


	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	1 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00



# PRELIMINARY SPECIFICATION

## Receiver

Part Number	OWR-0640T-16H
Note	This item is in compliance with the following requirements: 1. RoHS directive 2. REACH
Customer P/N	

Ole Wolff	Signature / Date	Prepared	Checked	Approved
		 2023.05.22		Ryan Li 2023.05.22

Customer	Signature / Date	Confirmation		

### REVISION NOTES:

Date	Rev.	Description of Revision
2023.05.22	00	Initial Release

<b>OLE WOLFF</b> ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	<b>OLE WOLFF</b> ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA TEL : +1 408 888 8413	<b>OLEWOLFF</b> ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn. Germany TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	<b>OLEWOLFF</b> ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	<b>OLE WOLFF</b> ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland TEL: +358 14 338 3050 FAX: +358 14 338 3059	<b>OLE WOLFF (ASIA) LTD.</b> Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K. TEL: +852 2424 3274 FAX: +852 2424 2219	<b>OLE WOLFF LTD.</b> Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
--	---	---	--	---	--	--

	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	2 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00

## 1. SCOPE

THIS SPECIFICATION IS APPLIED AS A RECEIVER UNIT FOR AN EARPHONE.

## 2. TEST CONDITIONS

TEMPERATURE : 24° ~ 27°C

HUMIDITY : 60° ~ 70°C (R.H.)

ATMOSPHERE : 860 ~ 1060 hPa

## 3. GENERAL REQUIREMENTS

OPERATING TEMPERATURE RANGE: -20° ~ 55°C

STORAGE TEMPERATURE RANGE: -25° ~ 60°C

## 4. MECHANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE 4.

UNIT WEIGHT : 0.35g +/-0.1g

## 5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1.	IMPEDANCE	16 Ω ± 15% (at 126mV 1KHz)
2.	SOUND PRESSURE LEVEL	103.5 dB ± 3 dB at 126 mV/IEC711 Coupler @ 1KHz
3.	SPL SORTING	Group A: 106.5~104.5dB marking = Red Group B: 104.49 ~ 102.5dB marking = Blue Group C: 102.49 ~ 100.5dB marking = Black
4.	RESONANCE FREQUENCY	3000Hz ± 15%
5.	FREQUENCY RANGE	50Hz ~ 20 KHz. Figure 2.
6.	RATED INPUT POWER	(Nominal /Maximum): 5mW / 10mW, 0.28V / 0.4V
7.	DISTORTION	Refer THD CURVES (FIG. 2)
8.	BUZZ AND RATTLES	Must be normal with a Sine wave from 50Hz to10KHz. Rated input power 5mW/0.28V by hearing test. Receiver is in vertical position and at free air.

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark  TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA  TEL: +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn. Germany  TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND  TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland  TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K.  TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF LTD. Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC.  TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	---	---

	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	3 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00

## 6 QUALIFICATION TESTS

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 recovery with conditioning of  $24^\circ\text{C} \sim 27^\circ\text{C}$ .

