

# Compliance Testing Report for Australian/New Zealand Standard AS/NZS60598.1:2017+A1+A2

## Luminaires – Part 1: General requirements and tests (Partial Testing - Flammability Testing)

|   |   |
|---|---|
| Client:   | Bounce LED  |
| Address:  | Unit 8, 17-21 Cadogan Street, Marrickville, NSW 2004, Australia |
| Report Number:  | 0210BOUApex_5981P   |
| Date of Testing:  | 4 <sup>th</sup> - 10 <sup>th</sup> February 2021                |
| File Number:  | BOU201209   |
| Equipment Name:   | LED module  |
| Equipment Model Number:   | Apex  |
| Equipment tradename / brandname   | Bounce LED  |
| Equipment Description:  | LED module  |
| Result:   | <b>COMPLIES</b>   |
| Tested by:  | Darren Li   |
| Approved by:  | Wing Ming Yeung   |
| Date of issue   | 10 <sup>th</sup> February 2021                                  |
| <p>Results appearing herein relate only to the sample(s) tested.<br/>This report may not be reproduced in any form unless done so in full.<br/>Original copies of reports are printed on Austest Laboratories official Test Report letterhead, printed in reflex blue.</p> <p>This report is issued errors and omissions exempt and is subject to withdrawal at Austest Laboratories discretion.<br/><b>* refer to summary page for clarification</b></p> |   |

This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.

Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990



## **SUMMARY OF COMPLIANCE WITH AUSTRALIAN AND NEW ZEALAND STANDARD AS/NZS60598.1:2017+A1+A2**

The EUT (Equipment Under Test), known as LED module, model number: Apex, was supplied for AS/NZS60598.1:2017+A1+A2 testing by Bounce LED of Unit 8, 17-21 Cadogan Street, Marrickville, NSW 2004, Australia.

The model Apex was considered as Class III equipment, designed to be powered through a supply voltage of 12VDC, each of the LED module rated power of 0.96W.

The LED module, model number: Apex **COMPLIES** with the tested clause of AS/NZS60598.1:2017+A1+A2.

### **Method**

Testing was performed in accordance with the standard and test procedures:

**60598.2.1man**

**Issue 1**

### **Possible Test Case Verdicts:**

- test case does not apply to the test object..... N(.A)
- test object does meet the requirements ..... P(ass)
- test object does not meet the requirements..... F(ail)
- test was not performed ..... NT(not tested)
- Noted ..... ND

This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.  
Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990



| AS/NZS 605981: 2017 + A1 +A2 |   |                         |         |
|------------------------------|---|-------------------------|---------|
| Clause                       | Requirement + Test  | Result - Remark         | Verdict |
| <b>16 (13)</b>               | <b>RESISTANCE TO HEAT, FIRE AND TRACKING</b>                  |                         | P       |
| 16 (13.3)                    | Resistance to flame and ignition (AS/NZS 60598.1/APPENDIX ZZ) |                         | P       |
| 16 (13.3.1)                  | Glow-wire test (750°C):                                       |                         | P       |
|                              | - part tested .....   | Refer to appended table | P       |
| 16 (13.3.2)                  | Glow-wire test (650°C) :                                      |                         | P       |
|                              | - part tested .....   | Refer to appended table | P       |
| 16 (13.3.3)                  | Needle flame test: (AS/NZS 60598.1+A2/APPENDIX ZZ)            |                         | P       |
|                              | - part tested .....   | Refer to appended table | P       |

This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.  
Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990



|                          |
|--------------------------|
| AS/NZS60598.1:2017+A1+A2 |
| FLAMMABILITY TEST RESULT |

*The following parts were subjected to the appropriate glow-wire/needle flame tests specified in AS/NZS60598.1:2017+A1+A2*

| <b>SPECIMEN<br/>NO.</b> | <b>PART</b> | <b>MATERIAL</b> | <b>COLOUR</b> |
|-------------------------|-------------|-----------------|---------------|
| 1                       | Enclosure   | Thermoplastic   | White         |
| 2                       | Diffuser    | Thermoplastic   | Translucent   |

For results see the following tables

This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.

Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990



|                          |
|--------------------------|
| AS/NZS60598.1:2017+A1+A2 |
| FLAMMABILITY TEST RESULT |

### Glow-wire tests

The specimens were tested with the test surfaces arranged vertically and the glow-wire tip applied at right-angles for 30s at the temperature stated:

| AS/NZS 60695.2.11 CLAUSE | SPECIMEN NUMBER ⇒   | 1     | 2   |
|--------------------------|---|-------|-----|
| 3                        | How tested  | C     | C   |
| 5                        | Glow-wire tip temp (°C)   | 750   | 650 |
| 10(a)                    | Time till ignition of specimen (s)  | 1     | NI  |
|                          | Time till ignition of the underlying layer (tissue paper, pinewood board etc.) (s)                                    | NI    | NI  |
| 10(b)                    | Time from tip application till flaming or glowing ceased (s)  | 31    | NA  |
| 10(c)                    | Maximum flame height (mm)   | 28    | NA  |
| 10(d)                    | Specimen distortion   | Yes   | Yes |
|                          | Depth of penetration (mm)   | NM    | NM  |
| 10(e)                    | Pinewood board scorching  | No    | No  |
| 11(a)                    | Flame or glowing  | Flame | No  |
| 11(b)                    | Time of flames or glowing of specimen, surroundings or layer below after removal of tip (maximum allowable: 30 s) (s) | <1    | NA  |
|                          | Ignition of surrounding parts or layer below (not permitted)  | NI    | NI  |
| 11                       | Ignition of wrapping tissue (not allowed)   | NI    | NI  |
| 11                       | RESULT  | NF    | P   |

**Legend:** CE-Complete Equipment; SA-Sub-Assembly; C-Component; ME-manually Extinguished; NI-No Ignition; NA-Not Applicable; P-Pass; F-Fail; Sat-Satisfactory; Uns-Unsatisfactory; ø-Ignited Specimen Number; NF-Needle Flame Test Required, NM- Not Measured

\* Either 11(a) or 11(b) has to comply. "Yes" does not constitute a point of non-compliance with 11(a) if the requirements of 11(b) are met.

This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.  
Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990



|                          |
|--------------------------|
| AS/NZS60598.1:2017+A1+A2 |
| FLAMMABILITY TEST RESULT |

#### Needle-flame test on surrounding parts

As a consequence of the glow-wire test, the following specimens were subjected to the needle-flame test of IEC 60695.11.5 for 30 s. Also, at the Client's request, parts indicated with an asterisk (\*) were subjected to a 30 s needle-flame test:

|                       |  |    |
|-----------------------|--|----|
| IEC 60695-11-5 Clause | SPECIMEN NUMBER $\Rightarrow$  | 2  |
|                       | Flame impinged from specimen no.   | 1  |
| 6                     | How tested   | SA |
| 7                     | Duration of flame application ( $t_a$ ) (s)  | 30 |
| 5.4                   | Specified layer used   | WT |
| 11a)                  | Flame or glowing of test specimen or ignition of specified layer or wrapping tissue  | NI |
| 11b)                  | Flame or glowing of test specimen and surrounding parts extinguish within 30 s after the removal of the needle-flame ( $t_b < 30$ s) (s) | NA |
| 11*                   | RESULT   | P  |

#### Legend:

P-Pass;

F-Fail;

NA-Not Applicable;

For clause 6:

CE-Complete Equipment;

SA-Sub-Assembly;

C-Component;

For clause 5.4:

WT-Wooden board covered with wrapping tissue;

SP-Surrounding part/material situated underneath the test specimen in normal use

For Clause 11:

ME-Manually Extinguished;

NI-No Ignition;

\*Specimen satisfies requirements if either 11a) or 11b) complies. "Yes" does not constitute a point of non-compliance with 11a) if the requirements of 11b) are met.

\*\*\*END OF REPORT BODY\*\*\*

### APPENDIX 1 – PHOTOGRAPHIC RECORD OF SAMPLE

This report is issued within the scope of A2LA accreditation #2765.02.

