

***MEC A/S***

Vibration Test of Illumec Switch

**Title** **Vibration Test of Illumec Switch**

**Project No.** 0551a Vibration Test of Illumec Switch

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## **Content**

1. **Definition**
2. **Applicable documents**
3. **Work Description**
4. **Summary Conclusion**
5. **Test results, Microscopy and Vibration Test**

## Report concerning Project No.

### 0551a Vibration Test of Illumec Switch

#### 1. Definition

The scope of this report is to verify the “Illumec” switch vibration reliability and determine mechanical weakness in the component according to EN/IEC 60068-2-6.

#### 2. Applicable documents

- EN/IEC 60068-2-6

#### 3. Work Description

For Verification of the Illumec Switches the following has been carried out:

- 5.1 Vibration Test according to EN/IEC 60068-2-6
- 5.2 Visual inspection and Microscopy

#### 4. Summary Conclusion

The tested Illumec switches **passed** the Vibration test, for components mounted in space launchers and engine mounted components in aircraft, according to the referred EN/IEC 60068-2-6 vibration specification.

**5 Test results, Microscopy and Vibration Test**

**5.1 Vibration Test**

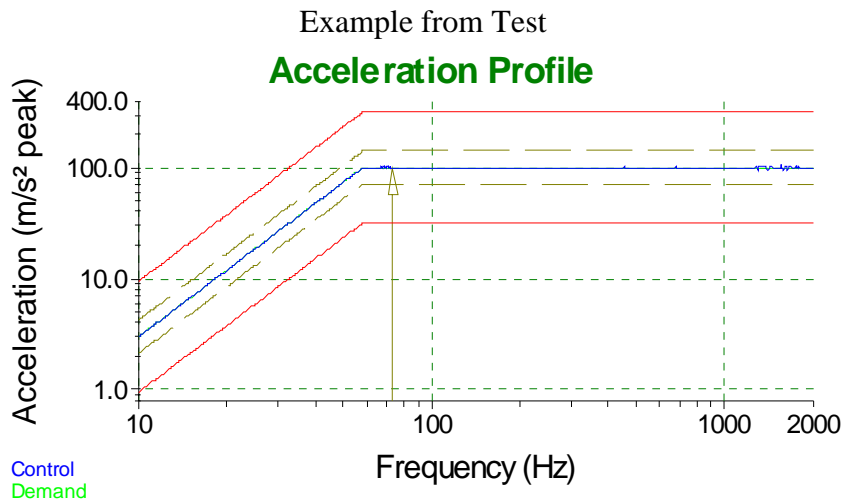
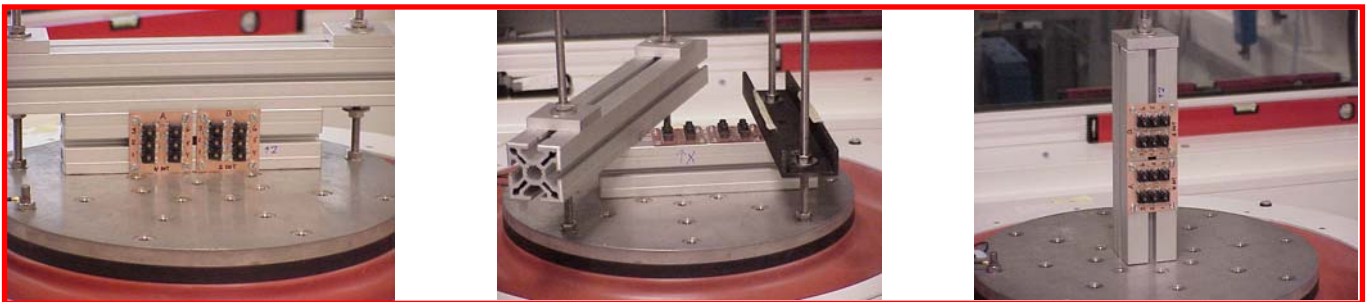


Fig. 5.1  
Vibration Test according to EN/IEC 60068-2-6.  
Cycle time: 2 hours in each direction (X, Y and Z Axis)  
Frequency: 10...2000...10Hz  
Cross over frequency: 58,1 Hz  
Sweep type: Sine  
Sweep rate: 1 octave per minute  
Amplitude: 100m/s<sup>2</sup> (10G)

Visual inspection and LED function test after Vibration Test.

*No failures observed after Vibration Test.*



X direction

Z direction

Y direction

## 5.2 Microscopy

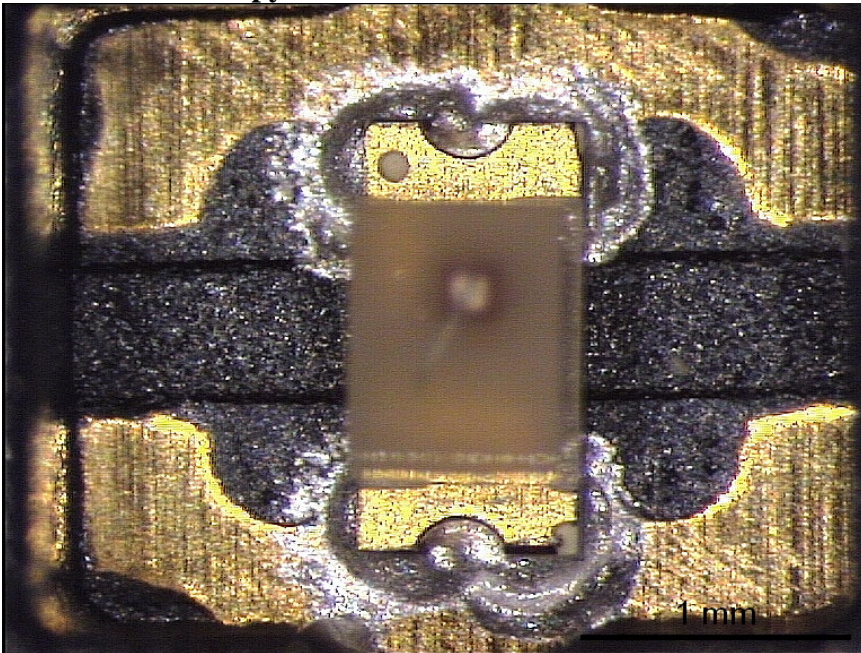


Fig. 5.2

Microscopy of selected area on Illume Switch

Generally acceptable placement and amount of Isotropic Conductive Adhesive.

No direct failures observed before and after vibration test