

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	1 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00



PERLIMINARY SPECIFICATION

Receiver

Part Number	OWR-0504T-16
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
		Claudia 2022.08.25	Nathan Chen 2022.08.25	Ryan Li 2022.08.25

Customer	Signature / Date	Confirmation

REVISION NOTES:

Date	Rev.	Description of Revision
2022.08.25	00	Initial version

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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	--	---

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	2 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

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 TEMPERATUR RANGE: -25° C ~ 60° C

4. MECANICAL LAYOUT & DIMENSIONS

DIMENSIONS : SHOWN IN FIGURE.5

NET WEIGHT: 0.17g

5. ELECTRICAL AND ACOUSTICAL CHARACTERISTICS

1	Impedance on IEC 60318-4	16Ω ± 15% at 100Hz with 0.179V/2mW
2	Sound Pressure Level on IEC 60318-4	104±2.5dB at 1000Hz with input 0.179V/12mW (0dB=20μPa) Measure setup as shown in Fig.1
3	Frequency response on IEC 60318-4	Typical performance as shown in Fig.3. (Test input 0.179V/2mW)
4	Total Harmonic Distortion on IEC 60318-4	THD as shown in Fig.3 (Test input 0.179V/2mW)
6	Input Power	(Nom./Max.): 0.05W /TBD
6	Rub & Buzz	Speaker must be free of audible noise at 0.4V sine wave between 50Hz-3KHz

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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	--	--	---	--	--	---

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	3 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

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 $24^{\circ}\text{C} \sim 27^{\circ}\text{C}$.

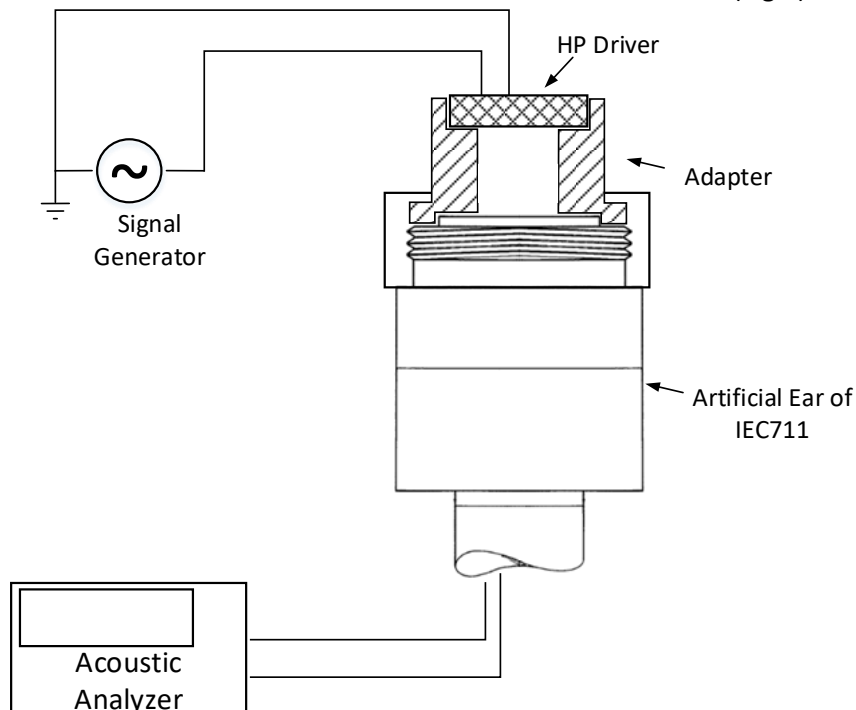
No.	ITEMS	TEST CONDITION	
1	HIGH TEMPERATURE TEST STORAGE	Temperature	$70 \pm 3^{\circ}\text{C}$
		Duration	48hrs
2	LOW TEMPERATURE TEST STORAGE	Temperature	$-25 \pm 3^{\circ}\text{C}$
		Duration	48hrs
3	HIGH TEMPERATURE HUMIDITY TEST	Temperature	$40 \pm 3^{\circ}\text{C}$
		Humidity	90%--95%(RH)
		Duration	96hrs
4	DROP TEST	Height	0.7m to concrete
		Total times	12 times
5	SHORT TERM MAX INPUT TEST	Test signal and Temperature	Broadband noise / 25°C
		Test input power	TBD
		Cycles	1sec On, 1min Off, 60cycles
6	RATED POWER TEST	Test signal and Temperature	Broadband Noise / 25°C
		Test input power	0.005W/0.283Vrms
		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 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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	--	---

