

|                                                                                   |      |                    |                      |                |
|-----------------------------------------------------------------------------------|------|--------------------|----------------------|----------------|
|  | Date | 22-Mar-2022        | <b>SPECIFICATION</b> | OLE WOLFF      |
|                                                                                   | Page | 1 / 10             |                      | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |                      | Revision: 01   |



# PRELIMINARY SPECIFICATION

## Receiver

|              |                                                                                            |
|--------------|--------------------------------------------------------------------------------------------|
| Part Number  | OWR-4009T-38E                                                                              |
| Note         | This item was compliance with the following requirements:<br>1. RoHS directive<br>2. REACH |
| Customer P/N |                                                                                            |

| Ole Wolff | Signature / Date | Prepared               | Checked                   | Approved              |
|-----------|------------------|------------------------|---------------------------|-----------------------|
|           |                  | Ena Wang<br>2022.03.22 | Nathan Chen<br>2022.03.22 | Ryan Li<br>2022.03.22 |

| Customer | Signature / Date | Confirmation |
|----------|------------------|--------------|
|          |                  |              |

### REVISION NOTES:

| Date       | Rev. | Description of Revision          |
|------------|------|----------------------------------|
| 2021.08.02 | 00   | Initial version                  |
| 2022.03.22 | 01   | Changed the FR and added parking |
|            |      |                                  |
|            |      |                                  |
|            |      |                                  |
|            |      |                                  |

|                                                                                                                     |                                                                                                                             |                                                                                                                                                |                                                                                                                                                       |                                                                                                                                                      |                                                                                                                                                                       |                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OLE WOLFF<br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br><br>TEL: +45 57833830<br>FAX: +45 57820019 | OLE WOLFF<br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br><br>TEL: +1 408 888 8413 | OLEWOLFF<br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br><br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | OLEWOLFF<br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br><br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | OLE WOLFF<br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br><br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | OLE WOLFF (ASIA) LTD.<br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br><br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | OLE WOLFF LTD.<br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br><br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |                      |                |
|-----------------------------------------------------------------------------------|------|--------------------|----------------------|----------------|
|  | Date | 22-Mar-2022        | <b>SPECIFICATION</b> | OLE WOLFF      |
|                                                                                   | Page | 2 / 10             |                      | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |                      | Revision: 01   |

## 1. SCOPE

THIS SPECIFICATION IS APPLIED FOR A DYNAMIC RECEIVER FOR HEADPHONE.

## 2. TEST CONDITIONS

TEMPERATURE : 24°C ~ 27°C

HUMIDITY : 65% +/-5% (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

## 3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -25° C ~ 60° C

STORAGE TEMPERATURE RANGE: -25° C ~ 60° C

## 4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.5

NET WEIGHT: 14.0g+/-10%

## 5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

|   |                                             |                                                                                                                                                                                                                                          |
|---|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Impedance on IEC 318                        | 38Ω ± 10% at 100Hz with 0.195V/1mW                                                                                                                                                                                                       |
| 2 | Sound Pressure Level in free field          | 83dB at 1000Hz with input 0.62V/10mW/5cm (0dB=20μPa)<br>Measure setup as shown in Fig.6 (for reference)                                                                                                                                  |
| 3 | Resonance frequency in free field           | 80Hz with input 0.62V/10mW (for reference, temperature 24 -27 °C)                                                                                                                                                                        |
| 4 | Frequency response in free field            | Typical performance as shown in Fig.6. (Test input 0.62V/10mW) (for reference)                                                                                                                                                           |
| 5 | Total Harmonic Distortion in free field     | THD as shown in Fig.6 (Test input 0.62V/10mW) (for reference)                                                                                                                                                                            |
| 2 | Sound Pressure Level on IEC318 coupler      | 115.0±3dB at 1000Hz with input 0.195V/1mW (0dB=20μPa)<br>Measure setup as shown in Fig.4<br>Binning:<br>Bin A: 118.0dB~116.0dB, dot mark =Red;<br>Bin B: 115.99dB~114.0dB, dot mark =Blue;<br>Bin C: 113.99dB~112.0dB, dot mark = Black; |
| 3 | Resonance frequency on IEC318 coupler       | 3k±15%Hz with input 0.195V/1mW                                                                                                                                                                                                           |
| 4 | Frequency response on IEC318 coupler        | Typical performance as shown in Fig.7. (Test input 0.195V/1mW)                                                                                                                                                                           |
| 5 | Total Harmonic Distortion on IEC318 coupler | THD as shown in Fig.7 (Test input 0.195V/1mW)                                                                                                                                                                                            |
| 6 | Input Power                                 | (Nom./Max.): 10mW /20mW                                                                                                                                                                                                                  |
| 7 | Rub & Buzz                                  | Speaker must be free of audible noise at 0.62V sine wave between 50Hz-10kHz                                                                                                                                                              |

|                                                                                                                     |                                                                                                                             |                                                                                                                                                |                                                                                                                                                       |                                                                                                                                                      |                                                                                                                                                                       |                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OLE WOLFF<br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br><br>TEL: +45 57833830<br>FAX: +45 57820019 | OLE WOLFF<br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br><br>TEL: +1 408 888 8413 | OLEWOLFF<br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br><br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | OLEWOLFF<br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br><br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | OLE WOLFF<br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br><br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | OLE WOLFF (ASIA) LTD.<br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br><br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | OLE WOLFF LTD.<br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br><br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |                      |                |
|-----------------------------------------------------------------------------------|------|--------------------|----------------------|----------------|
|  | Date | 22-Mar-2022        | <b>SPECIFICATION</b> | OLE WOLFF      |
|                                                                                   | Page | 3 / 10             |                      | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |                      | Revision: 01   |