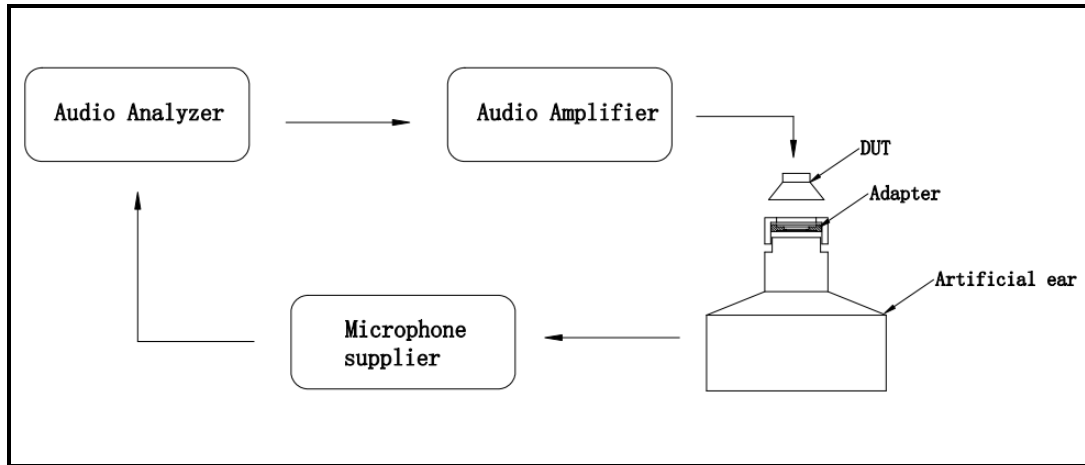
No.	ITEMS	TEST CONDITION	
1	HIGH TEMPERATURE TEST STORAGE	Temperature	$60 \pm 3^\circ\text{C}$
		Duration	96hrs
2	LOW TEMPERATURE TEST STORAGE	Temperature	$-25 \pm 3^\circ\text{C}$
		Duration	96hrs
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$40 \pm 3^\circ\text{C}$
		Humidity	90%--95%(RH)
		Duration	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	10mW
		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	10mW
		Cycles	1min On/ 2min Off, 10 cycles
8	RATED POWER TEST	Test signal and Temperature	Pink Noise / $25^\circ\text{C}$
		Test input power	5mW/0.28Vrms
		Duration	96hrs

OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark  TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA  TEL: +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn. Germany  TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF ELEKTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND  TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland  TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K.  TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF LTD. Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC.  TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	---	---

	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	4 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00

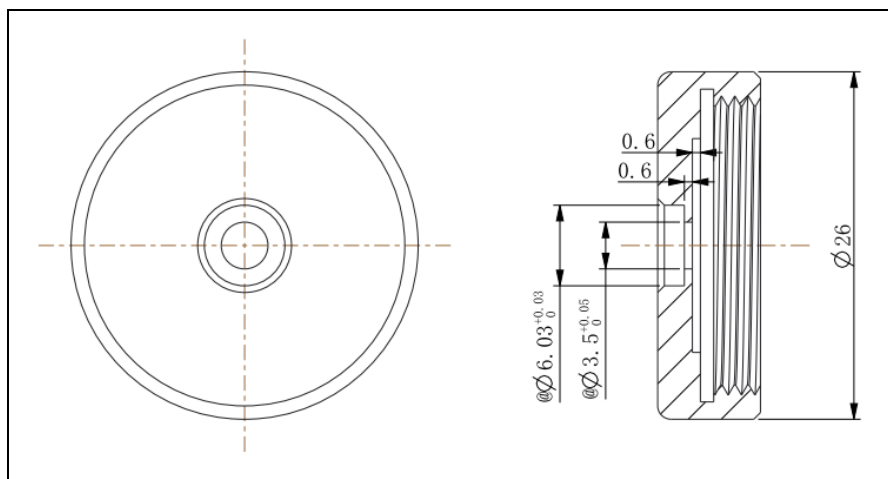
## 7 MEASUREMENT METHOD FOR DYNAMIC RECEIVER (FIG. 1)