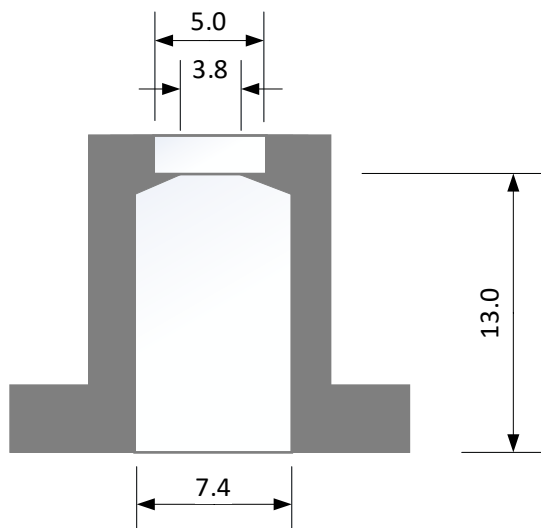
	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	4 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

7. TEST SETUP AND TEST JIG FOR IEC318 COUPLER

7.1 IEC 60318-4 MEASUREMENT CIRCUIT FOR DYNAMIC SPEAKER (Fig.1)



7.2 IEC 60318-4 TEST JIG (Fig.2)



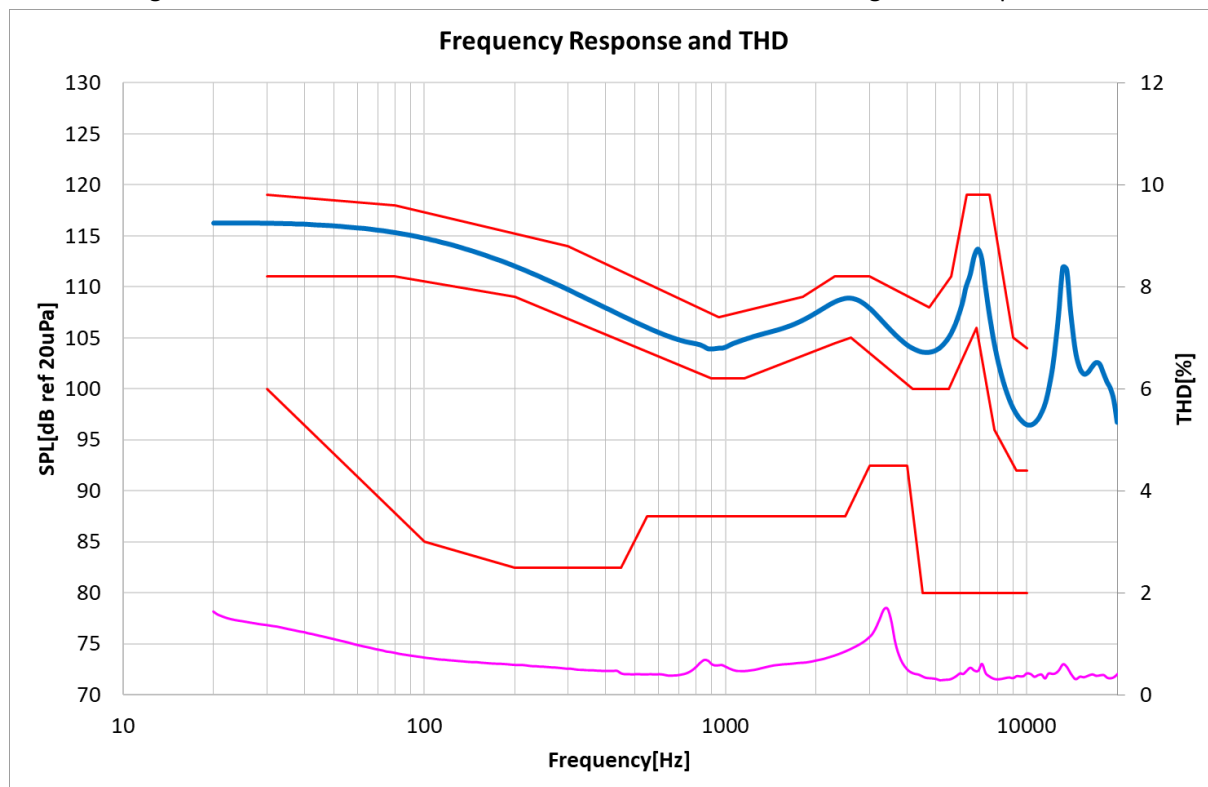
OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA TEL: +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A, DE-25451 Quickborn, Germany TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF 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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, P.R.C. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	--	--

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	5 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

8. STANDARD FREQUENCY RESPONSE CURVE & STANDARD THD

IEC 60318-4 TEST (Fig.3). Test input 0.179V, 1/6oct.

The following tolerance is offset value. Mask is absolute value based on the golden sample offset.



FR & THD masks.

