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P/N: 390397001012 Version: C

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Attached 1. Fixture exploded drawing	
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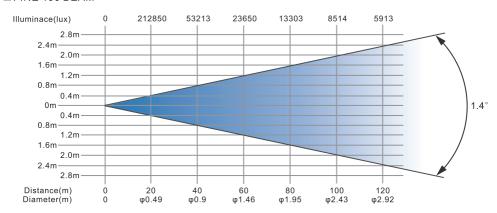
1.Technical feature

Technical feature	FINE 450 BEAM	FINE 400 BEAM	
Lamp source	420W Lamp	371W Lamp	
Input current	5.8A	5.2A	
Input power	580W	520W	
Max luminous flux	14210 lm	13150 lm	
Efficiency	26.24 lm/W	26.95 lm/W	
Beam angle	0°~1.3°	0° ~ 1.4°	
Input voltage	100-240V~	50/60Hz	
Power factor	PF≽	0. 98	
Color temperature	6200±	-300K	
Color system	14 color filters+white light, 6-color wheel		
Gobo system	1 fixed gobo wheel with 17 gobos +white		
Effect equipment	Frost+Strobe+8prism+24p	rism+6-face Gradient prism	
Pan	Pan=540°,Pan= 2.11°,	/step, Pan fine=0.008°	
Tilt	Tilt =250°, Tilt=1.05°/	step, Tilt fine=0.004°	
Safety protection	Over current, over voltage and overheating protection		
Control mode	DMX512/Wireless DMX (optional)		
Work environment	0°C~40°C		
Fixture dimension	391*293*628mm		
Package dimension	826*514*857mm		
Weight	Net weight: 27kg, Gross weight: 90kg		
Package	2pcs/flight case		
IP rate	IP20		

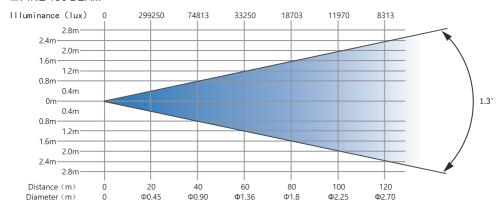
Note: The light source is a non-user replacement light source. If it is damaged or thermally deformed, please replace it!

2. Light output and beam angle range

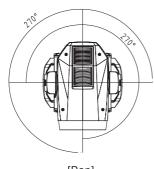
■FINE 400 BEAM



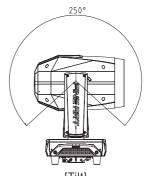
■FINE 450 BEAM



■Pan&Tilt scan







3.Control channel

3.1 Channel Menu

Channel	STND	16BT	EXTN
1	Strobe	Strobe	Strobe
2	Dimmer	Dimmer	Dimmer
3	Dimmer Fine	Dimmer Fine	Dimmer Fine
4	Pan	Pan	Pan
5	Pan Fine	Pan Fine	Pan Fine
6	Tilt	Tilt	Tilt
7	Tilt Fine	Tilt Fine	Tilt Fine
8	Fixed Gobo	Fixed Gobo	Fixed Gobo
9	Color	Color	Color
10	Six Color Prism	Six Color Prism	Six Color Prism
11	Prism	Prism	Prism
12	Prism Rot	Prism Rot	Prism Rot
13	Six Cylinder Rot	Six Cylinder Rot	Six Cylinder Rot
14	Focus	Effect Macro	Effect Macro
15	Frost	Focus	Focus
16	SPOT/BEAM	Focus Fine	Focus Fine
17	Fixture Control	Frost	Frost
18		SPOT/BEAM	SPOT/BEAM
19		Fixture Control	Fixture Control
20			Pan/Tilt Time
21			Color Time
22			Beam Time
23			Gobo Time

