

EZITOWN ELECTRICAL SUPPLY INC.

TEST REPORT

SCOPE OF WORK

MODIFIED UL 263-2011(R2022), MODIFIED ASTM E119-20 AND MODIFIED CAN/ULC-S101-14 TESTING ON WOOD JOIST FLOOR-CEILING ASSEMBLY INCORPORATING LED SLIM PANEL, FR-LED-6-S15W-5CCT-PL-**, FR-LED-4-S12W-5CCT-PL-** AND LED FLOATING GIMBAL, FR-LED-6-S15W-5CCT-FG-**, FR-LED-4-S9W-5CCT-FG-**

REPORT NUMBER

230202064GZC-001

TEST DATE(S)

2022-07-25

ISSUE DATE

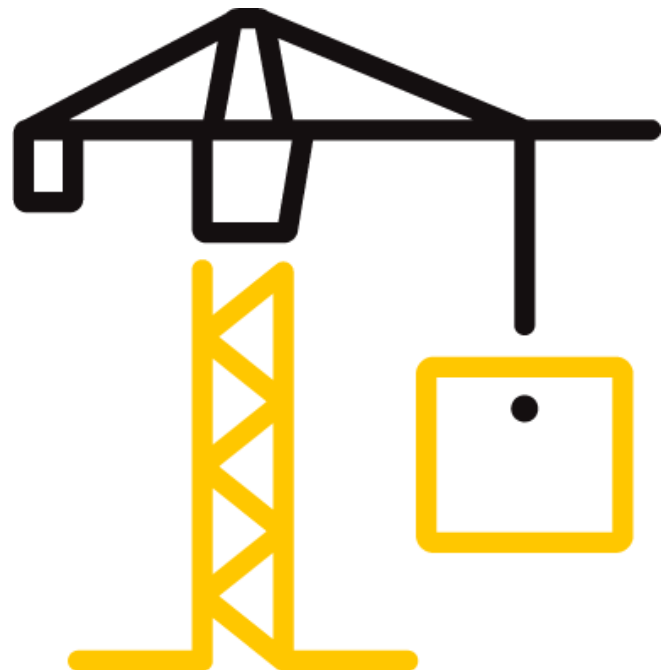
2023-02-10

[REVISED DATE]

/

PAGES

37



Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Statement

1. This report is invalid without authorized person's signature.
2. This report is invalid where any unauthorized modification indicated.
3. Don't copy this report in partial (except full copy) without any official approval in written by our company.
4. This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample(s) tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
5. All the test results give the statement of conformity refer to the decision rule of "Procedure 2 "Accuracy Method" as stated in the IEC Guide 115:2007.

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

REPORT ISSUED TO

EZITOWN ELECTRICAL SUPPLY INC.

101 Woodstock St., South Tavistock, Ontario N0B 2R0, Canada

SECTION 1

SCOPE

Intertek has conducted an evaluation for Ezitown Electrical Supply Inc. to determine the fire resistance characteristics of unrestrained wood joist floor-ceiling assembly incorporating one LED SLIM PANEL, model FR-LED-6-S15W-5CCT-PL-WH and one LED FLOATING GIMBAL, model FR-LED-6-S15W-5CCT-FG-WH for a 2-hour fire resistance rating test. The fire test was designed also to demonstrate evaluation on LED SLIM PANEL, model FR-LED-6-S15W-5CCT-PL-** and FR-LED-4-S12W-5CCT-PL-**, LED FLOATING GIMBAL, model FR-LED-6-S15W-5CCT-FG-**, FR-LED-4-S9W-5CCT-FG-**. This evaluation began on June 17, 2022 and was completed on July 25, 2022. The test was conducted on July 25, 2022.

The test was conducted in accordance with Modified UL 263-2011(R2022), STANDARD FOR SAFETY Fire Tests of Building Construction and Materials, Modified ASTM E119-20, Standard Test Methods for Fire Tests of Building Construction and Materials and Modified CAN/ULC-S101-14, Standard Methods of Fire Endurance Tests of Building Construction and Materials.

The fire resistance test was conducted at the internal approved facility, located at Shanghai.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

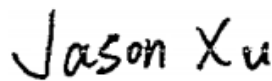
SUMMARY OF TEST RESULTS

The wood joist floor-ceiling assembly incorporating LED SLIM PANEL, model FR-LED-6-S15W-5CCT-PL-** and FR-LED-4-S12W-5CCT-PL-**, LED FLOATING GIMBAL, model FR-LED-6-S15W-5CCT-FG-**, FR-LED-4-S9W-5CCT-FG-** described and tested in this report met the Conditions of Acceptance of Modified UL 263-2011(R2022), Modified ASTM E119-20 and Modified CAN/ULC-S101-14 when exposed to a fire-resistance rating of 2-hour. Construction summary of the full assembly is located in Section 4 of this test report.

This report is co-listing based on Report No. 220617162GZU-001 R1 Dated Oct. 17, 2022.

Report Authorized:

Authorized By:



Jason Xu
Reviewer

Completed By:



Kevin Pan
Project Engineer

Noted: If you have any questions for the report, please contact: lillian.lf.he@intertek.com

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 3

TEST METHOD

The specimens were evaluated in accordance with the following:

Modified UL 263-2011(R2022), STANDARD FOR SAFETY Fire Tests of Building Construction and Materials

Modified ASTM E119-20, Standard Test Methods for Fire Tests of Building Construction and Materials

Modified CAN/ULC-S101-14, Standard Methods of Fire Endurance Tests of Building Construction and Materials

Test was conducted in accordance with the applicable requirement of UL 263-2011(R2022), STANDARD FOR SAFETY-Fire Tests of Building Construction and Materials, Section 10 Floor and Roof Assemblies Test, and ASTM E119-20, Standard Test Methods for Fire Tests of Building Construction and Materials, Section 8.6 Tests of Floors and Roofs, and CAN/ULC-S101-14, Standard Methods of Fire Endurance Tests of Building Construction and Materials, Section 11 Tests of Floor and Roof Assemblies.

The test will be a modified test, as the test will be reduced in scale, the area exposed to fire do not meet the standard of 180 sq.ft requirement for floor/ceiling assemblies and will also be conducted without a superimposed load which is requested by Section 10.3 of UL 263, Section 7.4.3 of ASTM E119 and Section 11.4.1 of CAN/ULC-S101.

SECTION 4

MATERIAL SOURCE/INSTALLATION

The specimens were provided to Intertek directly by the client and were not independently selected for testing. Test specimens were received at the Evaluation Center on June 17, 2022.

Sample Description:

The full information for the two series is provided by the applicant and as below table:

| Name | Series Model | Difference |
|--|--------------------------|--|
| LED SLIM PANEL | FR-LED-6-S15W-5CCT-PL-** | 1.power: The power has 12W and 15W difference, the structure is the same. |
| | FR-LED-4-S12W-5CCT-PL-** | 2. Size: The sizes are 4 inch and 6 inch respectively, and the construction is the same. |
| LED FLOATING GIMBAL | FR-LED-6-S15W-5CCT-FG-** | 1.power: There are 9W and 15W differences in power, the structure is the same. |
| | FR-LED-4-S9W-5CCT-FG-** | 2. Size: The sizes are 4 inch and 6 inch respectively, and the construction is the same. |
| Note: "***" symbol indicated finish color types including W, WH; N, BN, SN, NK; B, BK, BL; OB, ORB, BZ or AC; W or WH for white; N, BN, SN or NK for Brushed Nickel; B, BL or BK for black; OB, ORB or BZ for oil rubbed bronze, AC for copper. | | |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Four representative models of two series are included: FR-LED-6-S15W-5CCT-PL-WH, FR-LED-4-S12W-5CCT-PL-WH, FR-LED-6-S15W-5CCT-FG-WH and FR-LED-4-S9W-5CCT-FG-WH.

Corresponding weights are as follows:

| | |
|--------------------------|--------|
| FR-LED-6-S15W-5CCT-PL-WH | 298.5g |
| FR-LED-6-S15W-5CCT-FG-WH | 585.2g |
| FR-LED-4-S12W-5CCT-PL-WH | 165.4g |
| FR-LED-4-S9W-5CCT-FG-WH | 292.3g |

Documents and samples of LED SLIM PANEL were checked and found that they have the similar material and design. The main difference are diameter and configuration. Model FR-LED-6-S15W-5CCT-PL-WH with maximum weight and maximum diameter was selected to cover FR-LED-4-S12W-5CCT-PL-WH.

Documents and samples of LED FLOATING GIMBAL were checked and found that they have the similar material and design. The main difference are diameter and configuration. Model FR-LED-6-S15W-5CCT-FG-WH with maximum weight and maximum diameter was selected to cover FR-LED-4-S9W-5CCT-FG-WH.

Given the outlined parameters and all models are of a steel backing, Model FR-LED-6-S15W-5CCT-FG-WH and Model FR-LED-6-S15W-5CCT-PL-WH were installed into the ceiling assembly to subject to fire test. The sample ID number assigned by the test lab is S220720010SHF.001.