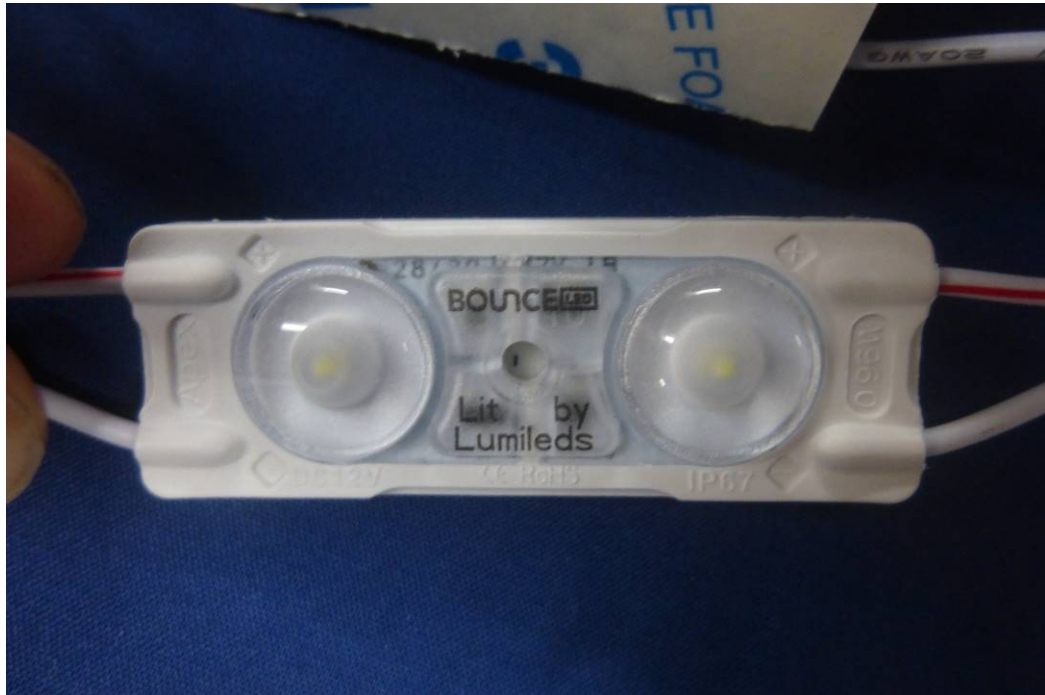
Accredited for compliance with ISO / IEC 17025.

Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990

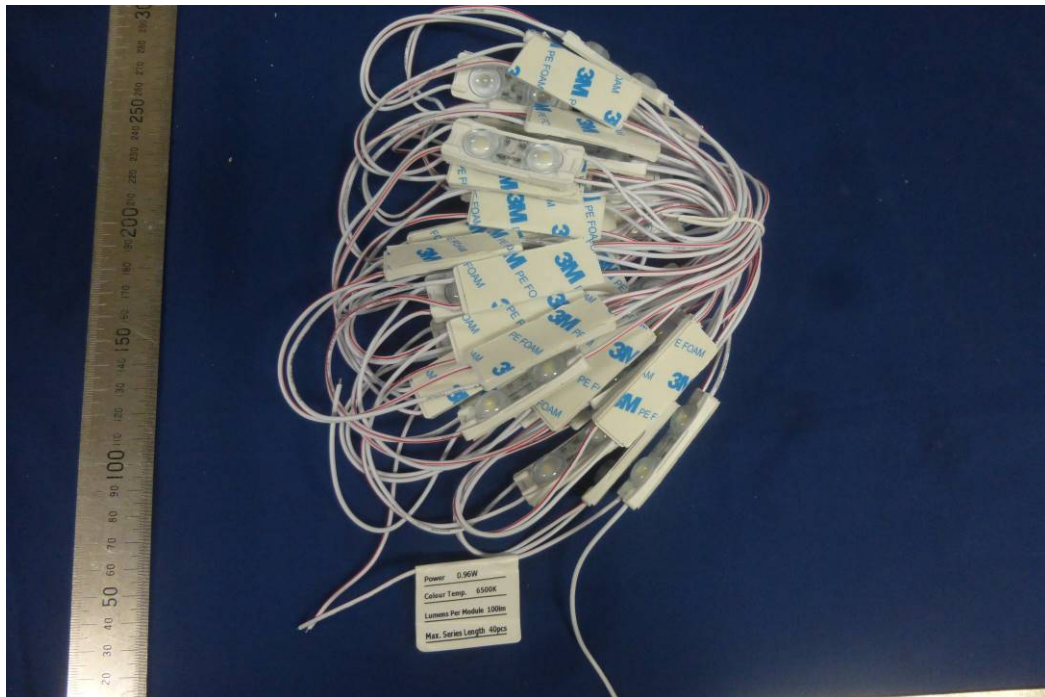




## Appendix 1 – Photographic Record of Sample



Overview



This report is issued within the scope of A2LA accreditation #2765.02.

Accredited for compliance with ISO / IEC 17025.  
Approval Specialists Pty Ltd (ACN: 094 656 354) Trading as Austest Laboratories  
2/9 Packard Avenue, Castle Hill NSW 2154 Australia Ph: +612 9680 9990

