

SPECIFICATION FOR APPROVAL

Customer : UKLK

Customer P/N : _____

Product Type : Integert Lamp

Product No. : LF04704

Issue Date : 2019.07.22

Prepared By			
Checked By	R&D	DQE	QC
Approved By			

Web: www.lumatek-lighting.com

Contents

1. Description	1
2. Function and parameters	2
2.1 Parameters	2
2.2 Recommended Matching Lamps	4
2.3 Remote Wire Communication Function	5
2.4 Protection	6
3. Environment	7
4. Safety	7
4.1 Surface Temperature Rise	7
4.2 Leakage Current	7
4.3 Insulation Resistance	7
4.4 Dielectric Withstand Voltage (HI-POT)	7
4.5 Grounded Resistance	7
4.6 Regulatory Standards	7
5. EMC	8
5.1 EMI	8
5.2 EMS	8
6. Physical Dimension	9
7. Input	10
8. Output	11
9. Packing	12
10. Mark	13

1. Description

This is an 630W integert lamp with 3.5mm headphone jack interface that can be connected to external controller. Input voltage is 400V,50/60Hz. Dimming range can be 60%-70%-80%-90%-100%. It will delay 0-6s ignition randomly. It can match well with 630W/600W DE lamps.

Date	Prepared	Checked	Item No	LF04704

2. Function and parameters

2.1 Parameters

2.1.1 Input Characteristics

Parameter	Conditions	Min	Type	Max	Units
Mains Voltage	Operational Voltage	360	400	440	V
	Safe Voltage	340	400	460	
Mains Frequency f_{mains}	Operational Frequency	48	50/60	63	Hz
	Safe Frequency	45	50/60	66	
Mains Power P_{mains}	P=100%	636	656	676	W
	P=90%	570	590	610	
	P=80%	505	525	545	
Mains Current I_{mains}	$V_{\text{mains}} = 400\text{V}$	1.7	1.7	1.8	A
Power Factor	P=100%	0.97	0.98	--	--
THD	P=100%	--	--	10%	--
Inrush Current	$V_{\text{mains}} = 400\text{V}$ $T_a = 25^\circ\text{C}$, cold start	--	--	30	A
Pulse Duration		--	--	0.8	ms

Note: The certified current of this product is :1.9A.

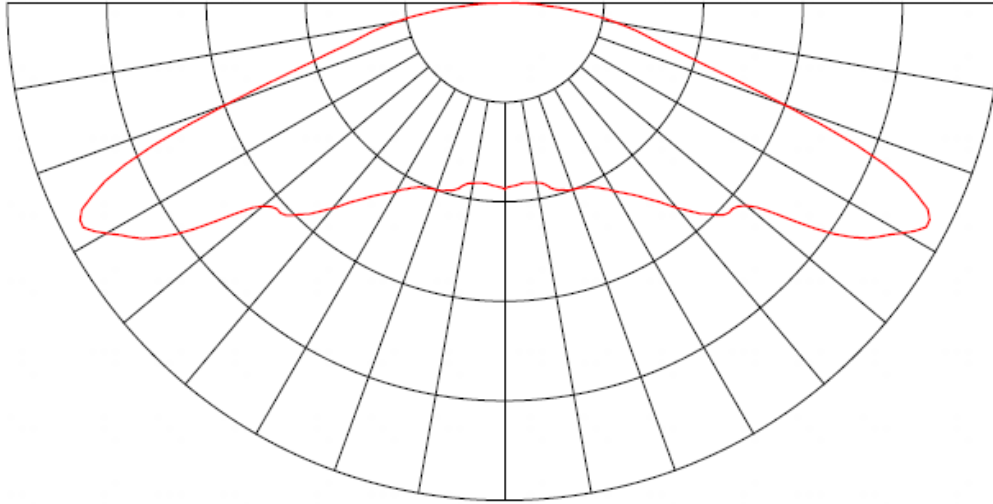
Date	Prepared	Checked	Item No	LF04704

2.1.2 Output Characteristics

Parameter	Conditions	Min	Type	Max	Units
Lamp Frequency f_{lamp}	P=100%	100	130	150	KHz
Efficiency(%)	P=100%	95	96	--	--
Lamp Power P_{lamp}	P=100%	610	630	650	W
	P=90%	547	567	587	
	P=80%	484	504	524	
Lamp Voltage	600W	175	195	225	V
Ignition Voltage	$C_{load} < 100\text{pF}$	3000	4000	5000	V
Ignition Interval	--	0.5-0.5-0.5-5-5-5-5-10			Min