Frequency Response Mask			
Freq[Hz]	Upper[dB]	Freq[Hz]	Lower[dB]
30	119	30	111
80	118	80	111
300	114	200	109
950	107	900	101
1800	109	1150	101
2300	111	2300	104.5
3000	111	2600	105
4750	108	4200	100
5600	111	5500	100
6300	119	6800	106
7500	119	7800	96
9000	105	9250	92
10000	104	10000	92

THD Mask	
Freq[Hz]	Limit[%]
30	6
100	3
200	2.5
450	2.5
550	3.5
2500	3.5
3000	4.5
4000	4.5
4500	2
10000	2

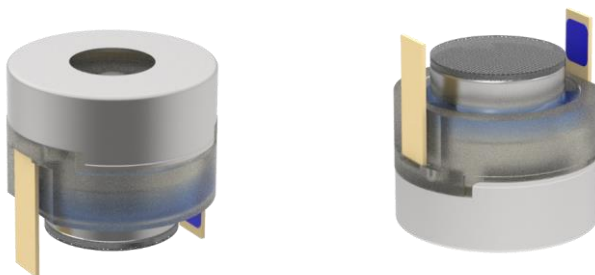
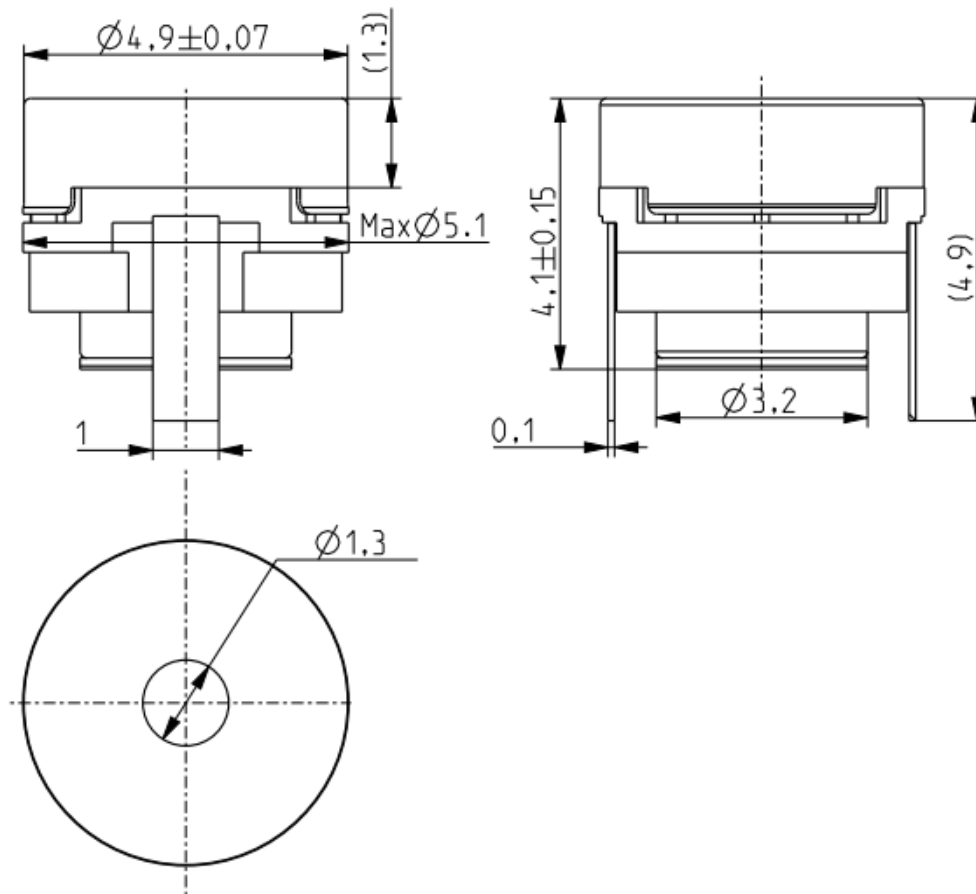
OLE WOLFF ELEKTRONIK A/S Roedengvej 25 4180 Soroe Denmark TEL: +45 57833830 FAX: +45 57820019	OLE WOLFF ELECTRONICS INC. 1525 McCarthy Blvd, Suite 1093 Milpitas, Ca 95035 USA TEL: +1 408 888 8413	OLEWOLFF ELEKTRONIK GmbH Schulstrasse 15A. DE-25451 Quickborn. Germany TEL: +49 (0) 4106 765900 FAX: +49 (0) 4106 627297	OLEWOLFF 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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	--	---

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	6 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

9. DIMENSION (Fig.4)

Unit: mm

Tolerance: +/-0.2



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 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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	---	--	---	--	--	--

	Date	25-Aug-2022	SPECIFICATION	OLE WOLFF
	Page	7 / 7		www.owolff.com
	DK	P/N: OWR-0504T-16		Revision: 00

10. Packing (Fig.5)

TBD

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. 5 Floor, Block G, WenTao Industrial Park, YingRenShi, Bao'an District, Shenzhen City, Guangdong Province, PRC. TEL: +86 755 82612542 TEL: +86 755 26406156
---	--	--	---	--	--	---