A description of component list of the floor ceiling assembly is given in the table below. The description of the specimen and information provided by the applicant. All values quoted below are nominal, unless tolerances are given.

| FLOOR-CEILING ASSEMBLY | | DESCRIPTION |
|-----------------------------|--------------|-------------------------------|
| Gypsum Board | Description | Knauf Fireshield Gypsum Board |
| | Nominal Size | 1220mm x 2440mm |
| | Thickness | 15mm |
| | Density | 905kg/m ³ |
| | Manufacturer | KNAUF |
| Wood Joists, bearing plates | Type | Solid wood |
| | Nominal Size | 241mm deep x 38mm width |
| | Density | 430kg/m ³ |
| Bridging | Type | Solid wood |
| | Nominal Size | 100mm deep x 38mm width |
| | Density | 430kg/m ³ |
| Flooring | Type | Plywood |
| | Thickness | 15mm |
| | Density | 625kg/m ³ |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

| | | |
|-----------------|---------------|---|
| Insulation | Description | Rockwool |
| | Thickness | 50mm |
| | Density | 150kg/m ³ |
| Furring Channel | Description | Hat-shaped rigid furring channels, galvanized steel |
| | Size | 68*35*22*0.5mm |
| Joint Compound | Material | Lafarge Caulk |
| | Manufacturer | Foshan Manda Building Materials Co., LTD |
| Specimen A | Model | FR-LED-6-S15W-5CCT-PL-WH |
| | Fixing method | Fixed to face gypsum board by two spring clips |
| Specimen B | Model | FR-LED-6-S15W-5CCT-FG-WH |
| | Fixing method | Fixed to face gypsum board by two spring clips |

Assembly Description:

Use a 2-hour fire rated ceiling assembly constructed in accordance with construction specifications of UL Design No. L556. The nominal size of wood joist floor-ceiling assembly is 1680mm long by 1624mm wide by 338mm deep, consisted of wood joists, gypsum board, flooring, rock wool and was constructed at laboratory. The fire rated ceiling assembly consisting of the following:

Wood Joist

Five 1604mm long wood joists were to be positioned and secured to the wood bearing plates of 1624mm long with three M4.8x75mm Hexagon washer head self-tapping screws per wood joist end. The three staggered bridging of each row were to be positioned between wood joists and secured to the joists with three M4.8x75mm Hexagon washer head self-tapping screws per bridging end.

Flooring

One layer of 15mm plywood was placed on unexposed side of the wood frame along the direction of wood joists and fastened by ST3.5x35mm flat head self-tapping screws with a spacing of approximately 203mm in the perimeter and in the field.

Insulation

50mm thick rockwool was positioned into the cavity between wood joists above gypsum board.

Gypsum Board

Base layer 15mm Knauf gypsum board applied at right angles to the wood joists by ST3.5x35mm flat head self-tapping screws spaced 12"o.c. Second layer 15mm Knauf gypsum board applied at right angles to joists by ST3.5x50mm flat head self-tapping screws spaced 8"o.c. Second layer joints offset 32" from base layer joints. Third layer 15mm Knauf gypsum board applied at right angles to joists by ST3.5x64mm flat head self-tapping screws spaced 8" o.c. Third layer joints offset 16" from second layer joints. Five Hat-shaped rigid furring channels spaced 16"o.c. applied at right angles to joists over third layer with two ST3.5x64mm flat head self-tapping screws at each joist. Face layer 15mm Knauf gypsum wallboard applied at right angles to

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

furring channels by ST3.5x35mm flat head self-tapping screws 8"o.c. The board joints and screws head were coated with 2 layers of joint compound.

Sample Installation:

Follow the manufacturer's installation instructions, cut a circular opening in the gypsum ceiling such that the annular space between the gypsum board and test specimen does not exceed 1/8 in. The test specimens were fixed to the face layer 15mm Knauf gypsum board of floor-ceiling assembly by spring clips.

The drawings of test specimens and wood joist ceiling assembly can be found in Section 10 and 11 respectively.

SECTION 5

EQUIPMENT

List of calibrated instrumentation used for testing

| ITEM | EQUIPMENT ID |
|---------------------------|--------------|
| Horizontal furnace | SH1124 |
| Furnace pressure gauge | SH1124-1~2 |
| Test Clock | SH1042 |
| Furnace thermocouple | SH1097-1 |
| Ambient temperature gauge | SH1097-11 |
| Unexposed thermocouple | SH1097-12 |

SECTION 6

TEST PROCEDURE

The test floor-ceiling assembly was installed in a steel restraint frame and simply supported at four edges with a span of 1500mm. The test assembly was exposed to the fire from the underside, and the exposed area was 1500 mm long by 1500 mm wide. The test assembly was placed on top of the furnace for the fire exposure. The side installed with test specimen was exposed to the fire.

Fire Endurance Test

After positioning the assembly frame over the furnace opening, the burners were ignited and the timer was started. Temperatures within the furnace were monitored using thermocouples and the data was recorded. The burners were controlled to keep the furnace temperatures within the allowable limits specified in the test standards. The neutral-pressure-plane was controlled by two pressure transducers that adjusted the opening of the exhaust damper. After 5 minutes, the furnace pressure was adjusted so that neutral- pressure-plane inside the furnace was established at 100mm below the underside of the test ceiling. Position for measurement of unexposed temperature was presented in the drawing of Section 7. The test measurement data and photographs were shown in Section 12 and 13 respectively.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Correction factor

When the indicated resistance period is 1/2h or over, determined by the average or maximum temperature rise on the unexposed or maximum temperature rise on the unexposed surface or within the test specimen, or by failure under load, a correction shall be applied for variation of the furnace exposure from that prescribed, where it will affect the classification, by multiplying the indicated period by two thirds of the difference in area between the curve of average furnace temperature and the standard curve for the first three fourths of the period and dividing the product by the area between the standard curve and a base line of 68°F for the same part of the indicated period, the latter area increased by 54°F*h(3240°F*min)to compensate for the thermal lag of the furnace thermocouples during the first part of the test. For fire exposure in the test higher than the standard, the indicated resistance period shall be increased by the amount of the correction and be similarly decreased for fire exposure below standard. The correction can be expressed by the following equation:

$$C = \frac{2I(A - A_s)}{3(A_s + L)}$$

where:

C = correction in the same units as I,

I = indicated fire-resistance period,

A = area under the curve of indicated average furnace temperature for the first three fourths of the indicated period,

A_s = area under the standard furnace curve for the same part of the indicated period, and

L = lag correction in the same units as A and A_s (54°F*h or 30°C*h (3240°F*min or 1800°C*min))

Test Report

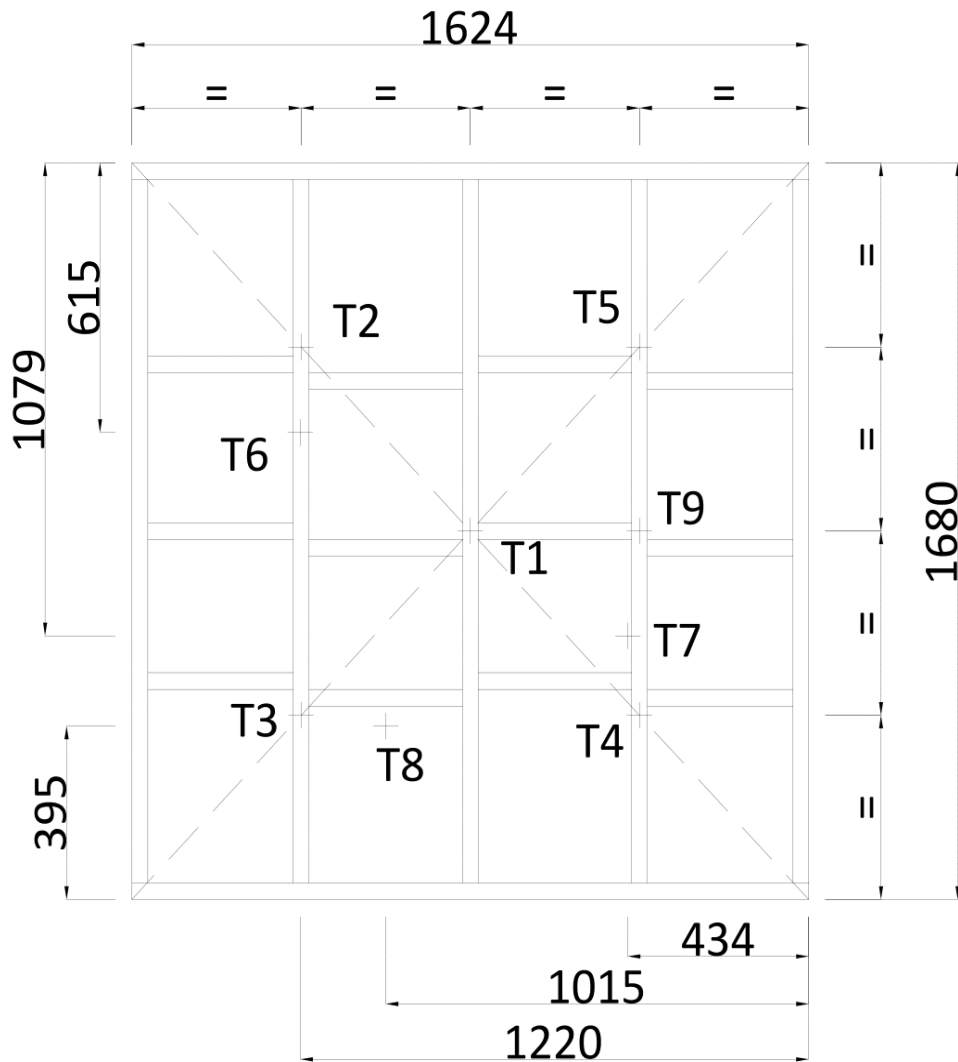
Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 7

TEST SPECIMEN INSTRUMENTATION

Nine 18 gauge, Type K thermocouples were covered by 6 in.by 6 in.by 0.4 in. thick dry felt pads and positioned on the unexposed surfaces of the specimens to measure heat transmission. Five of these were symmetrically disposed, one at approximately the center of the specimen and four at approximately the center of its quarter sections. The other four were to be located at the discretion of the testing body to obtain representative information on the performance of the construction under test.



Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 8

TEST RESULT

Fire Endurance Test

The test was initiated on July 25, 2022. The ambient temperature at the time of the test was 34.2°C and the humidity was 56%R.H. Observations made during the test are listed below:

Test Observations:

| Time | | All observations are from the unexposed face unless noted otherwise. |
|------|------|---|
| Mins | Secs | |
| 00 | 00 | Test started. |
| 20 | 00 | No significant change. |
| 40 | 00 | No significant change. |
| 60 | 00 | No significant change. |
| 80 | 00 | No significant change. |
| 100 | 00 | No significant change. |
| 120 | 00 | Fire Endurance test was discontinued. The test assembly withstood the fire test without passage of flame or passage of gases hot enough to ignite a cotton pad on the unexposed side. |

Correction Factor for the Fire Endurance Test

| VARIABLE | DESCRIPTION | VALUE | UNIT |
|------------------|--|------------|----------------|
| C | Correction Factor | -5.8 | seconds |
| I | Indicated FR Period | 120 | minutes |
| A | Area under Indicated FR Period for first 3/4 of test period | 73668 | °C*min |
| A _s | Area under Standard UL 263 Time vs. Temp. Curve for first 3/4 of test period | 73760 | °C*min |
| L | Lag Correction | 1800 | °C*min |
| FR Period | Fire- Resistance Period | 120 | minutes |

Note: The standard specifies that the fire resistance shall be determined to the nearest integral minute. Consequently, if the correction factor is less than 30 seconds, and the test specimen met the criteria for the full indicated fire resistance period, no correction is deemed necessary.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 9

CONCLUSION

Intertek Building Construction(B&C) has conducted testing for Ezitown Electrical Supply Inc. on the wood joist floor-ceiling assembly incorporating LED SLIM PANEL, model FR-LED-6-S15W-5CCT-PL-** and FR-LED-4-S12W-5CCT-PL-**, LED FLOATING GIMBAL, model FR-LED-6-S15W-5CCT-FG-**, FR-LED-4-S9W-5CCT-FG-**. Testing was conducted in accordance with the applicable criteria and following the standard methods of Modified UL 263-2011(R2022), Modified ASTM E119-20 and Modified CAN/ULC-S101-14.

Based on the result of this test, the wood joist floor-ceiling assembly incorporating LED SLIM PANEL, model FR-LED-6-S15W-5CCT-PL-** and FR-LED-4-S12W-5CCT-PL-**, LED FLOATING GIMBAL, model FR-LED-6-S15W-5CCT-FG-**, FR-LED-4-S9W-5CCT-FG-** described herein met the Conditions of Acceptance of Modified UL 263-2011(R2022), Modified ASTM E119-20 and Modified CAN/ULC-S101-14 when exposed to a fire resistance rating of 2-hour.



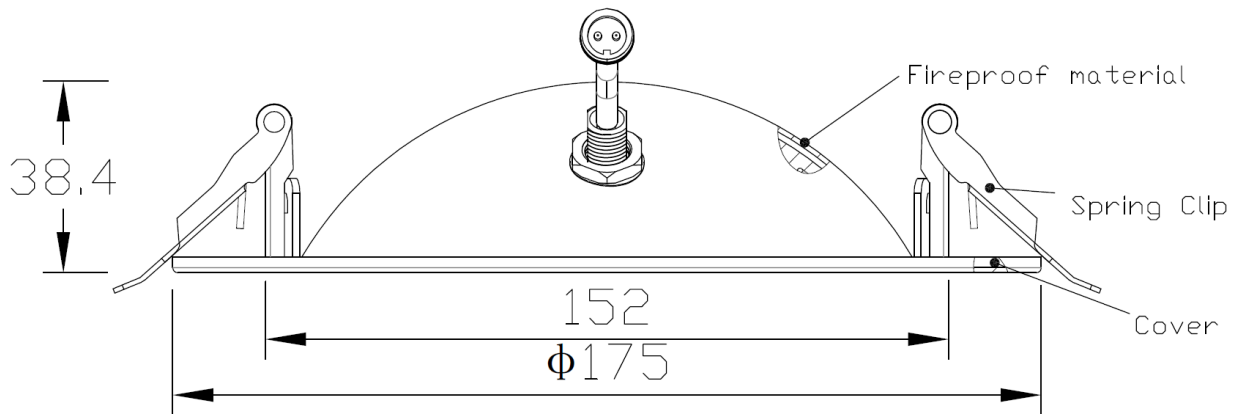
Test Report

Report No.: 230202064GZC-001

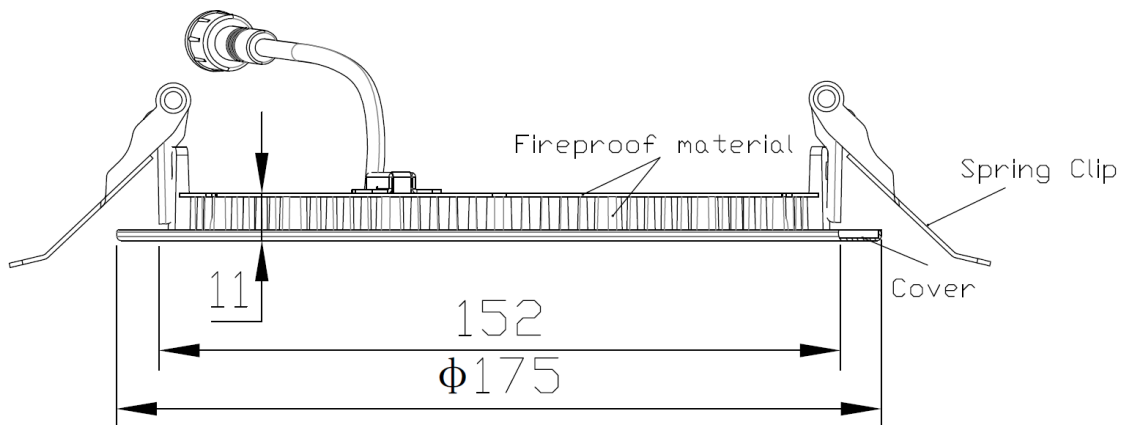
Report Date: 2023-02-10

SECTION 10

SPECIMEN DRAWING



Dimension Drawing of Model FR-LED-6-S15W-5CCT-FG-WH

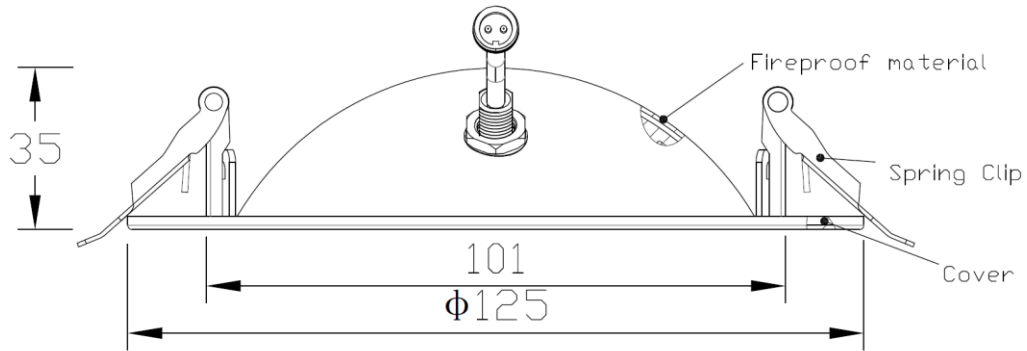


Dimension Drawing of Model FR-LED-6-S15W-5CCT-PL-WH

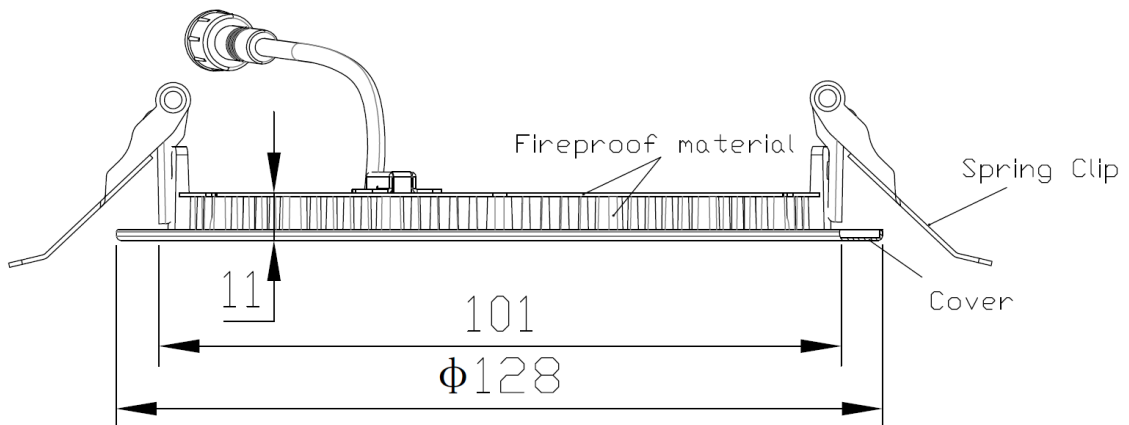
Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10