Date	Prepared	Checked	Item No	LF04704

2.1.3 distribution curve flux



Vertical Plane Through Horizontal Angles (0-180°), 163DEG

2.2 Recommended Matching Lamps

Lamp	LUMATEK 630W CMH DE
	LUMATEK DE 400V 600W HPS

*If the product match the bulb, dimming range from 60% to 100%.

Date	Prepared	Checked	Item No	LF04704

2.3 Remote Wire Communication Function

2.3.1 Remote Dimming

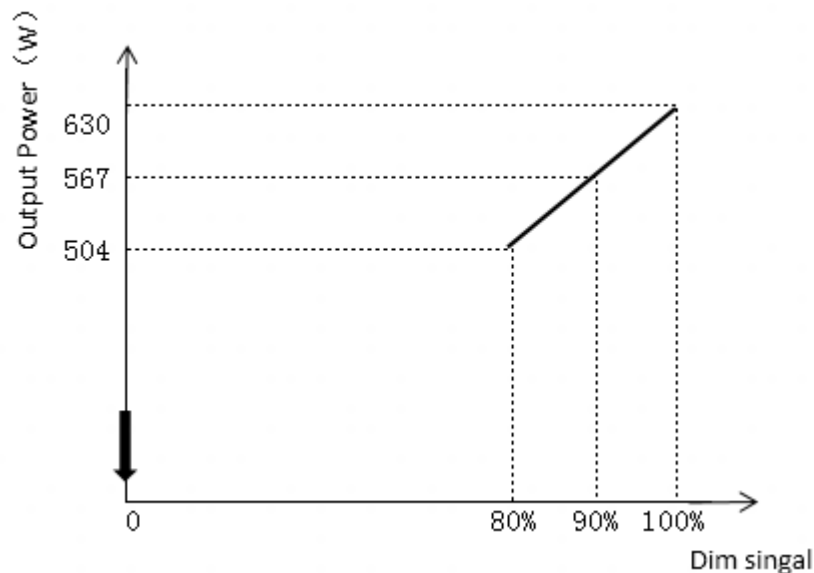
All output specifications are reported as a percentage of the full ballast rating,

EXP: 80% of 630W ballast = 504W

Output Mapping Equation (W): (Dimming ratio) *ballast rating=Output.

Note: 1. Dimming accuracy is 3% (as per the output power of $V_{mains} = 400V$).

2. when the dimming ratio is 0%, the ballast will be off ;user can set the parameters show in the 80%-100%.



2.3.2 Remote Control Function

- ✧ It can control remotely the ballast's on/off/dimming rate.
- ✧ Group control mode: it can control the state of a set of products .
- ✧ Single lamp control mode : it can control the state of a single product.
- ✧ Sun rise and set :When the SR/SS set time is 0min, the ballast will power on/off as its own speed, actually, it's exactly same as Power on/off.

Date	Prepared	Checked	Item No	LF04704

2.4 Protection

2.4.1 Open Circuit Protection

When output is shut off, the ballast will power off for open circuit protection. When errors are removed and the power is re-applied to the product, it can work normally.

2.4.2 Short Circuit Protection

When output is shorted, the ballast will power off for short circuit protection. When errors are removed and the power is re-applied to the product, it can work normally.

2.4.3 Over Temperature Protection

When $T_a > 40^\circ\text{C}$, the ballast will shut off for high temperature protection. When the temperature drop to normal and the power is re-applied to the product, it can work normally.

2.4.4 Lamp END of Life/Rectification

The ballast will be not damaged when the rectification appears at the end of the lamp life. When replacing a new lamp and the power is re-applied, it can work normally.

2.4.5 Over-voltage/ Low-voltage Detect Protection

Protection happens when input voltage is below 340V or up to 460V (Output power will drop to 80% when input voltage is 340-360V). When input voltage is back to normal, the ballast can work normally.