3.2 DMX channel

Specific	STND	16BT	EXTN	Value	Function		
				000~005	Closed		
				006~010	Open		
				011~105	Strobe at linearly variable frequency from slow to fast(0~10Hz)		
Strobe	1	1	1	106~110	Open		
				111~179	Thunder Strobe from slow to fast		
				180~185	Open		
				186~253	Random Strobe		
				254~255	Open		
Dimmer	2	2	2	000~255	0%->100%		
Dimmer Fine	3	3	3	000~255	0%->100%		
Pan	4	4	4	000~255	Movement positioning from 0° to 540°		
Pan Fine	5	5	5				
Tilt	6	6	6	000~255	Movement positioning from 0° to 252°		
Tilt Fine	7	7	7				
				000~003	Open		
				004~007	Gobo1		
				008~011	Gobo2		
				012~015	Gobo3		
				016~019	Gobo4		
							020~023
				024~027	Gobo6		
				028~031	Gobo7		
				032~035	Gobo8		
				036~039	Gobo9		
				040~043	Gobo10		
				044~047	Gobo11		
Fixed Gobo	8	8	8	048~051	Gobo12		
				052~055	Gobo13		
				056~059	Gobo14		
				060~063	Gobo15		
				064~067	Gobo16		
				068~071	Gobo17		
				072~081	Gobo2 shake from slow to fast		
			082~090	Gobo3 shake from slow to fast			
				091~099	Gobo4 shake from slow to fast		
				100~109	Gobo5 shake from slow to fast		
				110~118	Gobo6 shake from slow to fast		
				119~127	Gobo7 shake from slow to fast		

				1			
				128~136	Gobo8 shake from slow to fast		
				137~146	Gobo9 shake from slow to fast		
				147~155	Gobo10 shake from slow to fast		
				156~164	Gobo11 shake from slow to fast		
				165~173	Gobo12 shake from slow to fast		
				174~182	Gobo13 shake from slow to fast		
				183~192	Gobo14 shake from slow to fast		
				193~201	Gobo15 shake from slow to fast		
				202~209	Gobo16 shake from slow to fast		
				210~231	Continuous gobo wheel clockwise rotation from fast to slow		
				232~233	Stop		
				234~255	Continuous gobo wheel counter-clockwise rotation from slow to fast		
					Linear Movement		
				000~120	From White to (14th Color+White) Linearity Movement		
					Full Color		
				121~122	Color1		
				123~125	Color2		
				126~128	Color3		
				129~130	Color4		
						131~133	Color5
						134~136	Color6
				137~138	Color7		
				139~141	Color8		
				142~144	Color9		
Calan	9	9	9	145~146	Color10		
Color	9	9	9	147~149	Color11		
				150~152	Color12		
				153~154	Color13		
				155~157	Color14		
				158~160	Open		
					Continuous Rotation		
				161~200	Continuous color wheel clockwise rotation from fast to slow		
				201~203	Stop		
				204~243	Continuous color wheel counter-clockwise rotation from slow to fast		
					random full color		
				244~247	Fast		
				248~251	Medium		
				252~255	Slow		
Sin Cala - Dela	40	40	40	000~127			
Six Color Prism	10	10	10	128~255	Six Color Prism Inserted(Mutex with Frost)		
	•	•	•	•	•		