Dimension Drawing of Model FR-LED-4-S9W-5CCT-FG-WH



Dimension Drawing of Model FR-LED-4-S12W-5CCT-PL-WH

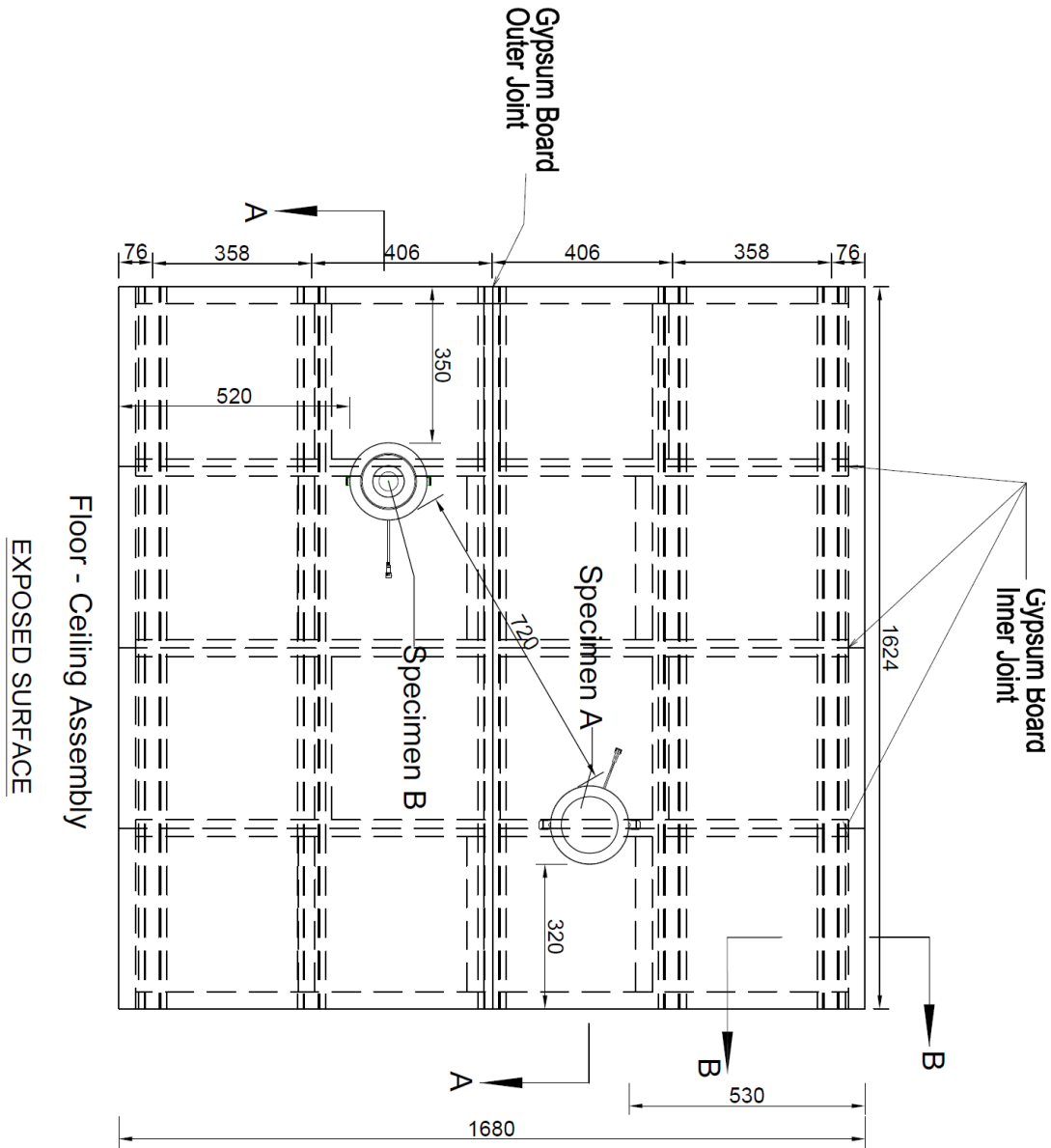
Test Report

Report No.: 230202064GZC-001

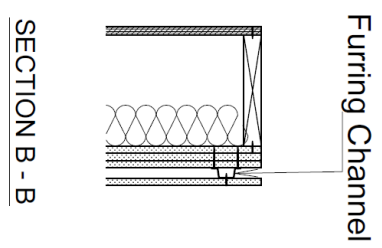
Report Date: 2023-02-10

SECTION 11

TEST ASSEMBLY DRAWINGS



Dimensions are in millimeters



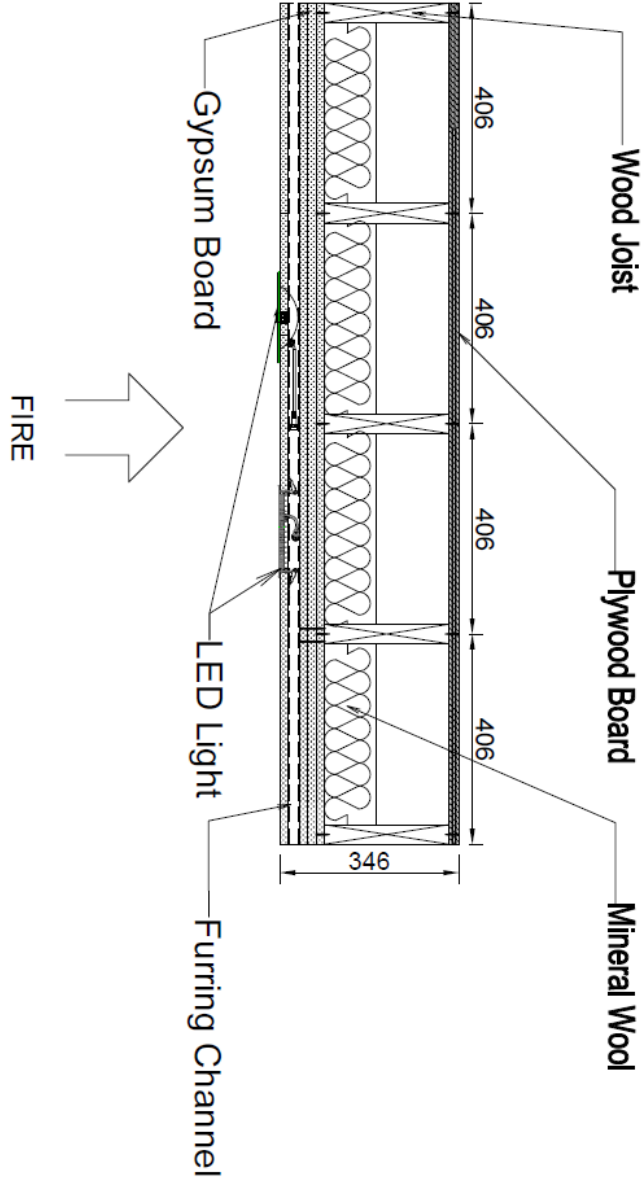
Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION A - A

Dimensions are in millimeters



Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 12

TEST DATA

Temperature Data:

Mean furnace temperature together with temperature-time relationship specified in the standard

| Time Mins | Furnace Mean Temp./ °C | Specified Furnace Temp./ °C | Area Above 20°C Base of Furnace Average (°C • min) | Area Above 20°C Base of Std Average (°C • min) | Error % |
|-----------|------------------------|-----------------------------|--|--|---------|
| 0 | 27 | 20 | 0 | 0 | 0.00% |
| 1 | 32 | 124 | 9 | 52 | -82.37% |
| 2 | 67 | 227 | 39 | 208 | -81.44% |
| 3 | 152 | 331 | 128 | 467 | -72.59% |
| 4 | 289 | 434 | 328 | 829 | -60.43% |
| 5 | 433 | 538 | 669 | 1295 | -48.37% |
| 6 | 544 | 571 | 1137 | 1830 | -37.86% |
| 7 | 617 | 604 | 1697 | 2397 | -29.19% |
| 8 | 663 | 638 | 2317 | 2998 | -22.70% |
| 9 | 691 | 671 | 2974 | 3633 | -18.12% |
| 10 | 712 | 704 | 3656 | 4300 | -14.98% |
| 11 | 729 | 715 | 4356 | 4990 | -12.70% |
| 12 | 743 | 726 | 5072 | 5690 | -10.86% |
| 13 | 757 | 738 | 5802 | 6402 | -9.37% |
| 14 | 769 | 749 | 6546 | 7126 | -8.14% |
| 15 | 781 | 760 | 7301 | 7860 | -7.11% |
| 16 | 792 | 767 | 8067 | 8604 | -6.23% |
| 17 | 802 | 774 | 8845 | 9354 | -5.45% |
| 18 | 812 | 781 | 9632 | 10112 | -4.74% |
| 19 | 822 | 788 | 10429 | 10876 | -4.11% |
| 20 | 829 | 795 | 11235 | 11648 | -3.54% |
| 21 | 828 | 800 | 12044 | 12425 | -3.07% |
| 22 | 827 | 805 | 12851 | 13208 | -2.70% |
| 23 | 822 | 811 | 13656 | 13996 | -2.43% |
| 24 | 816 | 816 | 14454 | 14789 | -2.26% |
| 25 | 813 | 821 | 15248 | 15588 | -2.18% |
| 26 | 813 | 825 | 16041 | 16391 | -2.13% |
| 27 | 820 | 830 | 16837 | 17198 | -2.10% |
| 28 | 831 | 834 | 17643 | 18010 | -2.04% |
| 29 | 839 | 839 | 18458 | 18827 | -1.96% |
| 30 | 845 | 843 | 19280 | 19648 | -1.87% |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