Note: Voltage accuracy is 3%.

2.4.6 LED Status

Status	LED
Ballast locked	Flash*1
Output errors	Flash*2
Low input voltage	Flash*3
Over temperature	Flash*4
Lamp fault	Flash*5
High input voltage	Flash*6

Date	Prepared	Checked	Item No	LF04704

3. Environment

Environment \ Conditions	Operating	Shipping and Storage
3.1 Temperature	-20°C--+40°C	-40°C--+70°C
3.2 Humidity	20%--90%, non-condensing	10%--95%, non-condensing
3.3 Vibration	Amplitude:0.035mm	Amplitude:0.15mm
	Frequency: 10-150Hz	
	test time in any Direction: 30min	
	Sweep velocity: 1oct/min	
3.4 waterproof and dustproof	IP20	

4. Safety

4.1 Surface Temperature Rise

When output power is 630W, ambient temperature is 25°C and input voltage is 400Vac, the surface temperature rise will be less than 40°C.

4.2 Leakage Current

0.75mAmax Vmains=400V/60Hz.

4.3 Insulation Resistance

The insulation resistance shall be no less than 2M ohm after application of 500Vdc for 60s.

4.4 Dielectric Withstand Voltage (HI-POT)

L,N-PE:1800Vac 5.5mAmax/60s.

4.5 Grounded Resistance

<0.13Ω, 30A, 120s.

4.6 Regulatory Standards

EN 61347-1 : 2008

EN 61347-2-12 : 2005

Date	Prepared	Checked	Item No	LF04704

5. EMC

5.1 EMI

EN55015

Limit value of radio disturbance characteristics of electrical lighting and similar equipment.

5.2 EMS

5.2.1 Surge Immunity

IEC 61000-4-5:

L-N: $\pm 1\text{KV}$;

L/N-PE: $\pm 2\text{KV}$.

5.2.2 Electrical Fast Transient

IEC 61000-4-4:

L-N-PE : $\pm 1\text{KV}$.

5.2.3 Voltage Dips and Interruptions Immunity

IEC 61000-4-11:

Drop: 30% ;cycles: 10;

Drop: 100% ;cycles: 0.5.

