



# AQUA

## **RELIABILITY & TESTING**

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# Overview

This document outlines the rigorous testing procedures and results that demonstrate the reliability and durability of the Aqua linear flex light. All tests were conducted according to internationally recognized standards to ensure the highest quality and performance.

## Testing Results

Test Items	Reference Standards	Test Condition & Methods	Result
<b>Waterproof Test</b>	IEC60598-1:2014 / IEC60529:2013 (IPX8)	Immersed the Aqua light strip in a water immersion pressure testing machine at 0.05Mpa (equivalent to 5M water depth) for 168 hours.	Pass
<b>Impact Resistance Test</b>	IEC62262 / IEC60068-2-75 (IK08:5J)	A 500g steel ball was dropped from a height of 1M onto the top and bottom sides of the Aqua light strip 5 times.	Pass
<b>Chlorine Water Immersion Test</b>	Kendila Standard	Immersed the Aqua light strip in chlorine water (10mg/L) at 23°C for 168 hours.	Pass
<b>Weak Base Immersion Test</b>	Kendila Standard	Immersed the Aqua light strip in a saturated solution of NaS at 23°C for 72 hours.	Pass
<b>High Temperature &amp; High Humidity Test</b>	Kendila Standard	Lighted up the Aqua light strip in an oven at 85°C and 80% RH for 168 hours.	Pass
<b>Temperature Rise Test</b>	Kendila Standard	Operated the Aqua light strip at 24V and 25.4VDC, measuring the temperature of all components at 25°C and 45°C.	Pass
<b>Bending Test</b>	Kendila Standard	Bent the Aqua light strip around a $\varphi=200\text{mm}$ cylinder for 50/100 times.	Pass
<b>Twist Test</b>	Kendila Standard	Twisted the Aqua light strip 0-360° forward and backward for 500 times.	Pass
<b>Strong Base Immersion Test</b>	Kendila Standard	Immersed the Aqua light strip in NaClO solution (100,000mg/L) at 23°C, 50% RH for 168 hours.	Pass
<b>Strong Base Immersion Test</b>	Kendila Standard	Immersed the Aqua light strip in Ca(CLO)2 solution (100,000mg/L) at 23°C, 50% RH for 168 hours.	Pass
<b>Ozone Aging Test</b>	Kendila Standard	Exposed the Aqua light strip to ozone at 50pphm, 23°C, 50% RH for 168 hours.	Pass
<b>Salt Spray Test</b>	IEC60068-2-11	Placed the Aqua light strip in a chamber at $35\pm 2^{\circ}\text{C}$ with a salt spray solution (concentration= $50\pm 5\text{g/L}$ ) and tested for 168 hours.	Pass



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AQUA – Reliability & Testing Report

