specified voltage. The overcurrent relay was monitored to ensure it did not trip below 100 mA, and no flashover or breakdown occurred.



- **Inspection Criteria:** The equipment was evaluated for appearance, functional performance, and electrical integrity after the test. Any damage, malfunction, or deviation from normal operation would have been recorded.

Test Results

- **Structural Integrity:** No physical damage was observed on the equipment after the temperature cycle test.
- **Functional Performance:** All functions of the GPON equipment remained normal, including data transmission and network connectivity.
- **Electrical Safety:** The equipment passed the electrical strength test without flashover, breakdown, or overcurrent issues .
- **Traceability:** The test was conducted according to national reference standards, ensuring reliability and repeatability of results.

Additional Notes

- The test report is valid only with laboratory stamp and authorized signatures.
- The results are specific to the Unit Under Test (UUT) and cannot be partially copied without prior written approval .
- This testing confirms that the GPON equipment is suitable for deployment in environments with extreme temperature variations, ensuring reliable operation for both residential and small office applications . This report demonstrates that the tested GPON equipment meets high-temperature operational requirements, providing confidence in its durability and performance under harsh environmental conditions.

Article Content

GPON Testing

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Regarding GPONT ONT's Optical Module Temperature stats

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GPON PON Power Meter KI 6102 | Kingfisher International

GPON / PON Power Meter KI 6102 is used during FTTH / PON service turn-up or maintenance, to perform a live optical power test

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The gigabit passive optical network GPON market is experiencing strong momentum driven by rising demand for high

The next generation of passive optical networks: A review

Furthermore, GPON equipment needs virtual channel, segmentation and reassembly, multiple protocol conversions,

Best practices for next-generation PON testing

EXFO's PPM-350D next-generation PON power meter is specially designed to test both legacy and next-generation PON

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