## 6. RELIABILITY TEST REQUIREMENTS

Sensitivity difference at 1000Hz shall be within  $\pm 3\text{dB}$  from initial value after each test. The measurement shall be done after minimum 2 hours with conditioning of  $24^{\circ}\text{C} \sim 27^{\circ}\text{C}$ .

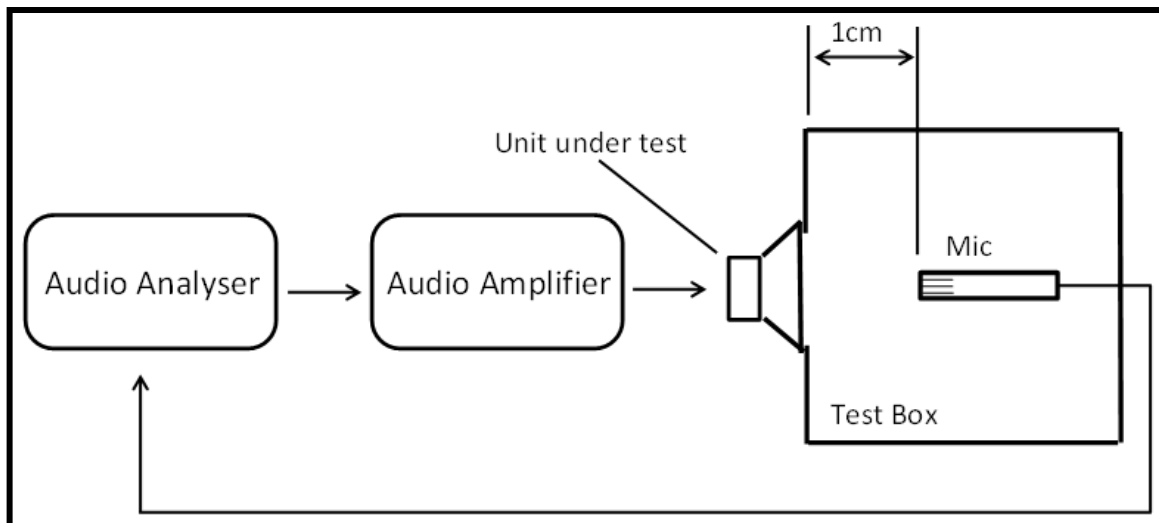
| No. | ITEMS                          | TEST CONDITION              |                                                                      |
|-----|--------------------------------|-----------------------------|----------------------------------------------------------------------|
| 1   | HIGH TEMPERATURE TEST STORAGE  | Temperature                 | $60 \pm 3^{\circ}\text{C}$                                           |
|     |                                | Duration                    | 96hrs                                                                |
| 2   | LOW TEMPERATURE TEST STORAGE   | Temperature                 | $-25 \pm 3^{\circ}\text{C}$                                          |
|     |                                | Duration                    | 96hrs                                                                |
| 3   | HIGH TEMPERATURE HUMIDITY TEST | Temperature                 | $40 \pm 3^{\circ}\text{C}$                                           |
|     |                                | Humidity                    | 90%--95%(RH)                                                         |
|     |                                | Duration                    | 96hrs                                                                |
| 4   | DROP TEST                      | Height                      | With protector grill 0.75m to concrete                               |
|     |                                | Total times                 | 10 times                                                             |
| 5   | TEMPERATURE CYCLE TEST         | Temperature                 | $-25 \pm 3^{\circ}\text{C} \leftrightarrow 60 \pm 3^{\circ}\text{C}$ |
|     |                                | Duration                    | 2hours, 5mins, 2hours                                                |
|     |                                | Cycles                      | 5 cycles                                                             |
| 6   | SHORT TERM MAX INPUT TEST      | Test signal and Temperature | Pink noise / $25^{\circ}\text{C}$                                    |
|     |                                | Test input power            | 0.02W/0.872Vrms                                                      |
|     |                                | Cycles                      | 1sec On, 1min Off, 60cycles                                          |
| 7   | LONG TERM MAX INPUT TEST       | Test signal and Temperature | Pink noise / $25^{\circ}\text{C}$                                    |
|     |                                | Test input power            | 0.02W/0.872Vrms                                                      |
|     |                                | Cycles                      | 1min On/ 2min Off, 10 cycles                                         |
| 8   | RATED POWER TEST               | Test signal and Temperature | Pink Noise / $25^{\circ}\text{C}$                                    |
|     |                                | Test input power            | 0.01W/0.62Vrms                                                       |
|     |                                | Duration                    | 96hrs                                                                |

|                                                                                                                     |                                                                                                                             |                                                                                                                                                |                                                                                                                                                       |                                                                                                                                                      |                                                                                                                                                                       |                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OLE WOLFF<br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br><br>TEL: +45 57833830<br>FAX: +45 57820019 | OLE WOLFF<br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br><br>TEL: +1 408 888 8413 | OLEWOLFF<br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br><br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | OLEWOLFF<br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br><br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | OLE WOLFF<br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br><br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | OLE WOLFF (ASIA) LTD.<br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br><br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | OLE WOLFF LTD.<br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br><br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 4 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