### 7.1 MEASUREMENT CIRCUIT FOR DYNAMIC RECEIVER (Fig. 1A)



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

### 7.2 IEC 711 TEST JIG JIG (Fig. 2)



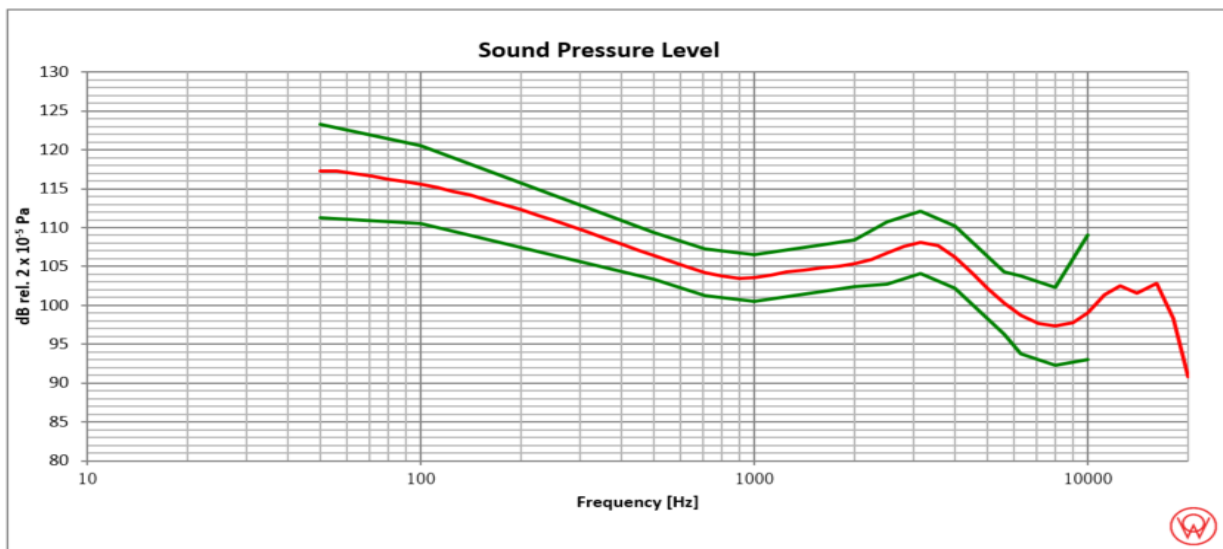
OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark  TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA  TEL : +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn, Germany  TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF ELEKTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND  TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland  TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K.  TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF LTD. Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC.  TEL: +86 755 82612542 TEL: +86 755 26406156
---	--	--	---	--	---	---

## FREQUENCY RESPONSE & THD CURVES (FIG. 2)

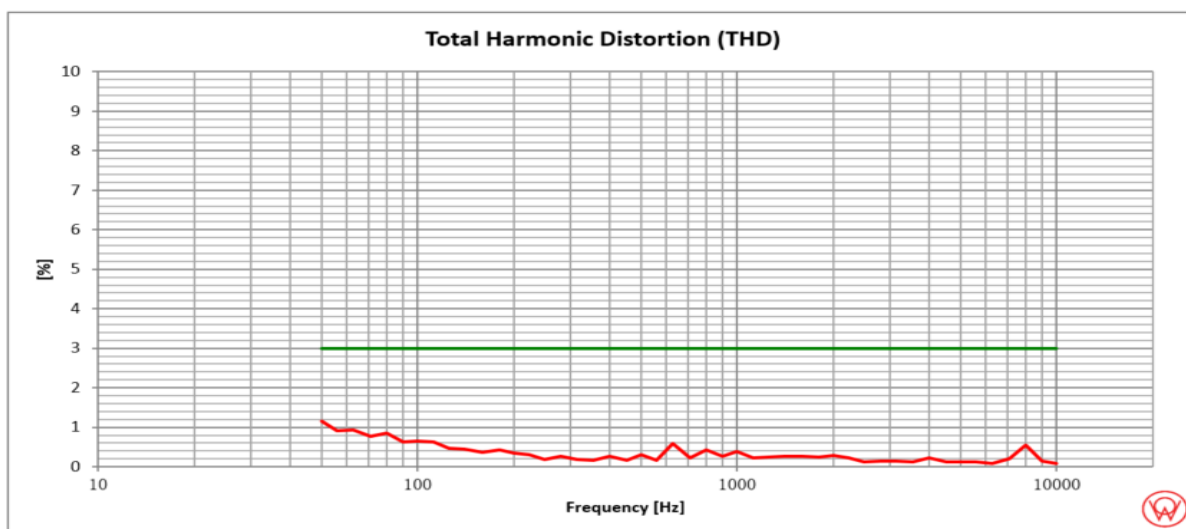
Test input 0.126V, IEC711, 50-20kHz, 1/6oct.

Soundcheck stimulus step size 8 min cycles and 5ms min duration.