| Time Mins | Furnace Mean Temp./ °C | Specified Furnace Temp./ °C | Area Above 20°C Base of Furnace Average (°C • min) | Area Above 20°C Base of Std Average (°C • min) | Error % |
|-----------|------------------------|-----------------------------|--|--|---------|
| 31 | 850 | 847 | 20107 | 20473 | -1.78% |
| 32 | 855 | 851 | 20940 | 21302 | -1.70% |
| 33 | 859 | 854 | 21777 | 22134 | -1.61% |
| 34 | 863 | 858 | 22618 | 22970 | -1.53% |
| 35 | 867 | 862 | 23463 | 23810 | -1.46% |
| 36 | 870 | 865 | 24311 | 24654 | -1.39% |
| 37 | 873 | 868 | 25163 | 25500 | -1.32% |
| 38 | 876 | 872 | 26018 | 26350 | -1.26% |
| 39 | 880 | 875 | 26876 | 27204 | -1.20% |
| 40 | 882 | 878 | 27737 | 28060 | -1.15% |
| 41 | 885 | 881 | 28601 | 28920 | -1.10% |
| 42 | 888 | 884 | 29467 | 29782 | -1.06% |
| 43 | 890 | 886 | 30336 | 30647 | -1.02% |
| 44 | 892 | 889 | 31207 | 31515 | -0.98% |
| 45 | 895 | 892 | 32080 | 32385 | -0.94% |
| 46 | 897 | 895 | 32956 | 33259 | -0.91% |
| 47 | 899 | 897 | 33834 | 34135 | -0.88% |
| 48 | 901 | 900 | 34714 | 35013 | -0.85% |
| 49 | 903 | 902 | 35596 | 35894 | -0.83% |
| 50 | 905 | 905 | 36480 | 36778 | -0.81% |
| 51 | 907 | 907 | 37366 | 37664 | -0.79% |
| 52 | 908 | 909 | 38254 | 38552 | -0.77% |
| 53 | 910 | 912 | 39143 | 39442 | -0.76% |
| 54 | 914 | 914 | 40035 | 40335 | -0.74% |
| 55 | 920 | 916 | 40932 | 41230 | -0.72% |
| 56 | 922 | 918 | 41833 | 42127 | -0.70% |
| 57 | 922 | 920 | 42735 | 43026 | -0.68% |
| 58 | 924 | 923 | 43638 | 43928 | -0.66% |
| 59 | 926 | 925 | 44543 | 44832 | -0.64% |
| 60 | 928 | 927 | 45450 | 45738 | -0.63% |
| 61 | 931 | 929 | 46359 | 46646 | -0.61% |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

| Time Mins | Furnace Mean Temp./ °C | Specified Furnace Temp./ °C | Area Above 20°C Base of Furnace Average (°C • min) | Area Above 20°C Base of Std Average (°C • min) | Error % |
|-----------|------------------------|-----------------------------|--|--|---------|
| 62 | 934 | 931 | 47272 | 47556 | -0.60% |
| 63 | 936 | 933 | 48187 | 48468 | -0.58% |
| 64 | 937 | 935 | 49103 | 49382 | -0.56% |
| 65 | 938 | 937 | 50021 | 50298 | -0.55% |
| 66 | 939 | 939 | 50940 | 51216 | -0.54% |
| 67 | 940 | 941 | 51859 | 52136 | -0.53% |
| 68 | 941 | 942 | 52779 | 53057 | -0.52% |
| 69 | 946 | 944 | 53703 | 53980 | -0.51% |
| 70 | 950 | 946 | 54631 | 54905 | -0.50% |
| 71 | 954 | 948 | 55563 | 55832 | -0.48% |
| 72 | 957 | 950 | 56499 | 56761 | -0.46% |
| 73 | 960 | 951 | 57437 | 57692 | -0.44% |
| 74 | 963 | 953 | 58379 | 58624 | -0.42% |
| 75 | 966 | 955 | 59324 | 59558 | -0.39% |
| 76 | 968 | 957 | 60271 | 60494 | -0.37% |
| 77 | 970 | 958 | 61219 | 61431 | -0.34% |
| 78 | 972 | 960 | 62170 | 62370 | -0.32% |
| 79 | 973 | 961 | 63122 | 63311 | -0.30% |
| 80 | 976 | 963 | 64077 | 64253 | -0.27% |
| 81 | 978 | 965 | 65034 | 65197 | -0.25% |
| 82 | 980 | 966 | 65992 | 66142 | -0.23% |
| 83 | 982 | 968 | 66953 | 67089 | -0.20% |
| 84 | 982 | 969 | 67915 | 68038 | -0.18% |
| 85 | 981 | 971 | 68876 | 68988 | -0.16% |
| 86 | 981 | 972 | 69837 | 69939 | -0.15% |
| 87 | 980 | 974 | 70797 | 70892 | -0.13% |
| 88 | 977 | 975 | 71756 | 71847 | -0.13% |
| 89 | 976 | 977 | 72712 | 72803 | -0.12% |
| 90 | 976 | 978 | 73668 | 73760 | -0.12% |
| 91 | 975 | 979 | 74624 | 74719 | -0.13% |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

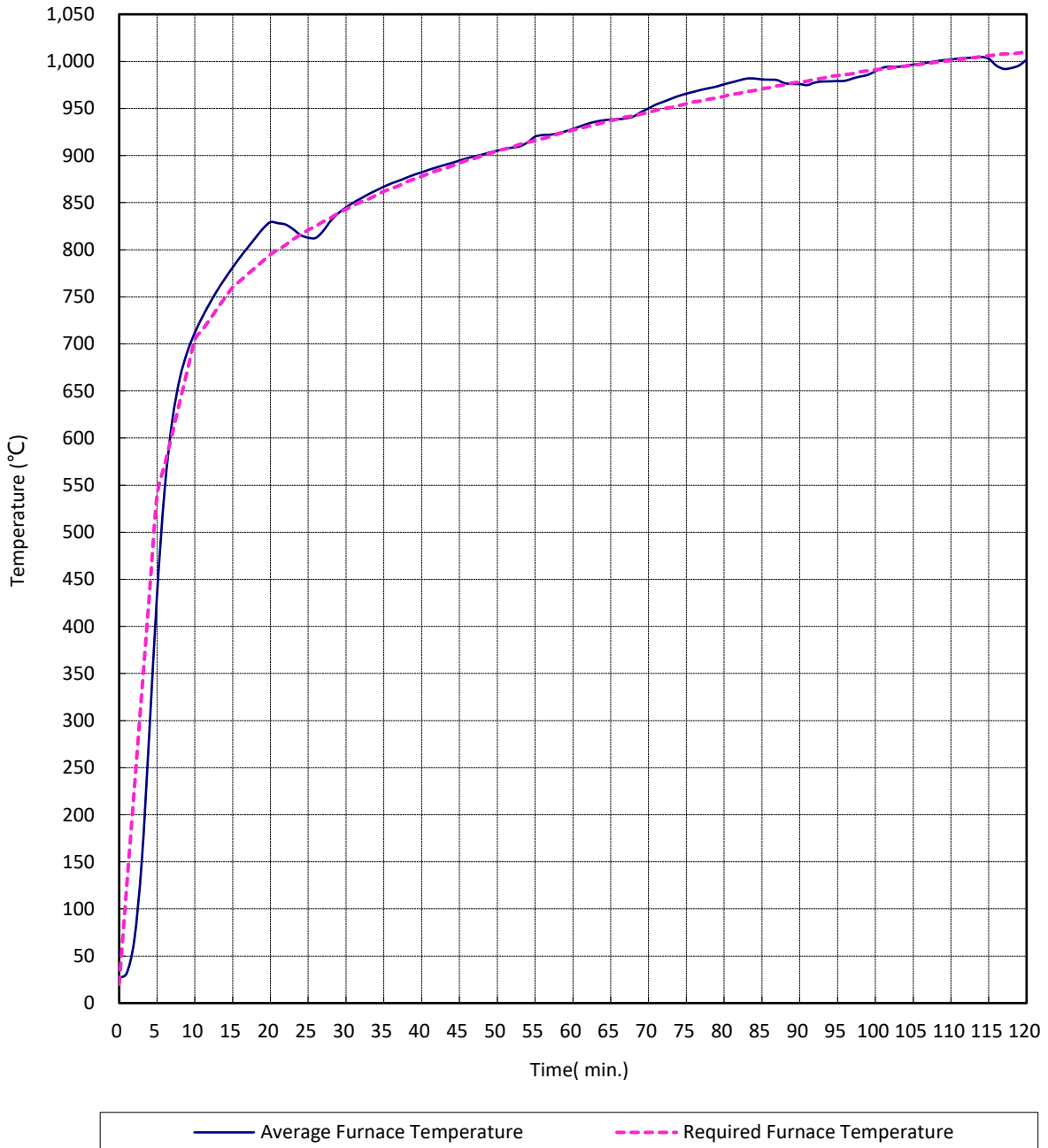
| Time Mins | Furnace Mean Temp./ °C | Specified Furnace Temp./ °C | Area Above 20°C Base of Furnace Average (°C • min) | Area Above 20°C Base of Std Average (°C • min) | Error % |
|-----------|------------------------|-----------------------------|--|--|---------|
| 92 | 978 | 981 | 75580 | 75679 | -0.13% |
| 93 | 979 | 982 | 76538 | 76640 | -0.13% |
| 94 | 979 | 984 | 77497 | 77603 | -0.14% |
| 95 | 979 | 985 | 78456 | 78568 | -0.14% |
| 96 | 979 | 986 | 79415 | 79533 | -0.15% |
| 97 | 982 | 987 | 80376 | 80500 | -0.15% |
| 98 | 984 | 989 | 81338 | 81468 | -0.16% |
| 99 | 986 | 990 | 82303 | 82437 | -0.16% |
| 100 | 990 | 991 | 83271 | 83408 | -0.16% |
| 101 | 993 | 992 | 84242 | 84379 | -0.16% |
| 102 | 994 | 993 | 85216 | 85352 | -0.16% |
| 103 | 994 | 994 | 86190 | 86325 | -0.16% |
| 104 | 995 | 995 | 87165 | 87300 | -0.15% |
| 105 | 997 | 996 | 88141 | 88275 | -0.15% |
| 106 | 998 | 997 | 89118 | 89252 | -0.15% |
| 107 | 999 | 998 | 90097 | 90229 | -0.15% |
| 108 | 1000 | 999 | 91076 | 91208 | -0.14% |
| 109 | 1001 | 1000 | 92057 | 92187 | -0.14% |
| 110 | 1002 | 1001 | 93038 | 93168 | -0.14% |
| 111 | 1003 | 1002 | 94021 | 94149 | -0.14% |
| 112 | 1004 | 1003 | 95004 | 95132 | -0.13% |
| 113 | 1004 | 1004 | 95988 | 96115 | -0.13% |
| 114 | 1005 | 1005 | 96972 | 97100 | -0.13% |
| 115 | 1003 | 1006 | 97956 | 98085 | -0.13% |
| 116 | 996 | 1007 | 98935 | 99072 | -0.14% |
| 117 | 992 | 1008 | 99909 | 100059 | -0.15% |
| 118 | 993 | 1008 | 100882 | 101047 | -0.16% |
| 119 | 996 | 1009 | 101856 | 102036 | -0.18% |
| 120 | 1002 | 1010 | 102835 | 103025 | -0.18% |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Graph for mean furnace temperature and temperature - time curve specified in the standard



Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | T1 (°C) | T2 (°C) | T3 (°C) | T4 (°C) | T5 (°C) | T6 (°C) | T7 (°C) | T8 (°C) | T9 (°C) |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0 | 36 | 35 | 35 | 36 | 35 | 35 | 36 | 36 | 35 |
| 1 | 36 | 35 | 35 | 36 | 36 | 35 | 36 | 36 | 35 |
| 2 | 36 | 35 | 35 | 35 | 36 | 35 | 36 | 36 | 35 |
| 3 | 36 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 35 |
| 4 | 36 | 35 | 35 | 35 | 35 | 35 | 36 | 36 | 35 |
| 5 | 36 | 35 | 36 | 36 | 35 | 35 | 36 | 36 | 35 |
| 6 | 36 | 35 | 35 | 36 | 36 | 35 | 36 | 36 | 35 |
| 7 | 36 | 35 | 35 | 36 | 36 | 35 | 36 | 36 | 35 |
| 8 | 36 | 35 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 9 | 36 | 35 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 10 | 36 | 35 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 11 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 12 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 13 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 14 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 15 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 16 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 17 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 18 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 19 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 20 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 21 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 22 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 23 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 24 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 25 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 26 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 27 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 28 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 29 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 30 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | T1 (°C) | T2 (°C) | T3 (°C) | T4 (°C) | T5 (°C) | T6 (°C) | T7 (°C) | T8 (°C) | T9 (°C) |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 31 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 32 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 33 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 34 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 35 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 36 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 35 |
| 37 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 38 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 39 | 36 | 36 | 36 | 36 | 36 | 35 | 36 | 36 | 36 |
| 40 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 |
| 41 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 |
| 42 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 |
| 43 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 |
| 44 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 |
| 45 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 36 |
| 46 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 36 |
| 47 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 36 |
| 48 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 38 | 36 |
| 49 | 37 | 36 | 36 | 36 | 36 | 36 | 37 | 38 | 37 |
| 50 | 37 | 37 | 36 | 36 | 37 | 37 | 37 | 38 | 37 |
| 51 | 37 | 37 | 36 | 36 | 37 | 37 | 37 | 38 | 37 |
| 52 | 37 | 37 | 37 | 36 | 37 | 37 | 37 | 39 | 37 |
| 53 | 37 | 37 | 37 | 37 | 37 | 37 | 38 | 39 | 38 |
| 54 | 37 | 37 | 37 | 37 | 37 | 37 | 38 | 39 | 38 |
| 55 | 38 | 37 | 37 | 37 | 37 | 37 | 38 | 40 | 38 |
| 56 | 38 | 38 | 37 | 37 | 38 | 38 | 38 | 40 | 38 |
| 57 | 38 | 38 | 37 | 37 | 38 | 38 | 38 | 40 | 39 |
| 58 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 40 | 39 |
| 59 | 38 | 38 | 38 | 38 | 38 | 38 | 39 | 41 | 39 |
| 60 | 39 | 38 | 38 | 38 | 39 | 38 | 39 | 41 | 39 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | T1 (°C) | T2 (°C) | T3 (°C) | T4 (°C) | T5 (°C) | T6 (°C) | T7 (°C) | T8 (°C) | T9 (°C) |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 61 | 39 | 39 | 38 | 38 | 39 | 39 | 39 | 41 | 40 |
| 62 | 39 | 39 | 39 | 38 | 39 | 39 | 39 | 42 | 40 |
| 63 | 39 | 39 | 39 | 39 | 39 | 39 | 40 | 42 | 40 |
| 64 | 40 | 40 | 39 | 39 | 39 | 40 | 40 | 43 | 41 |
| 65 | 40 | 40 | 39 | 39 | 40 | 40 | 40 | 43 | 41 |
| 66 | 40 | 40 | 40 | 39 | 40 | 40 | 40 | 43 | 41 |
| 67 | 41 | 41 | 40 | 40 | 40 | 41 | 41 | 44 | 42 |
| 68 | 41 | 41 | 40 | 40 | 41 | 41 | 41 | 44 | 42 |
| 69 | 41 | 41 | 40 | 40 | 41 | 41 | 41 | 45 | 42 |
| 70 | 42 | 42 | 41 | 40 | 41 | 42 | 41 | 46 | 43 |
| 71 | 42 | 42 | 41 | 41 | 42 | 42 | 42 | 46 | 43 |
| 72 | 42 | 43 | 42 | 41 | 42 | 43 | 42 | 47 | 43 |
| 73 | 43 | 44 | 42 | 41 | 42 | 43 | 42 | 48 | 44 |
| 74 | 43 | 44 | 43 | 42 | 42 | 44 | 43 | 48 | 44 |
| 75 | 44 | 45 | 43 | 42 | 43 | 45 | 43 | 49 | 45 |
| 76 | 44 | 46 | 44 | 42 | 43 | 45 | 43 | 50 | 45 |
| 77 | 45 | 46 | 44 | 43 | 43 | 46 | 44 | 51 | 45 |
| 78 | 46 | 47 | 45 | 43 | 44 | 47 | 44 | 52 | 46 |
| 79 | 46 | 48 | 46 | 43 | 44 | 48 | 44 | 53 | 46 |
| 80 | 47 | 49 | 47 | 44 | 45 | 49 | 45 | 54 | 46 |
| 81 | 48 | 50 | 47 | 44 | 45 | 49 | 45 | 55 | 47 |
| 82 | 48 | 51 | 48 | 44 | 45 | 50 | 45 | 56 | 47 |
| 83 | 49 | 51 | 49 | 45 | 46 | 51 | 46 | 57 | 48 |
| 84 | 50 | 52 | 50 | 45 | 46 | 52 | 46 | 58 | 48 |
| 85 | 51 | 53 | 51 | 46 | 46 | 53 | 47 | 59 | 49 |
| 86 | 51 | 54 | 52 | 46 | 47 | 54 | 47 | 60 | 49 |
| 87 | 52 | 55 | 53 | 46 | 47 | 55 | 47 | 61 | 50 |
| 88 | 53 | 56 | 54 | 47 | 48 | 56 | 48 | 62 | 50 |
| 89 | 54 | 57 | 55 | 47 | 48 | 57 | 48 | 63 | 50 |
| 90 | 55 | 58 | 56 | 48 | 48 | 58 | 49 | 64 | 51 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | T1 (°C) | T2 (°C) | T3 (°C) | T4 (°C) | T5 (°C) | T6 (°C) | T7 (°C) | T8 (°C) | T9 (°C) |
|-----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 91 | 55 | 59 | 57 | 48 | 49 | 59 | 49 | 65 | 52 |
| 92 | 56 | 59 | 58 | 49 | 49 | 59 | 49 | 66 | 52 |
| 93 | 57 | 60 | 59 | 49 | 50 | 60 | 50 | 66 | 53 |
| 94 | 58 | 61 | 60 | 50 | 50 | 61 | 50 | 67 | 53 |
| 95 | 58 | 62 | 61 | 50 | 51 | 62 | 51 | 68 | 54 |
| 96 | 59 | 63 | 62 | 51 | 51 | 63 | 51 | 68 | 54 |
| 97 | 60 | 63 | 62 | 52 | 52 | 64 | 52 | 69 | 55 |
| 98 | 61 | 64 | 63 | 52 | 53 | 64 | 52 | 69 | 56 |
| 99 | 61 | 65 | 64 | 53 | 53 | 65 | 53 | 70 | 56 |
| 100 | 62 | 65 | 65 | 53 | 54 | 66 | 53 | 70 | 57 |
| 101 | 63 | 66 | 65 | 54 | 54 | 66 | 54 | 71 | 58 |
| 102 | 63 | 66 | 66 | 55 | 55 | 67 | 54 | 71 | 58 |
| 103 | 64 | 67 | 67 | 55 | 56 | 67 | 55 | 72 | 59 |
| 104 | 65 | 67 | 67 | 56 | 56 | 68 | 56 | 72 | 60 |
| 105 | 65 | 68 | 68 | 57 | 57 | 68 | 56 | 73 | 61 |
| 106 | 66 | 68 | 68 | 57 | 57 | 69 | 57 | 73 | 61 |
| 107 | 66 | 69 | 69 | 58 | 58 | 69 | 57 | 73 | 62 |
| 108 | 67 | 69 | 69 | 59 | 59 | 70 | 58 | 74 | 63 |
| 109 | 67 | 70 | 70 | 60 | 60 | 70 | 59 | 74 | 63 |
| 110 | 68 | 70 | 70 | 60 | 60 | 71 | 59 | 74 | 64 |
| 111 | 69 | 70 | 71 | 61 | 61 | 71 | 60 | 75 | 65 |
| 112 | 69 | 71 | 71 | 62 | 62 | 71 | 61 | 75 | 66 |
| 113 | 69 | 71 | 72 | 62 | 62 | 72 | 61 | 75 | 66 |
| 114 | 70 | 72 | 72 | 63 | 63 | 72 | 62 | 76 | 67 |
| 115 | 71 | 72 | 73 | 64 | 64 | 73 | 63 | 76 | 68 |
| 116 | 71 | 72 | 73 | 64 | 64 | 73 | 63 | 76 | 68 |
| 117 | 71 | 73 | 73 | 65 | 65 | 73 | 64 | 77 | 69 |
| 118 | 72 | 73 | 74 | 65 | 66 | 74 | 65 | 77 | 70 |
| 119 | 72 | 73 | 74 | 65 | 66 | 74 | 65 | 77 | 70 |
| 120 | 73 | 73 | 74 | 66 | 67 | 74 | 66 | 77 | 71 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | Mean temperature of T1 ~ T9 (°C) | Maximum temperature of T1 ~ T9 (°C) |
|--------------|--|---|
| 0 | 35 | 36 |
| 1 | 36 | 36 |
| 2 | 35 | 36 |
| 3 | 35 | 36 |
| 4 | 35 | 36 |
| 5 | 36 | 36 |
| 6 | 36 | 36 |
| 7 | 36 | 36 |
| 8 | 36 | 36 |
| 9 | 36 | 36 |
| 10 | 36 | 36 |
| 11 | 36 | 36 |
| 12 | 36 | 36 |
| 13 | 36 | 36 |
| 14 | 36 | 36 |
| 15 | 36 | 36 |
| 16 | 36 | 36 |
| 17 | 36 | 36 |
| 18 | 36 | 36 |
| 19 | 36 | 36 |
| 20 | 36 | 36 |
| 21 | 36 | 36 |
| 22 | 36 | 36 |
| 23 | 36 | 36 |
| 24 | 36 | 36 |
| 25 | 36 | 36 |
| 26 | 36 | 36 |
| 27 | 36 | 36 |
| 28 | 36 | 36 |
| 29 | 36 | 36 |
| 30 | 36 | 36 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | Mean temperature of T1 ~ T9 (°C) | Maximum temperature of T1 ~ T9 (°C) |
|--------------|--|---|
| 31 | 36 | 36 |
| 32 | 36 | 36 |
| 33 | 36 | 36 |
| 34 | 36 | 36 |
| 35 | 36 | 36 |
| 36 | 36 | 36 |
| 37 | 36 | 36 |
| 38 | 36 | 36 |
| 39 | 36 | 36 |
| 40 | 36 | 37 |
| 41 | 36 | 37 |
| 42 | 36 | 37 |
| 43 | 36 | 37 |
| 44 | 36 | 37 |
| 45 | 36 | 37 |
| 46 | 36 | 37 |
| 47 | 36 | 37 |
| 48 | 36 | 38 |
| 49 | 37 | 38 |
| 50 | 37 | 38 |
| 51 | 37 | 38 |
| 52 | 37 | 39 |
| 53 | 37 | 39 |
| 54 | 37 | 39 |
| 55 | 38 | 40 |
| 56 | 38 | 40 |
| 57 | 38 | 40 |
| 58 | 38 | 40 |
| 59 | 39 | 41 |
| 60 | 39 | 41 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