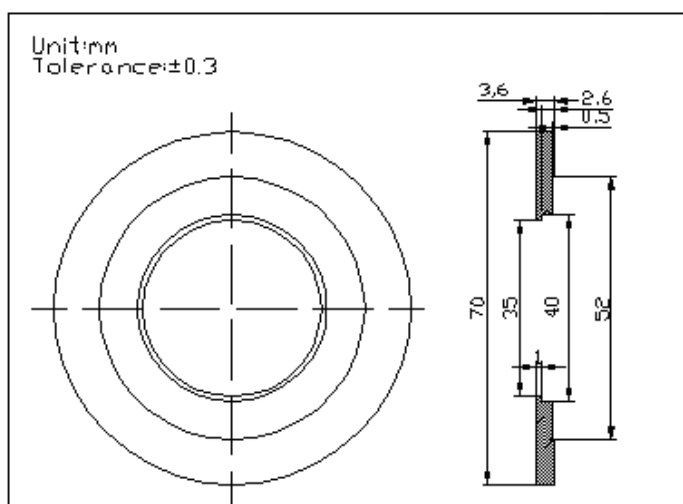
## 7. TEST SET UP AND TEST JIG FOR FREE FIELD

### 7.1 FREE FIELD MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER(Fig.1)



| NO | EQUIPMENT             | REMARKS                |
|----|-----------------------|------------------------|
| 1  | UNIT UNDER TEST       | RECEIVER               |
| 2  | TEST BOX              | OLE WOLFF STANDARD BOX |
| 3  | AUDIO POWER AMPLIFIER | LEM DPA300             |
| 4  | ANALYZER              | LISTEN SOUNDCHECK      |

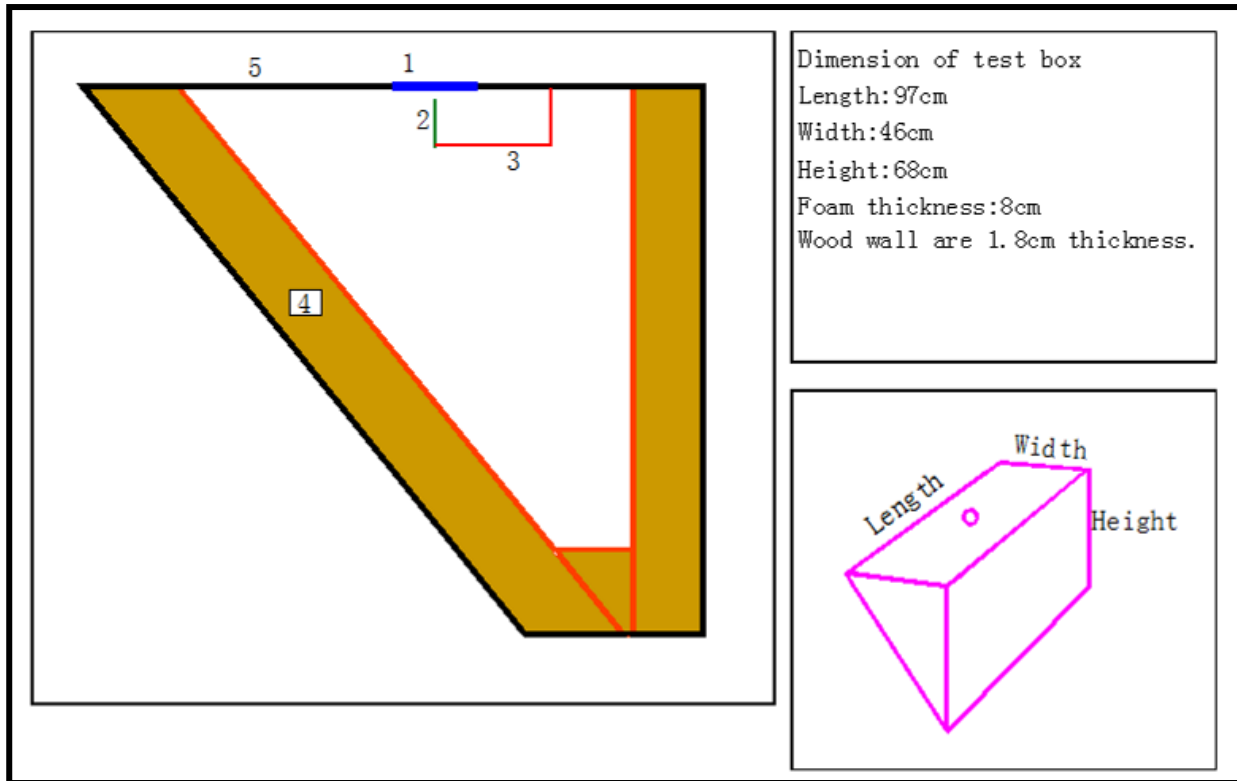
### 7.2 FREE FIELD TEST JIG(Fig.2)