5.2.4 Electrostatic Discharge Immunity

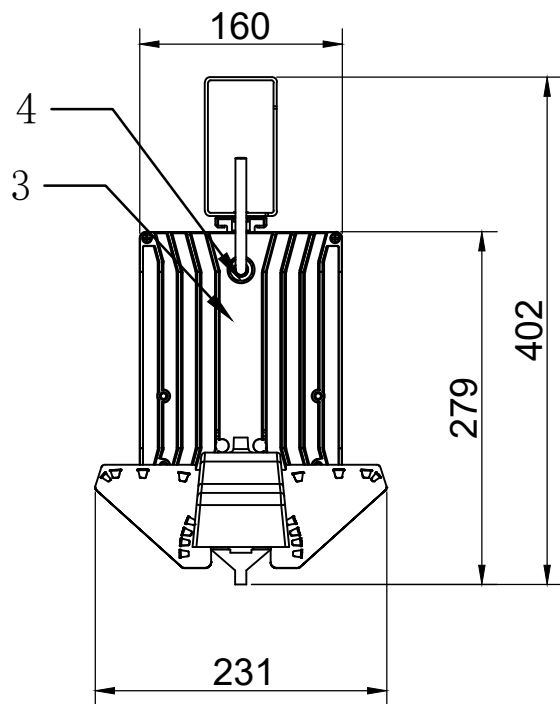
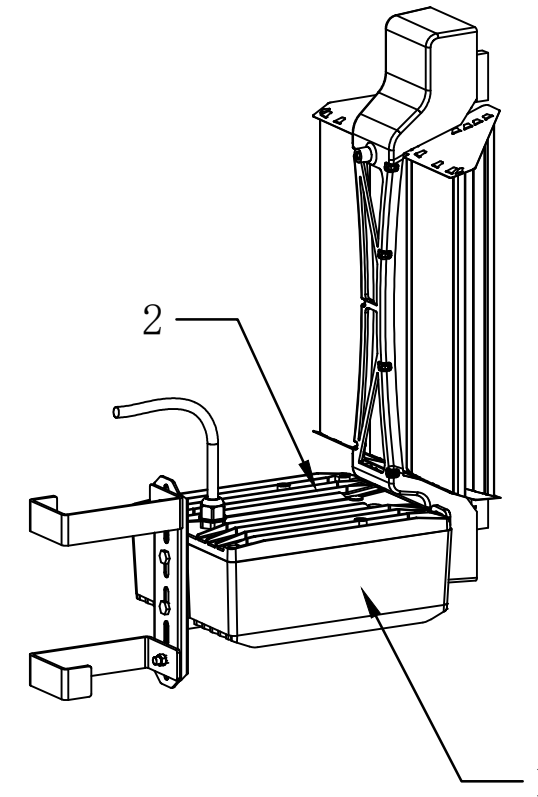
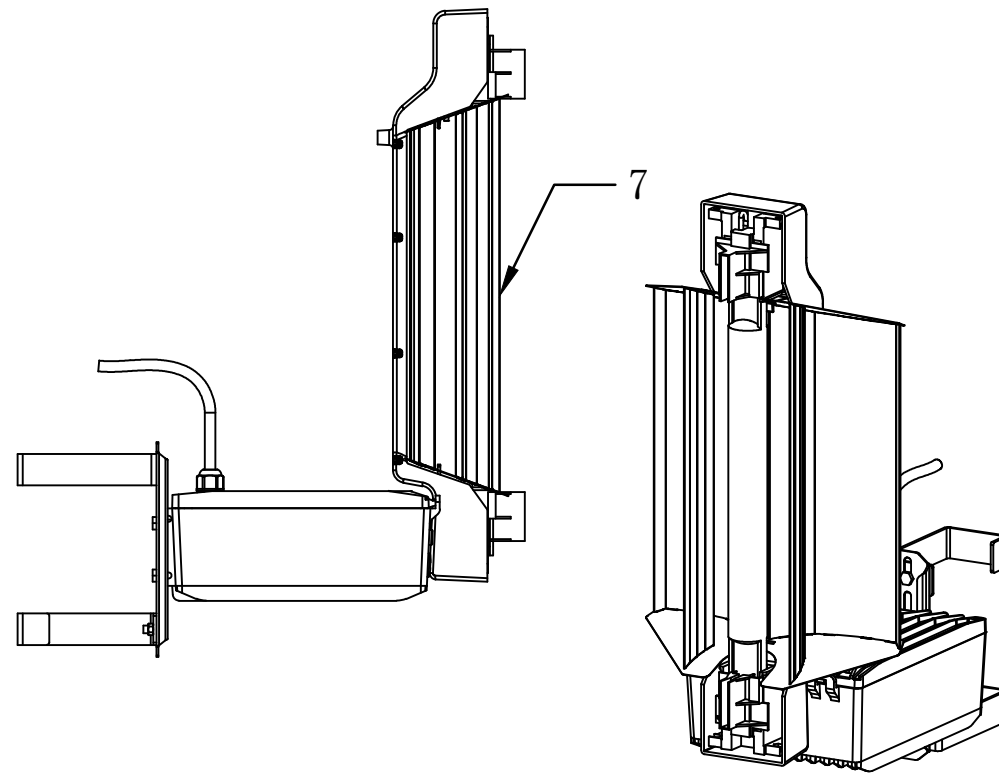
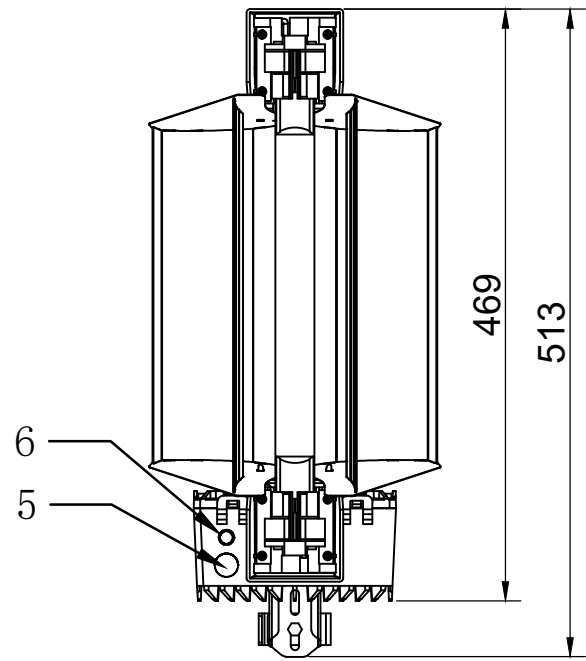
IEC 61000-4-2:

Contact discharge: $\pm 4\text{KV}$;

Air discharge: $\pm 8\text{KV}$.