| Time Mins | Mean temperature of T1 ~ T9 (°C) | Maximum temperature of T1 ~ T9 (°C) |
|--------------|--|---|
| 61 | 39 | 41 |
| 62 | 39 | 42 |
| 63 | 40 | 42 |
| 64 | 40 | 43 |
| 65 | 40 | 43 |
| 66 | 40 | 43 |
| 67 | 41 | 44 |
| 68 | 41 | 44 |
| 69 | 41 | 45 |
| 70 | 42 | 46 |
| 71 | 42 | 46 |
| 72 | 43 | 47 |
| 73 | 43 | 48 |
| 74 | 44 | 48 |
| 75 | 44 | 49 |
| 76 | 45 | 50 |
| 77 | 45 | 51 |
| 78 | 46 | 52 |
| 79 | 46 | 53 |
| 80 | 47 | 54 |
| 81 | 48 | 55 |
| 82 | 48 | 56 |
| 83 | 49 | 57 |
| 84 | 50 | 58 |
| 85 | 51 | 59 |
| 86 | 51 | 60 |
| 87 | 52 | 61 |
| 88 | 53 | 62 |
| 89 | 53 | 63 |
| 90 | 54 | 64 |

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Unexposed surface temperatures of fire endurance test

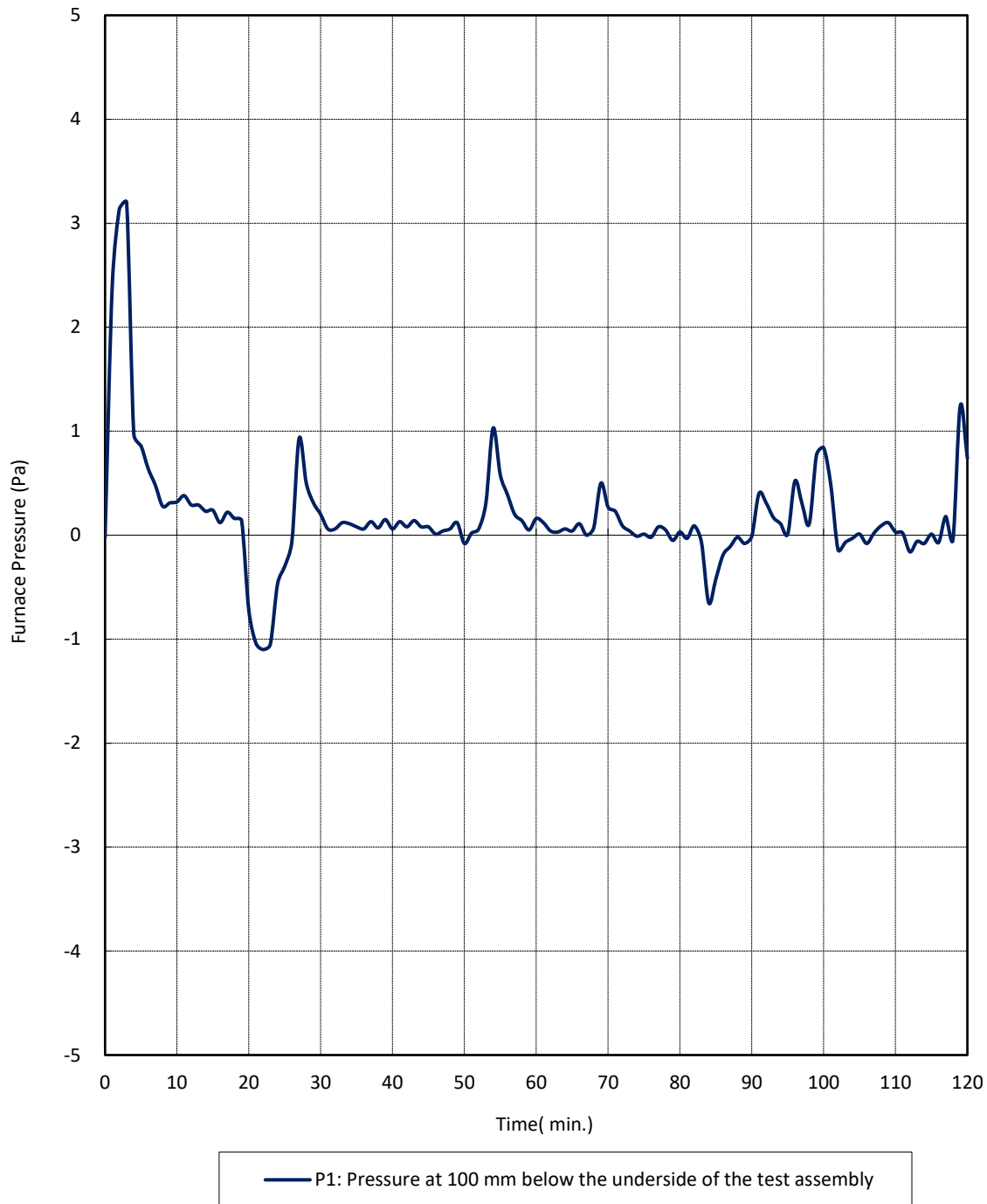
| Time Mins | Mean temperature of T1 ~ T9 (°C) | Maximum temperature of T1 ~ T9 (°C) |
|--------------|--|---|
| 91 | 55 | 65 |
| 92 | 55 | 66 |
| 93 | 56 | 66 |
| 94 | 57 | 67 |
| 95 | 57 | 68 |
| 96 | 58 | 68 |
| 97 | 59 | 69 |
| 98 | 59 | 69 |
| 99 | 60 | 70 |
| 100 | 61 | 70 |
| 101 | 61 | 71 |
| 102 | 62 | 71 |
| 103 | 62 | 72 |
| 104 | 63 | 72 |
| 105 | 64 | 73 |
| 106 | 64 | 73 |
| 107 | 65 | 73 |
| 108 | 65 | 74 |
| 109 | 66 | 74 |
| 110 | 66 | 74 |
| 111 | 67 | 75 |
| 112 | 68 | 75 |
| 113 | 68 | 75 |
| 114 | 69 | 76 |
| 115 | 69 | 76 |
| 116 | 69 | 76 |
| 117 | 70 | 77 |
| 118 | 71 | 77 |
| 119 | 71 | 77 |
| 120 | 71 | 77 |