1					
11 11			000~010	Open	
		11	011~059	Eight prism Inserted	
			060~108	24 Prism Inserted	
			109~157	Six Cylinder Inserted	
			158~206	Eight prism+24 Prism Inserted	
			207~255	Eight prism+Six Cylinder Inserted	
			000~127	0°~360°	
12	12	12	128~190	Continuous gobo wheel clockwise rotation from fast to slow	
-			191~192	Stop	
			193~255	Continuous gobo wheel counter-clockwise rotation from slow to fast	
			000~127	0°~360°	
13	13	13	128~190	Continuous gobo wheel clockwise rotation from fast to slow	
.			191~192	Stop	
			193~255	Continuous gobo wheel counter-clockwise rotation from slow to fast	
-	14	14	000~255	Reserved	
14	15	15	000~255	Distant to Near	
-	16	16			
15 17 1		17	000~127	Open	
ost 15 17	''	''	128~255	Frost Inserted (Mutex with Six Cylinder)	
				000~127	BEAM Mode(Default)
16	18	18	128~191	SPOT Mode(Uniform level 1)	
			192~255	SPOT Mode(Uniform level 2)	
			000~009	None	
			010~014	Entire Fixture Reset, staying in this range for 5 seconds.	
			015~029	Effects Reset, staying in this range for 5 seconds.	
17	10	10	030~034	Pan/Tilt Reset, staying in this range for 5 seconds.	
''	13	13	035~039	Reserved	
			040~044	Lamp Strike On, staying in this range for 4 seconds.	
			045~049	Lamp Strike Off, staying in this range for 4 seconds.	
			050~255	Reserved	
		20	000~254	Slope Time from Fast to Slow	
_			255~255	Follow Cue Data	
		21	000~254	Slope Time from Fast to Slow	
_			255~255	Follow Cue Data	
22		000~254	Slope Time from Fast to Slow		
		255~255	Follow Cue Data		
_	_	23	000~254	Slope Time from Fast to Slow	
	12 13 - 14 - 15 16	12 12 13 13 - 14 14 15 - 16 15 17 16 18 17 19	12 12 12 13 13 13 - 14 14 14 15 15 - 16 16 15 17 17 16 18 18 17 19 19 20 21	11	

4 . Operation chart for the display panel function

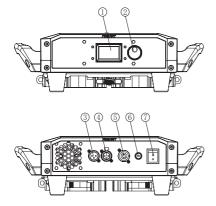
Level 1	Level 2	Level 3	Level 4	Default Setting
1 Address	001-XXX			001-017
	STD:17CH			STD:17CH
2 Model	16B:19CH			
	EXT:23CH			
	1 X Rev	Off/On		Off
	2 Y Rev	Off/On		Off
	3 XY Swap	Off/On		Off
	4 XY Speed	FAST/NORMAL/SLOW		NORMAL
	5 Lamp DMX	On/Off		On
	6 Curve	Curve1-4		Curve1
	7 Half Pwr	On/Off		On
	8 CMY Rev	Off/On		Off
		Off		Off
	0.4	Short		
3 Specific	9 AutoFocus	Middle		
		Long		
	10 Shortest	On/Off		On
	11 XY Encod	On/Off		On
	12 Blackout	Off/On		Off
	13 EffectSpd	Effect1/Effect2		Effect1
	14 PanelRev	Off/On		Off
	15 Sleep	Off/On		Off
	16 ShutDown	Off/On		Off
	17 B_L Mode	Delay/Always		Delay
	18 Exit			
		Code01	0000-XXXX	0000
		Code02	0000-XXXX	0000
	1 CODE	Code03	0000-XXXX	0000
		Code04	0000-XXXX	0000
		Exit		
		00 Pan_Off	0000-XXX0	0000
		01 Tilt_Off	0000-XXX0	0000
		02 Shutt_Off	0000-XXX0	0000
		03 Color_Off	0000-XXX0	0000
4 Advance	2 Offset	04 Gobo Off	0000-XXX0	0000
		05 Prism6Off	0000-XXX0	0000
		06 Prism8Off	0000-XXX0	0000