Date	Prepared	Checked	Item No	LF04704

6 Physical Dimension



Item	Part Name	Q'ty	Remark
1	Cover	1	White
2	Cover	1	White
3	Headphone hole	1	White
4	Strain Relief Bushing	1	White
5	Transmitter plug	1	White
6	Breathing	1	Black
7	Lampshade	1	---

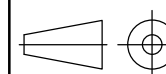
Physical Dimension	
Material	Aluminium
Dimension	279×231×469
Weight	TBDKg

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Dimensional Tolerances (V)		Holes:±0.05 ()		Angles:±0.5° ()	
<30	±0.25	Up~100	±0.2	250~300	±0.4
>30~100	±0.35	100~150	±0.25	300~350	±0.45
>100~300	±0.5	150~200	±0.3	350~400	±0.5
Above300	±0.6	200~250	±0.35	900~Over	±3.1

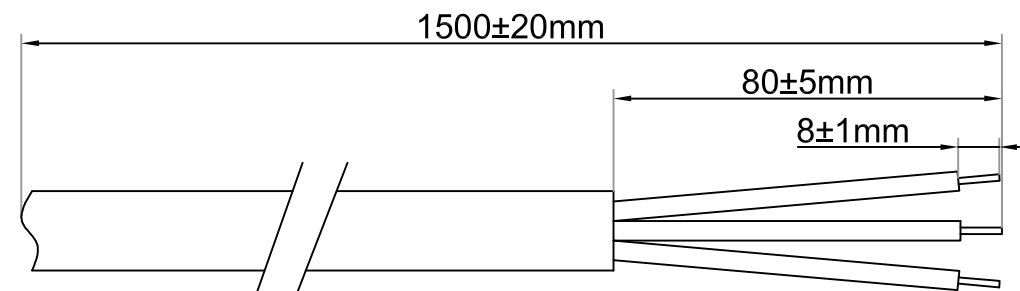


First Angle Projection

Description:		REV P00
Part No:		SIZE A3
Used On:	LF04703	

Scale	---	Unit	mm	Sheet 1 Of 1	Issue Date:	Drawn:	Design:
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7 Input