|                                                                                                                               |                                                                                                                                       |                                                                                                                                                          |                                                                                                                                                                 |                                                                                                                                                                |                                                                                                                                                                          |                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLE WOLFF</b><br><b>ELEKTRONIK A/S</b><br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | <b>OLE WOLFF</b><br><b>ELECTRONICS INC.</b><br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | <b>OLEWOLFF</b><br><b>ELEKTRONIK GmbH</b><br>Schulstrasse 15A, DE-25451<br>Quickborn,<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | <b>OLEWOLFF</b><br><b>ELECTRONICS</b><br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | <b>OLE WOLFF</b><br><b>ELEKTRONIK</b><br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | <b>OLE WOLFF (ASIA) LTD.</b><br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | <b>OLE WOLFF LTD.</b><br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 5 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

### 7.3 FREE FIELD TEST BOX: OWBOX (Fig.3)



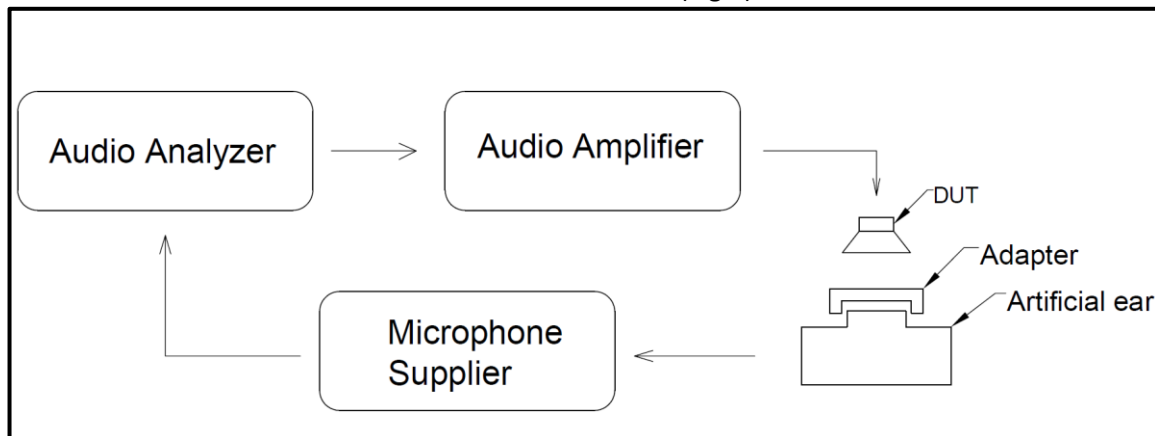
| NO. | EQUIPMENT                                                                      | REMARKS                    |
|-----|--------------------------------------------------------------------------------|----------------------------|
| 1   | TEST JIG                                                                       | Fig.2                      |
| 2   | MICROPHONE                                                                     | 1/2 INCH MICROPHONE (46AF) |
| 3   | MICROPHONE HOLDER                                                              |                            |
| 4   | DAMPING MATERIAL                                                               | FOAM RUBBER                |
| 5   | BOX                                                                            | WOOD                       |
| 6   | TEST DISTANCE MEASURED FROM FRONT OF SPEAKER FRAME TO FRONT OF TEST MICROPHONE | 5cm                        |

|                                                                                                                               |                                                                                                                                       |                                                                                                                                                          |                                                                                                                                                                 |                                                                                                                                                                |                                                                                                                                                                           |                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLE WOLFF</b><br><b>ELEKTRONIK A/S</b><br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | <b>OLE WOLFF</b><br><b>ELECTRONICS INC.</b><br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | <b>OLEWOLFF</b><br><b>ELEKTRONIK GmbH</b><br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | <b>OLEWOLFF</b><br><b>ELECTRONICS</b><br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | <b>OLE WOLFF</b><br><b>ELEKTRONIK</b><br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | <b>OLE WOLFF (ASIA) LTD.</b><br>Unit B, 19/F.,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | <b>OLE WOLFF LTD.</b><br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 6 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