The following tolerances are offset values. Limit is absolute value based on the golden sample offset.



Frequency(Hz)	50	100	500	710	1000	1600	2000	2500	3150	4000	5000	6300	8000	10000	Hz
Upper limit	6	5	3	3	3	3	3	4	4	4	4	5	5	10	dB
Lower limit	-6	-5	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-5	-6	dB

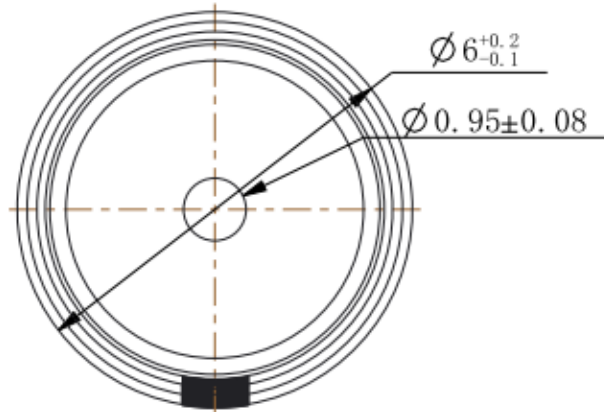


Frequency (Hz)	50	1000	10000	Hz
THD	3	3	3	%

	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	6 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00

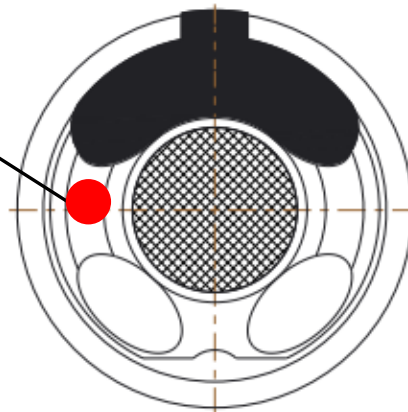
## 8 DIMENSIONS (Unit: mm. Tolerance: +/-0.2)

Fig 3A: Receiver assembly



**Polarity and binning Marking:**

- Bin A = Red dot,
- Bin B = Blue dot,
- Bin C = Black dot.



