

VARDAflex Neon Temperature Cycling Test

No: CL-P-1104024

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1. Testing Item

Name: VARDAflex Neon

Length: 1m, Initial Power: 11.5W

Operating Status: Normal Lighting Up

2. Testing Purpose

To observe the changes of power and appearance of VARDAflex Neon under the temperature of -20°C ~ 60°C

3. Testing Equipment

Programmable constant temperature and humidity test chamber

4. Testing Procedure

- (1) Put the VARDAflex Neon into the programmable constant temperature and humidity test chamber
- (2) Energizing the VARDAflex Neon by DC24V driver
- (3) Connect a digital electric relay, which is outside of the test chamber, on the power input of VARDAflex Neon; Make a cycling of 17 hours ON and 7 hours OFF.
- (4) Set up the cycling of test chamber: single cycle is 60°C (stay 17 hours) ~ 20°C (stay 7 hours)
- (5) Start the DC24V driver and the power of test chamber
- (6) Total testing duration: 104 hours
- (7) Record all the data of power at the beginning, under the testing and after the testing

4. Picture of Testing Equipment



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6. Testing Result

(1) Power data of VARDAflex Neon before testing, under testing and after the testing, details as follow:

Vardaflex Neon	Power	Temperature	Humidity
Before testing	11.5W	25°C	60%
Under testing	10.5W	60°C	90%
Under testing	12.6W	-20°C	0%
After testing	11.5W	25°C	65%

(2) There is no appearance difference of VARDAflex Neon after testing

7. Wave and Curve



8. Result Analysis

90% humidity, under the temperature of 60°C, the power of VARDAflex Neon decreased around 8%;

Under the temperature of -20°C, the power of VARDAflex Neon increased around 10%;

After the testing, the power was the same as the initial power when the temperature was room temperature.

9. Conclusion

Ambient temperature affects the power of VARDAflex Neon, in the temperature of -20~60°C, the changes of power is around 10%, but there is no observable effects on appearance and mechanical properties.