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

Furnace pressure



Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 13

PHOTOGRAPHS



Photo No. 1

Front View of Specimen FR-LED-6-S15W-5CCT-PL-WH



Photo No. 2

Back View of Specimen FR-LED-6-S15W-5CCT-PL-WH

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10



Photo No. 3

Front View of Specimen FR-LED-6-S15W-5CCT-FG-WH



Photo No. 4

Back View of Specimen FR-LED-6-S15W-5CCT-FG-WH

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10



Photo No. 5
Ceiling Assembly Being Constructed

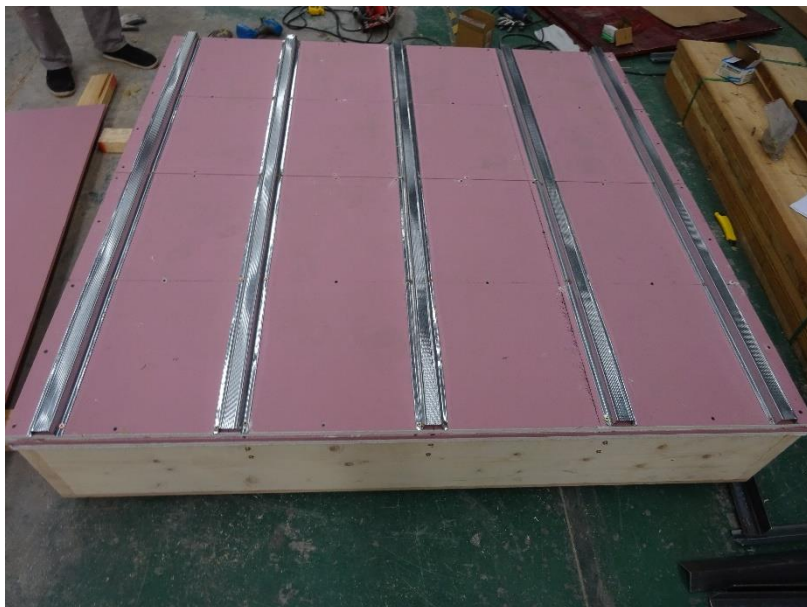


Photo No. 6
Furring Channel Installed on Ceiling Assembly

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10



Photo No. 7

LED light Installed on Ceiling Assembly



Photo No. 8

Completed Assembly - Exposed Surface before Fire Endurance Test

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

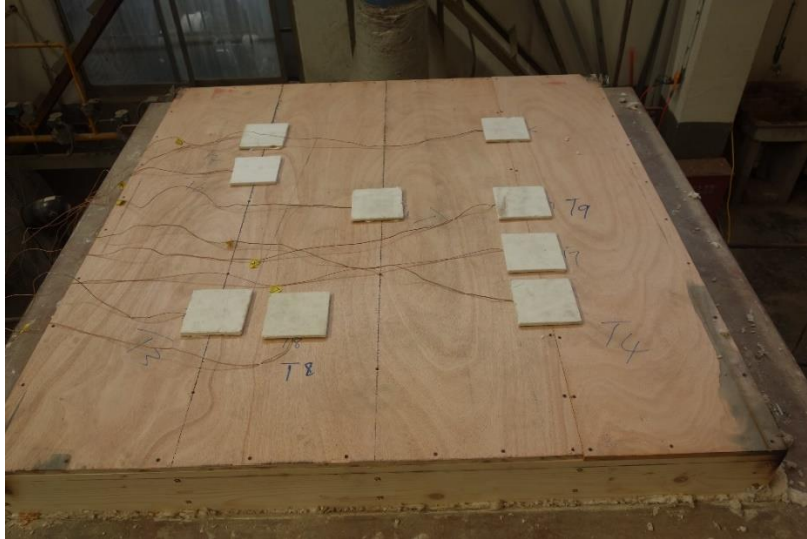


Photo No. 9

Completed Assembly - Unexposed Surface before Fire Endurance Test



Photo No. 10

Unexposed Surface after Fire Endurance Test (30 minutes)

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

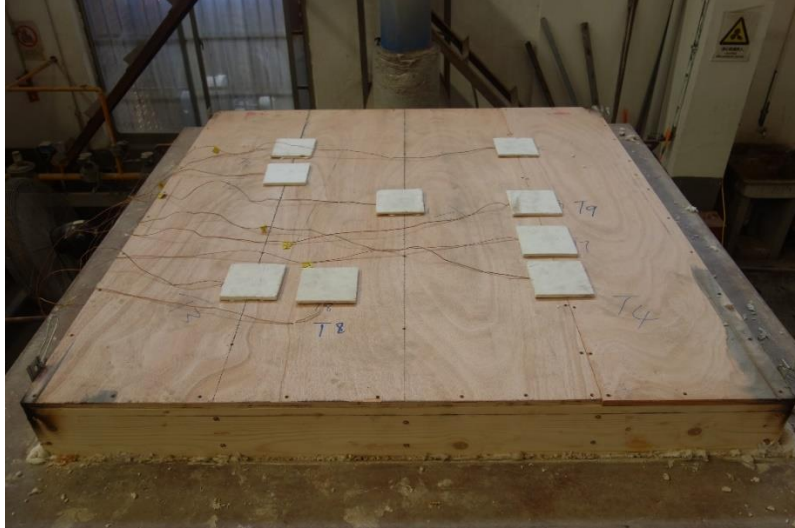


Photo No. 11
Unexposed Surface after Fire Endurance Test (60 minutes)

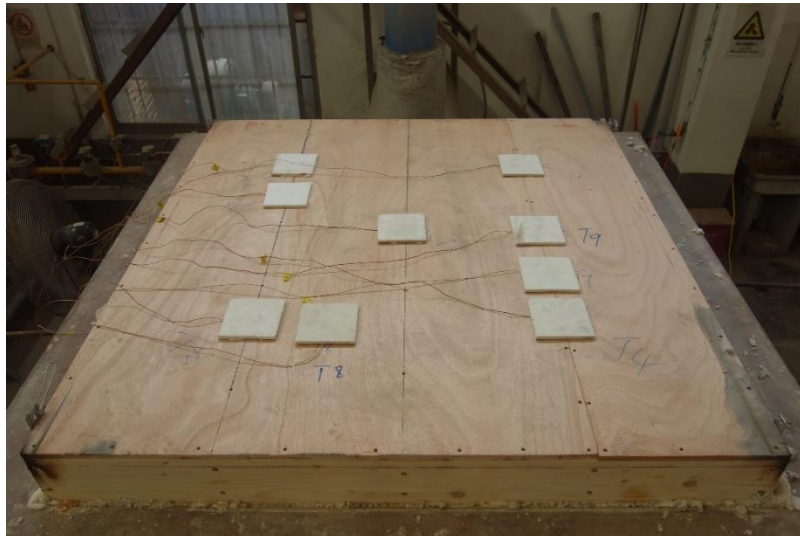


Photo No. 12
Unexposed Surface after Fire Endurance Test (90 minutes)

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

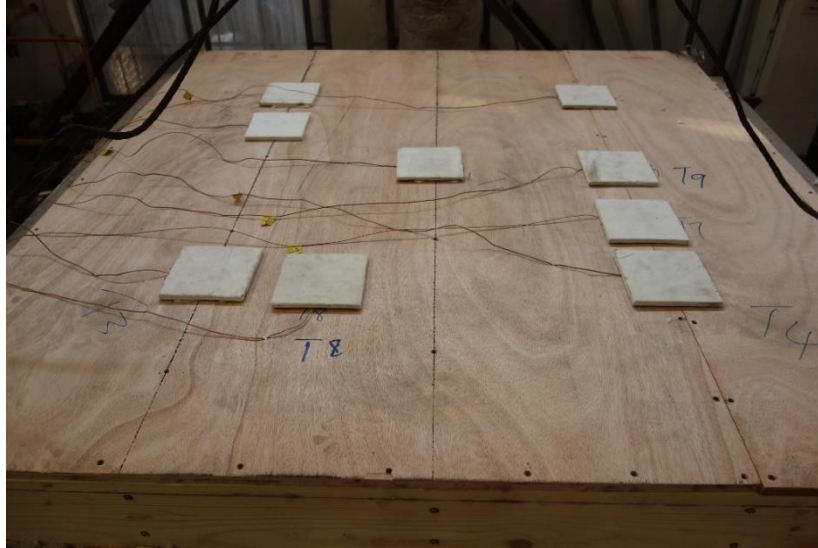


Photo No. 13
Unexposed Surface after Fire Endurance Test (120 minutes)



Photo No. 14
Exposed Surface after Fire Endurance Test (120 minutes)

Total Quality. Assured.

Test Report

Report No.: 230202064GZC-001

Report Date: 2023-02-10

SECTION 14

REVISION LOG

| Revision No. | Date | PAGES | REVISION |
|--------------|------------|-------|-----------------------|
| 0 | 2023-02-10 | N/A | Original Report Issue |

*****End of Report*****