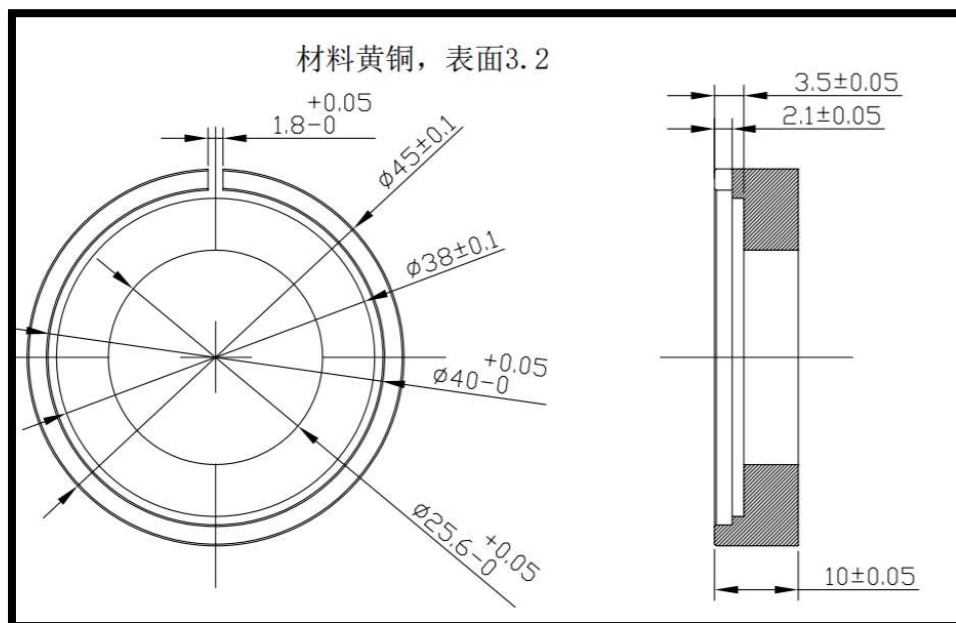
## 8. TEST SETUP AND TEST JIG FOR IEC318 COUPLER

### 8.1 IEC 318 MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER (Fig.4)



| NO | EQUIPMENT           | REMARKS           |
|----|---------------------|-------------------|
| 1  | DUT                 | Receiver          |
| 2  | Adapter             | As shown on Fig.4 |
| 3  | Audio Analyzer      | LISTEN SOUNDCHECK |
| 4  | Audio Amplifier     | LEM DPA300        |
| 5  | Artificial ear      | GRAS 43AA         |
| 6  | Microphone supplier | GRAS 12AX         |

### 8.2 IEC 318 TEST JIG (Fig.5)



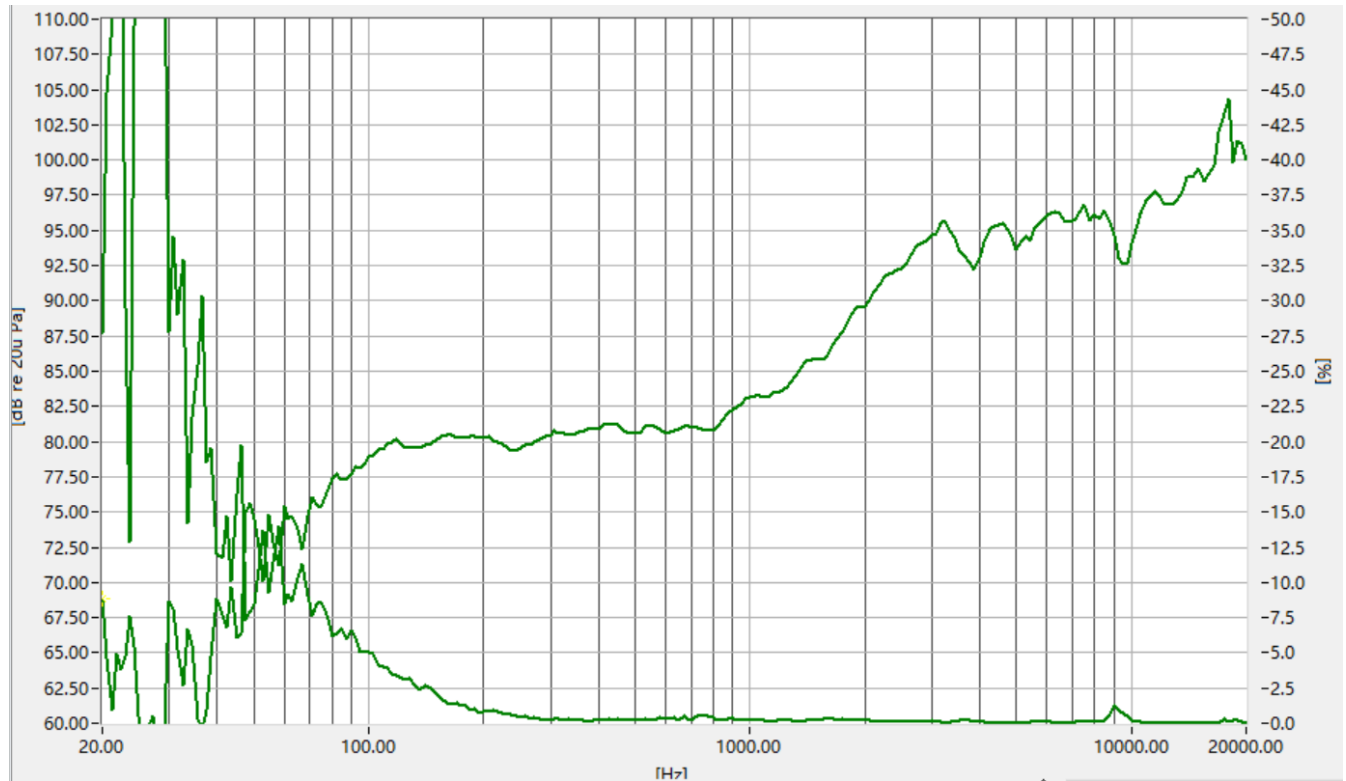
|                                                                                                                 |                                                                                                                         |                                                                                                                                            |                                                                                                                                                   |                                                                                                                                                  |                                                                                                                                                                   |                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OLE WOLFF<br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | OLE WOLFF<br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | OLEWOLFF<br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | OLEWOLFF<br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | OLE WOLFF<br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | OLE WOLFF (ASIA) LTD.<br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | OLE WOLFF LTD.<br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 7 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