		07 Prism24Off	0000-XXX0	0000
		08 P Rot Off	0000-XXX0	0000
		09 6CylinOff	0000-XXX0	0000
		10 CylindOff	0000-XXX0	0000
		11 Frost off	0000-XXX0	0000
		12 Focus Off	0000-XXX0	0000
		13 Homegenity	0000-XXX0	0000
		14 Exit		
	3 FixID	400/450BEAM		400/450BEAM
	4 BackLed	003-007		003
	5 FanCtl	Normal/Quite		Normal
	6 LoadDefault	Cancel/ACT		Cancel
	7 ClearLamp	Cancel/ACT		Cancel
	8 ServerClr	Cancel/ACT		Cancel
	9 Language	Chinese/English		Chinese
	10 Exit			
	1 No ACT	Run/Stop		Run
	2 XY AUTO	Stop/Run		Stop
	3 BEAM AUTO	Stop/Run		Stop
	4 FullDemo	Stop/Run		Stop
	5 Server	Cancel/ACT		Cancel
		1 Shutter	000-xxx	000
		2 Dimmer	000-xxx	000
		3 Dimmer LSB	000-xxx	000
		4 Pan	000-xxx	000
		5 Pan LSB	000-xxx	000
		6 Tilt	000-xxx	000
5 Manual		7 Tilt LSB	000-xxx	000
Jivianuai		8 Gobo	000-xxx	000
	6 ChannelCtl	9 Color	000-xxx	000
	o Chamileicu	10 6Color	000-xxx	000
		11 Prism	000-xxx	000
		12 Prism Rot	000-xxx	000
		13 CylinRot	000-xxx	000
		14 Focus	000-xxx	000
		15 Frost	000-xxx	000
		16 SPOT/BEAM	000-xxx	000
		17 Control	000-xxx	000
		18 Exit		
1	7 Exit	1		1

	1 PowerTim	xxxx.x		0000.0
	2 LampTim	xxxx.x		0000.0
	3 DockTemp	xxx xxx		000 000
	4 XY Temp	xxx xxx		000 000
	5 DrvTemp	xxx xxx		000 000
	6 DockFanSp	xxxx xxxx		0000 0000
	7 XY FanSp	xxxx xxxx		0000 0000
	8 DrvFanSp	xxxx xxxx		0000 0000
	9 PanVer	xxxxxxx		F4BbPxxx
	10 XY Ver	xxxxxxxx		F4BbXxxx
	11 DrvVer	xxxxxxxx		F4BbSxxx/F45BSxxx
		Level01	000-xxx	000
6 Inform		Level02	000-xxx	000
		Level03	000-xxx	000
		Level04	000-xxx	000
	12 CH Level	Level05	000-xxx	000
		Level06	000-xxx	000
		Level07	000-xxx	000
		Level08	000-xxx	000
		Level09	000-xxx	000
			000-xxx	000
		Level57	000-xxx	000
		Level58	000-xxx	000
		Level59	000-xxx	000
		Level60	000-xxx	000
		Level61	000-xxx	000
		Level62	000-xxx	000
		Level63	000-xxx	000
		Exit		
	13 HALL Info	00000000		
	14 Exit			
7 Lamp Ctl	Lamp off/Lamp of	on		Off
8 Home	Act/Cancel			Cancel
9 Exit				

5.Control panel

5.1 Control panel introduction



- 1.LCD display
- 2. Function button (Enter)
- 3.DMX in
- 4.DMX out
- 5. Power in
- 6.Fuse
- 7.Power switch

Fig.(5. 1-1)

5.2 Control panel Operation introduction

- 1. Mains switch: It's power off when turning the mains switch to "O". And it's power on when turning the mains switch to "I".
- 2. Press function button to enter the main menu interface for menu operation.

Main Menu Interface

Select Menu	
Address	001-XXX
Model	
Specific	
Advance	
_	

Note: Indicate the selected menu items in the menu interface. If you are sure to enter this menu, please press the runner to confirm. That is to say, enter the next menu and continue editing. If this menu option is not set in the entry address, the menu can be paged by rotating the runner.

Fig.5.2-1

3. Jog wheel:

Press down the jog wheel: enter an item/save the present value. Holds for a few more second, it will return to upper menu.

Clockwise rotate: scroll down the page/increase the parameter value.

Counterclockwise rotate: scroll up the page/decrease the parameter value.

6 . Production feature explanation

6.1 Color wheel

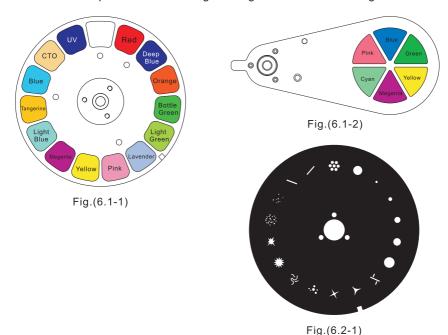
The color wheel consists of a high standard of 14 color filters+while light can realize color rainbow, as show in Fig. (6.1-1).