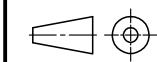


Technical requirements:
 1. Specifications: VDE H05VV-F 3×1.0mm² 70 °C

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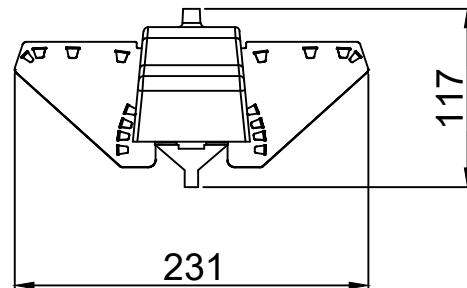
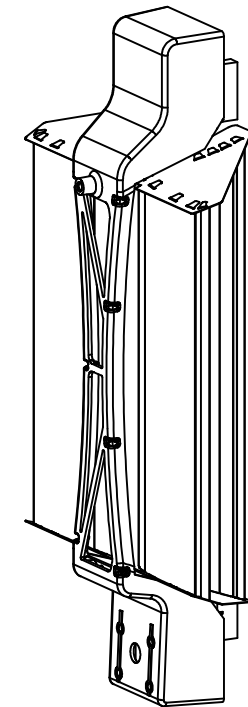
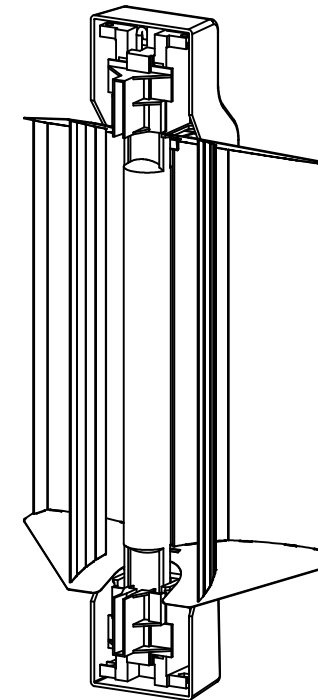
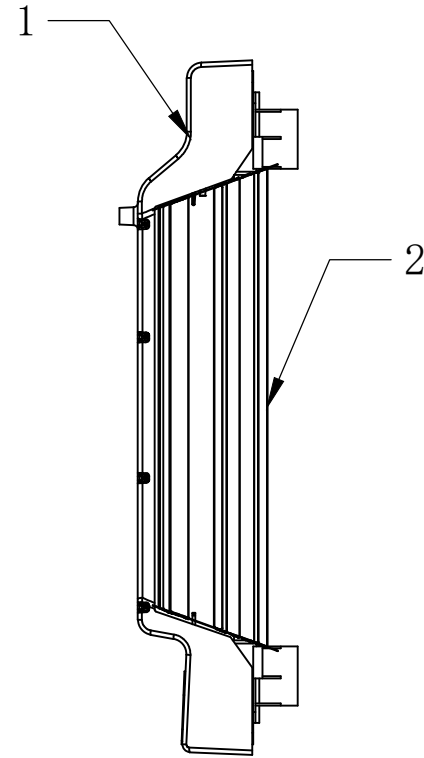
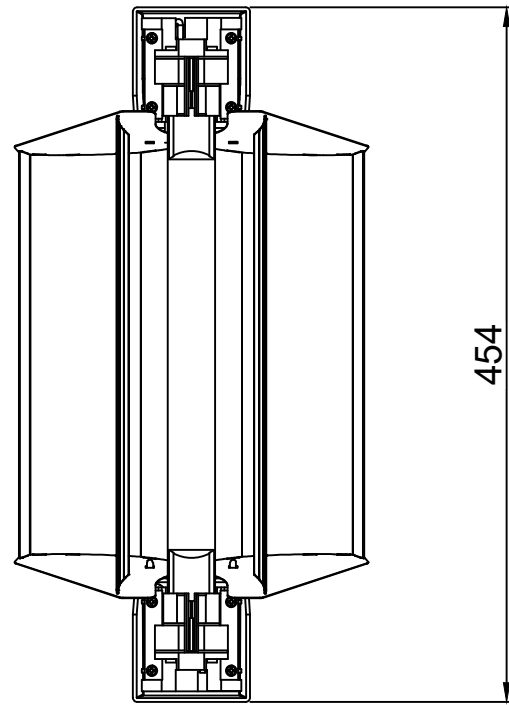


First Angle Projection

Description:	Input	REV P00 SIZE A3
Part No:	--	
Used On	LF04703	

Scale	--	Unit	mm	Sheet 1 Of 1	Issue Date:	Drawn:	Design:
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8 Output



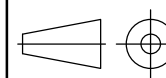
Physical Dimension		Material	Aluminium	Item	Part Name	Q'ty	Remark
Dimension	231×117×454			1	Bracket	1	White
				2	Lampshade	1	Aluminum bright colors

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Dimensional Tolerances (V)	Holes:±0.05 ()	Angles:±0.5° ()
<30 ±0.25 Decimals	Up~100 ±0.2 250~300 ±0.4	Up~600 ±1.5
>30~100 ±0.35 .X ±0.3	100~150 ±0.25 300~350 ±0.45	600~900 ±2.4
>100~300 ±0.5 X.X ±0.2	150~200 ±0.3 350~400 ±0.5	900~Over:±3.1
Above300 ±0.6 X.XX ±0.1	200~250 ±0.35	



First Angle Projection

Description:		REV P00
Part No:		SIZE A3
Used On:	LF04703	

Scale	— —	Unit	mm	Sheet 1 Of 1	Issue Date:
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Drawn:	Design:
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