## 9. STANDARD FREQUENCY RESPONSE CURVE & STANDARD THD

### 9.1 Free field TEST (Fig.6)

Test input 0.62V, 50mm in free filed

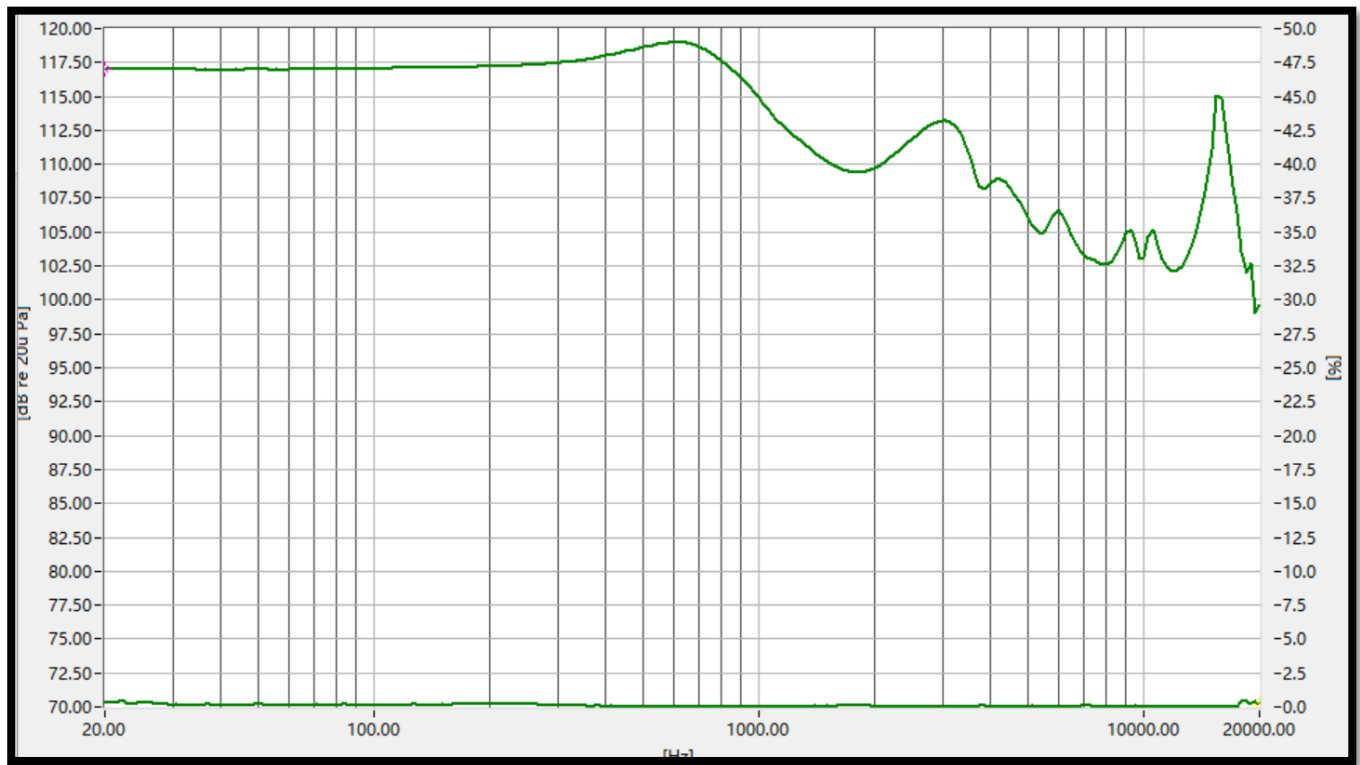


|                                                                                                                               |                                                                                                                                       |                                                                                                                                                          |                                                                                                                                                                 |                                                                                                                                                                |                                                                                                                                                                          |                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLE WOLFF</b><br><b>ELEKTRONIK A/S</b><br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | <b>OLE WOLFF</b><br><b>ELECTRONICS INC.</b><br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | <b>OLEWOLFF</b><br><b>ELEKTRONIK GmbH</b><br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | <b>OLEWOLFF</b><br><b>ELECTRONICS</b><br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | <b>OLE WOLFF</b><br><b>ELEKTRONIK</b><br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | <b>OLE WOLFF (ASIA) LTD.</b><br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | <b>OLE WOLFF LTD.</b><br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 8 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

## 9.2 IEC 318 TEST (Fig.7)

Test input 0.195V on IEC318 coupler, 1/6 oct.