Color wheel is attached to the six-color filters to achieve a colorful beam effect, as show in Fig.(6.1.-2).

Lighting designers can easily choose the colors which they like and create the perfect lighting effect.

6.2 Fixed gobo wheel

1 fixed gobo wheel with 17 gobos + white light as show in Fig. (6.2-1). (Customers can replace the rotation gobo in gobo wheel according to their needs)



6.3 Pan&Tilt

Pan 540°, tilt 250°. Both of pan & tilt come with 16 Bit precise positioning function. Pan/tilt speed (fast, normal, slow) can be set up through "speed settings" on the menu item.

6.4 PRISM

one rotating 8-facet prism+one rotating 24-facet prism and one 6-face gradient prism, bidirectional rotation. The prism can superimpose 32 prisms.

7. Routine maintenance

This fixture requires routine cleaning. The service life depends on the operating environment heavily. Please kindly contact GUANGZHOU CHAIYI LIGHT CO., LTD for more maintenance information not included in this user's manual.

Notice: Excessive dust, smoke fluid and particulate buildup will degrade performance and cause over heating or damage to the fixture that is not covered by the warranty.

Warning: Please unplug the fixture before you open any covers.

Cleaning

Optical components should be cleaned carefully and lightly. Coating face is easily damaged, do not use harmful solvent so as to avoid damage to plastic parts or coating parts.

Cleaning optical components

- 1. Switch off the fixture and keep it cool completely, then open the cover.
- 2. Clean the floats by dust collector or compressed.
- 3. Use cotton paper without smell or cotton cloth soaked with the water, distilled water to wipe the granular thing, don't wipe the surface, float things should be blown away by the pressure gas.
- 4. Use the cotton cloth or cotton paper without smell soaked with isopropyl alcohol to remove the smoke and other residues. A commercial glass cleaner may be used, but residues must be removed with distilled water. Clean with a slow circular motion from center to edge. Dry with a clean, soft and lint-free cloth or compressed air.

Cleaning fan and air vents

Remove dust from the fans and air vents with a soft brush, cotton paper, vacuum, or compressed air.

8.Safety information

The following symbols are used to identify important safety information on the product and in this manual:



DANGER!

Safety hazard. Risk of severe injury or death.



DANGER!

Refer to manual before installing, powering or servicing.



Hazardous voltage. Risk of severe or lethal electric shock.



Warning!

Fire hazard.



Warning!

Burn hazard. Hot surface. Do not touch.



Warning!

Risk of eye injury. Safety glasses must be worn.



Warning

Do not stare at the bulb which is still on.





Risk of hand injury. Safety gloves must be worn.



) (

(]----1

Minimum distance from lighted objects

is 15.2m.



For indoor use only.



Do not direct lens to sun ray or strong light!



Do not actuate during operating.



Luminaries not suitable for direct mounting on normally flammable surfaces (suitable only for mounting on

(suitable only for mounting on non-combusible surfaces)





Replace any

cracked

protective

shield.

The surface's temperature is 87°C.

Rated maximum ambient temperature is 40°C.



Protection against explosion

Protection screen must be replaced if they have become visible damaged to such an extent that their effectiveness is impaired.



Protection against burning or fire

Keep flammable materials far away from the fixture. Minimum distance from the flammable materials is 0.5m.

9. Product Connection

9.1 Included items

FINE 400/450 BEAM is packed with flight case. One single standard flight case carries two fixtures, Included items listed below (shown as table 9.1-1):

Accessories	QTY	UNIT
User manual	1	PCS
Warranty card	1	PCS
Signal cable	1	PCS
Safety wire	1	PCS
Fuse	2	PCS

Table(9.1-1)

9.2 Power Connection

Power supply and fuses' type and rating:

Power	Fuse
100-240V~	5A 5X20

Table(9.2-1)

Notice: Type X attachment for power supply connection. Method of attachment of the cable or cord such that any replacement can only be made by the manufacturer, his service agent or similarly qualified person.