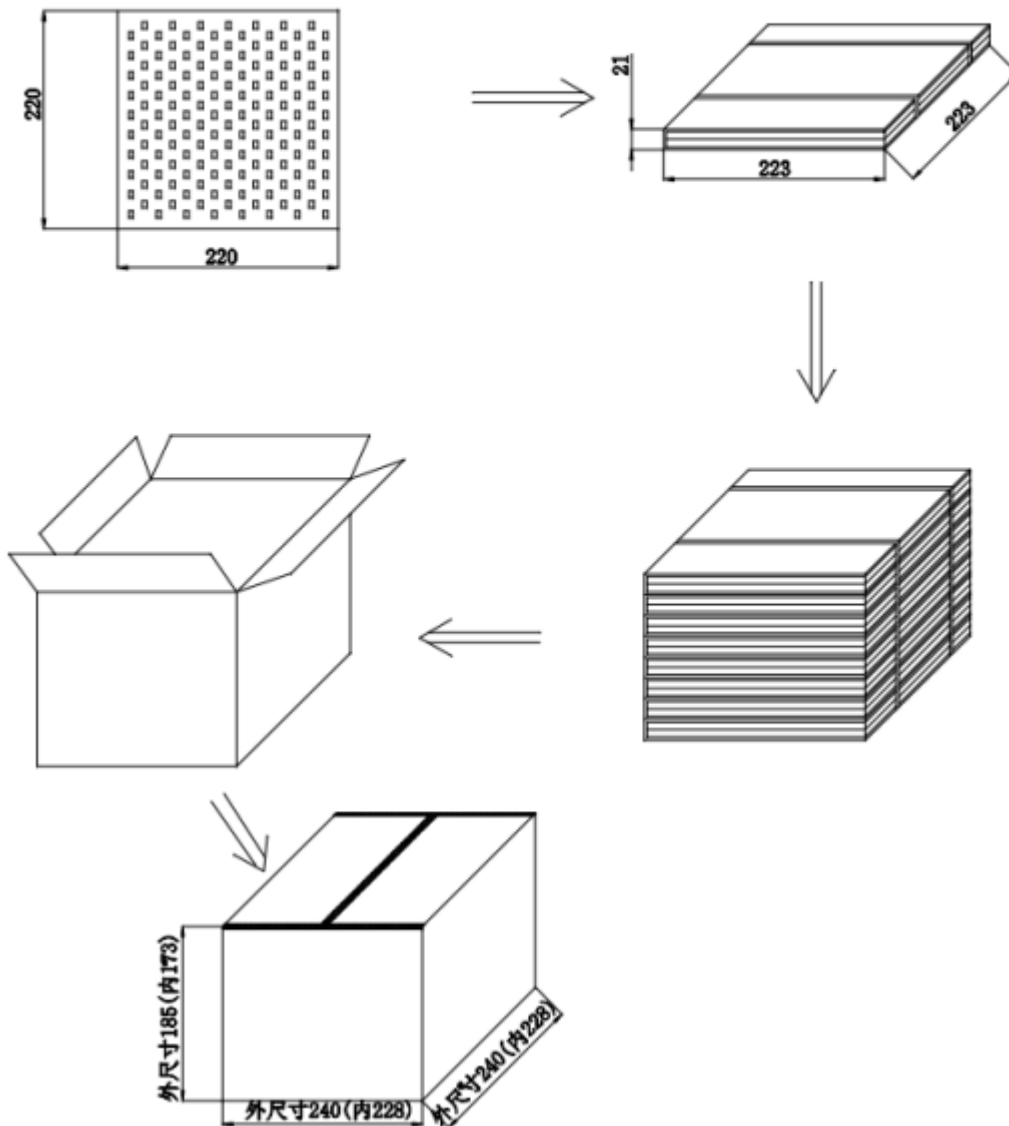
<p>OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark</p> <p>TEL: +45 57833830 FAX: +45 57820019</p>	<p>OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA</p> <p>TEL : +1 408 888 8413</p>	<p>OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn, Germany</p> <p>TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297</p>	<p>OLEWOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND</p> <p>TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855</p>	<p>OLE WOLFF ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland</p> <p>TEL: +358 14 338 3050 FAX: +358 14 338 3059</p>	<p>OLE WOLFF (ASIA) LTD. Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K.</p> <p>TEL: +852 2424 3274 FAX: +852 2424 2219</p>	<p>OLE WOLFF LTD. Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC.</p> <p>TEL: +86 755 82612542 TEL: +86 755 26406156</p>
---	--	--	---	---	---	---

	Date	22-May-2023	<b>SPECIFICATION</b>	OLE WOLFF
	Page	7 / 7		www.owolff.com
	CN	P/N: OWR-0640T-16H		Revision: 00

## 9. Packaging (Fig 4)

### PACKAGING

1. Foam tray: 220 x 220 x 18mm  
150 pcs per layer--- 10 layers/Box
2. Box : 230 x 230 x 205 mm  
Total: 1500pcs/ Carton box
3. PP board: 220 x 220 x 3mm



OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA TEL: +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn, Germany TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF ELECTRONICS 3 Bedford Street, Woburn, Bedfordshire MK17 9QB, ENGLAND TEL: +44 (0) 1525 290755 FAX: +44 (0) 1525 290855	OLE WOLFF ELEKTRONIK Yliopistonkatu 26 (P.O.BOX 257) FI-40101 Jyväskylä Finland TEL: +358 14 338 3050 FAX: +358 14 338 3059	OLE WOLFF (ASIA) LTD. Unit B, 19/F, Bold Win Ind. Bldg., No. 16-18 Wah Sing St., Kwai Chung, N.T., H.K. TEL: +852 2424 3274 FAX: +852 2424 2219	OLE WOLFF LTD. Unit 7A08, Block 2, Elite Building, Nanshan Avenue, Nanshan District, Shenzhen, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	---	---