FR mask

THD mask

|                                                                                                                        |                                                                                                                                |                                                                                                                                                   |                                                                                                                                                          |                                                                                                                                                         |                                                                                                                                                                          |                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLE WOLFF</b><br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | <b>OLE WOLFF</b><br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | <b>OLEWOLFF</b><br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | <b>OLEWOLFF</b><br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | <b>OLE WOLFF</b><br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | <b>OLE WOLFF (ASIA) LTD.</b><br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | <b>OLE WOLFF LTD.</b><br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

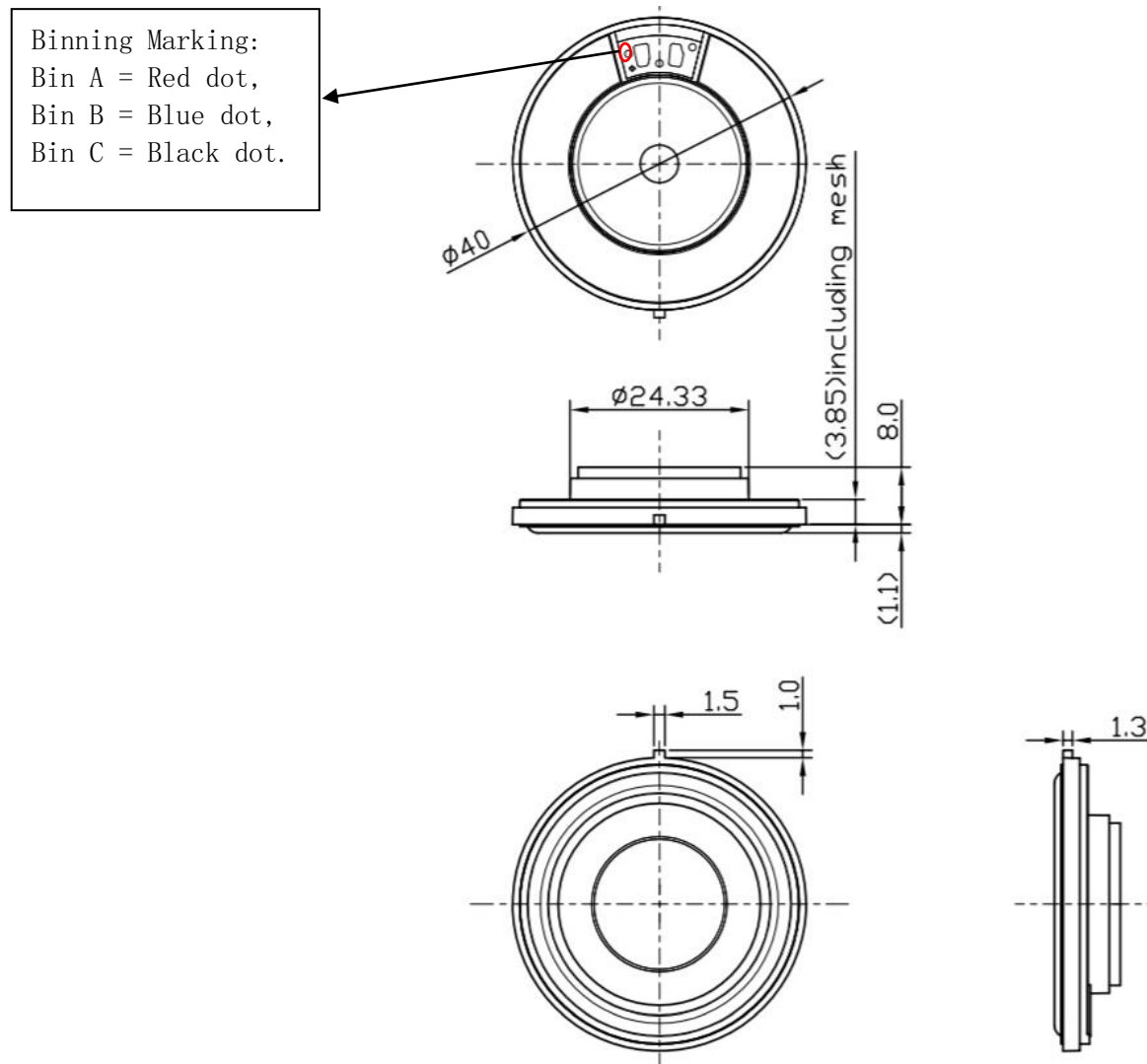


|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 9 / 10             |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