The person must have the relevant qualification to connect the power supply. The AC power voltage shall be suitable to the lamp provided with over-loading or creepage protection.

- 1. Connecting the equipment to the power supply, do not connect to silicon box system, or else, it will destroy the equipment.
 - The fixture is provided with standard 3-pin socket. Please according to table 9.2-2 connect to power supply, Yellow/green line must be earthed. If you still have any question to the installation, please consultant with the experienced electrician.
- 2. When power is supplied, put the base switch to the position "I".

Color	Wire	Mark
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	=

Table(9.2-2)

9.3 Signal Connection

Data linkage for the fixture may be provided by DMX512 connection and wireless linkage(optional).

DMX connection

Note: The signal cable was type X connection.

Type X connection—if the external flexible cable or cord of this fixture is damaged, it shall be replaced by a special cord or cord exclusively available from the manufacturer or his service agent.

3-pin or 5pin XLR connecters are provided for fixture DMX input and output. Pin 1 is for earthing, pin 2 is for minus signals, and pin 3 is for plus signals. To prevent and absorb the reflection and interference of the signals, each data link must be ended by a respective terminator.





Pin1: GND Pin2: Signal(-) Pin3: Signal(+)

3-pin XLR connector

13: Signai(+) T 1 r

Terminator
Terminator specification: a
120Ω plug-in resistor with
rated power of 0.25W,
soldered between pin 2 and
pin 3 at the end of respective

data link.

Fig.(9.3-1)

Connect the fixtures with Max.22 pieces. Make sure to insert the "signal in" terminal in the last connecting fixture. shown in Fig. (9.3-2).

Note: Make sure the fixture vertically upwards when it is placed horizontally, the safe distance between two adjacent fixtures must be \geq 900mm.

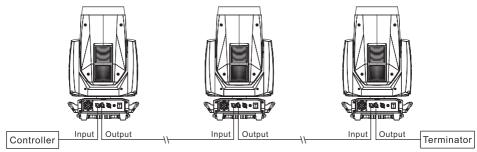


Fig.(9. 3-2)

If long-distance data transfer occurs, a DMX512 signal amplifier is necessary. The added amplifier is inserted between the lighting controller and the first fixture on the basis of a normal data link.



Notice!

- 1. No more than one signal input or output can occur in one fixture.
- 2. Don't split a data link via output ports on the fixture, use a DMX512 signal amplifier instead, if necessary.
- 3. Use only shielded-pair cables, and standard microphone cable is not reliable for long-distance data transfer.

■ Wireless transmission (optional)

- Customer might choose wireless edition fixture which supports wireless data transmission. Wireless signal control is pretty reliable within a 225m radius empty space, thus no need for physical connection for data transmission. All has to be done is to set up corresponding addresses.
- 2. 2.4GHz worldwide free frequency band available in wireless control. Such huge frequency band favors users with variable band options.
 - (a) Wireless receiving mode setup:
 - "Personality"→"Receive Mode"→"WDMX"
 - (b)Press emitter button to search preset address within a fixture. When it's done, remotely control a fixture through a controller, Shown as Fig. (9.3-3).

Notice:

- 1. Emitter location: Distribute the antenna higher than any barrier on floor as possible.
- 2. Antenna direction: Emitting antenna points to receiving antenna.
- 3. Antenna location: far away from the distractions, such as the WLAN antenna.