## 10. DIMENSION (Fig.8)

Unit: mm

Tolerance: +/-0.2

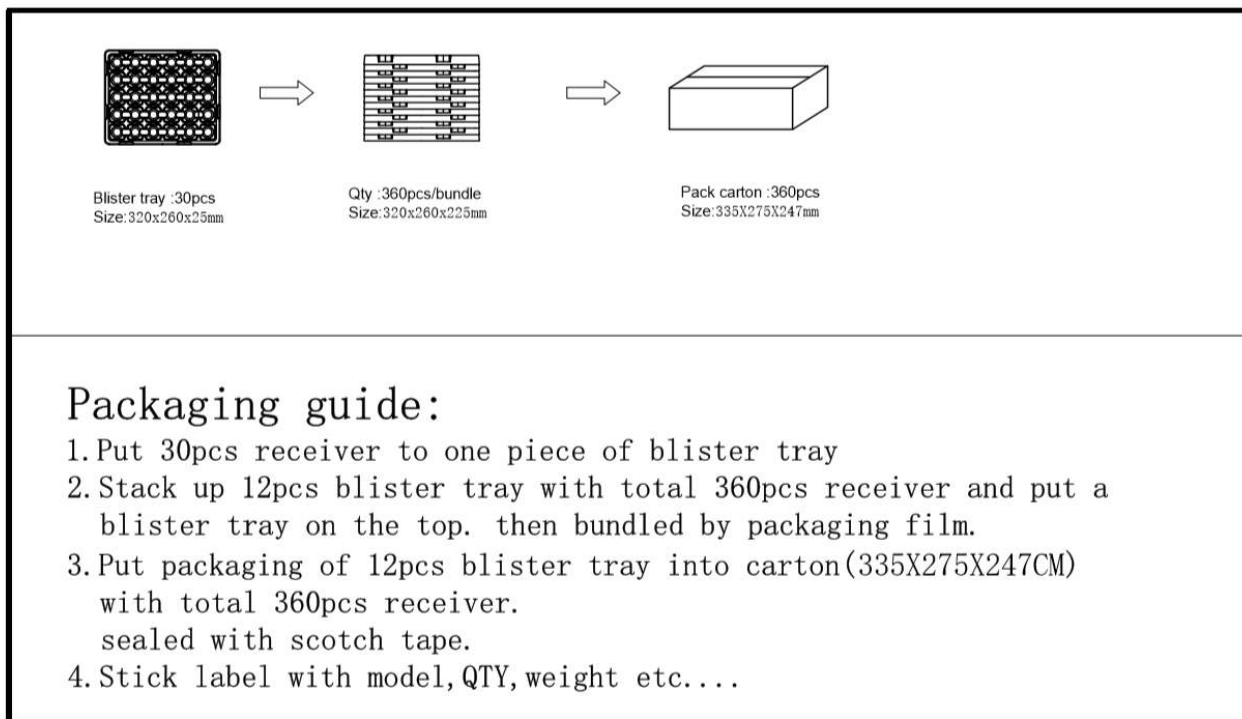


|                                                                                                                 |                                                                                                                         |                                                                                                                                            |                                                                                                                                                   |                                                                                                                                                  |                                                                                                                                                                   |                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OLE WOLFF<br>ELEKTRONIK A/S<br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | OLE WOLFF<br>ELECTRONICS INC.<br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | OLEWOLFF<br>ELEKTRONIK GmbH<br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | OLEWOLFF<br>ELECTRONICS<br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | OLE WOLFF<br>ELEKTRONIK<br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | OLE WOLFF (ASIA) LTD.<br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | OLE WOLFF LTD.<br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                   |      |                    |               |                |
|-----------------------------------------------------------------------------------|------|--------------------|---------------|----------------|
|  | Date | 22-Mar-2022        | SPECIFICATION | OLE WOLFF      |
|                                                                                   | Page | 10 / 10            |               | www.owolff.com |
|                                                                                   | CN   | P/N: OWR-4009T-38E |               | Revision: 01   |

## 11. Marking (T.B.D)

## 12. Packing (Fig.9)



|                                                                                                                               |                                                                                                                                       |                                                                                                                                                          |                                                                                                                                                                 |                                                                                                                                                                |                                                                                                                                                                          |                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OLE WOLFF</b><br><b>ELEKTRONIK A/S</b><br>Roedengvej 25<br>4180 Soroe<br>Denmark<br>TEL: +45 57833830<br>FAX: +45 57820019 | <b>OLE WOLFF</b><br><b>ELECTRONICS INC.</b><br>1525 McCarthy Blvd,<br>Suite 1093<br>Milpitas, Ca 95035<br>USA<br>TEL: +1 408 888 8413 | <b>OLEWOLFF</b><br><b>ELEKTRONIK GmbH</b><br>Schulstrasse 15A. DE-25451<br>Quickborn.<br>Germany<br>TEL: +49 (0) 4106 765900<br>FAX: +49 (0) 4106 627297 | <b>OLEWOLFF</b><br><b>ELECTRONICS</b><br>3 Bedford Street, Woburn,<br>Bedfordshire MK17 9QB,<br>ENGLAND<br>TEL: +44 (0) 1525 290755<br>FAX: +44 (0) 1525 290855 | <b>OLE WOLFF</b><br><b>ELEKTRONIK</b><br>Yliopistonkatu 26<br>(P.O.BOX 257)<br>FI-40101 Jyväskylä<br>Finland<br>TEL: +358 14 338 3050<br>FAX: +358 14 338 3059 | <b>OLE WOLFF (ASIA) LTD.</b><br>Unit B, 19/F,<br>Bold Win Ind. Bldg.,<br>No. 16-18 Wah Sing St.,<br>Kwai Chung, N.T., H.K.<br>TEL: +852 2424 3274<br>FAX: +852 2424 2219 | <b>OLE WOLFF LTD.</b><br>5 Floor, Block G, WenTao<br>Industrial Park, YingRenShi,<br>Bao'an District, Shenzhen City,<br>Guangdong Province, PRC.<br>TEL: +86 755 82612542<br>TEL: +86 755 26406156 |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|