controlled fixture

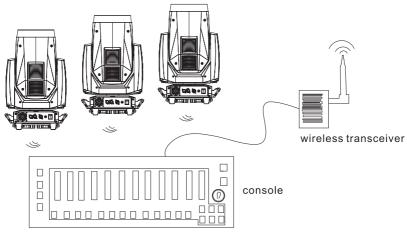


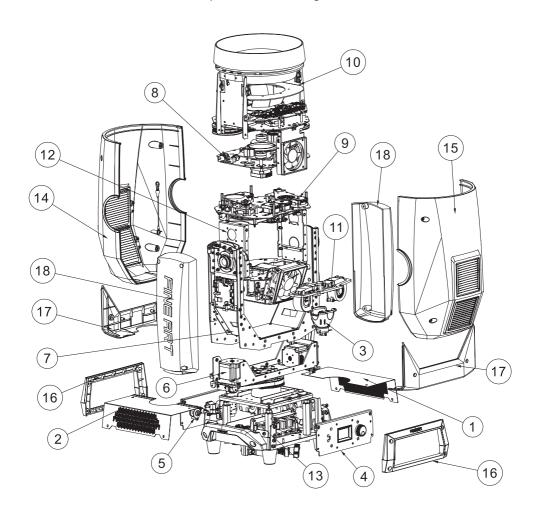
Fig.(9.3-3)

$10_{\rm .Parts\,Code}$

NO.	Item	Specification	Ording index
1	Light Source	420W	180103000076
2	Light Source	371W	180103000068
3	Ballast	420W	330002200031
4	Ballast	370W	330002200013
5	Power supply	680W	330001200111
6	Screen control board	-	330397100181
7	XY-axis drive board	-	330397100114
8	11-CH drive board	-	330397100120
9	XY-axis optical coupler	-	330390100007
10	X-axis Belt	-	350201000740
11	Y-axis Belt	-	350201000735
12	XY-axis Motor	-	140103000041
13	Outer Lens	Ф200	200397000239
14	Zoom Lens	-	200397000241
15	Focus Lens	-	200397000240
16	Diffusefilm	-	200397000047
17	24-Face Prism	Ф60x12.2mm	200397000260
18	8-Face Prism	Ф60x12x21°	200397000261
19	6-facet gradient prism	Ф54	200397000279
20	6-color wheel-Megenta	1.1mm, R27.5X60°	220397000243
21	6-color wheel-Cyan	1.1mm, R27.5X60°	220397000244
22	6-color wheel-Green	1.1mm, R27.5X60°	220397000245
23	6-color wheel-Yellow	1.1mm, R27.5X60°	220397000246
24	6-color wheel-Blue	1.1mm, R27.5X60°	220397000247
25	6-color wheel-Pink	1.1mm, R27.5X60°	220397000248
26	Orange	-	220397000002
27	Lavender	-	220397000006
28	Pink	-	220397000007
29	Yellow	-	220397000008
30	СТО	-	220397000249

NO.	Item	Specification	Ording index
31	Dark Blue	-	220397000251
32	Red	-	220397000252
33	Dark Orange	-	220397000253
34	UV	-	220397000254
35	Light Green	-	220397000255
36	Magenta	-	220397000256
37	Light Blue	-	220397000257
38	Dark Green	-	220397000258
39	Blue	-	220397000259
40	Fix Gobo Wheel	Ф113	191130000003
41	Base Cooling Fan	AGE08015B12H-J30F	150101000197
42	Cooling Fan	MF60151V2-1000C-A99	150101000196
43	Lamp cooling fan 1	PF92251B1-000C-G99	150101000139
44	Lamp cooling fan 2	06023GA-24N-AU	150102000047
45	Power Switch	RL2-121-C-2-BK/BK-P2	299901010006
46	Fuse	10A/250V	309905000017
47	5-Pin XLR Socket	-	330395100139

Attached 1: Fixture exploded drawing



- 1.Base cover 1
- 2.Base cover 2
- 3.Light Source
- 4. Display panel
- 5.5-PIN XLR socket
- 6.Arm beam assembly
- 7.Arm assembly
- 8. Focus assembly 9.Gobo assembly
- 10.Prism assembly
- 11.Lamp holder assembly 1
- 12.Lamp holder assembly 2
- 13.Base assembly
- 14.Body cover 1 15.Body cover 2
- 16.Base end cover
- 17.Beam cover
- 18.Arm cover