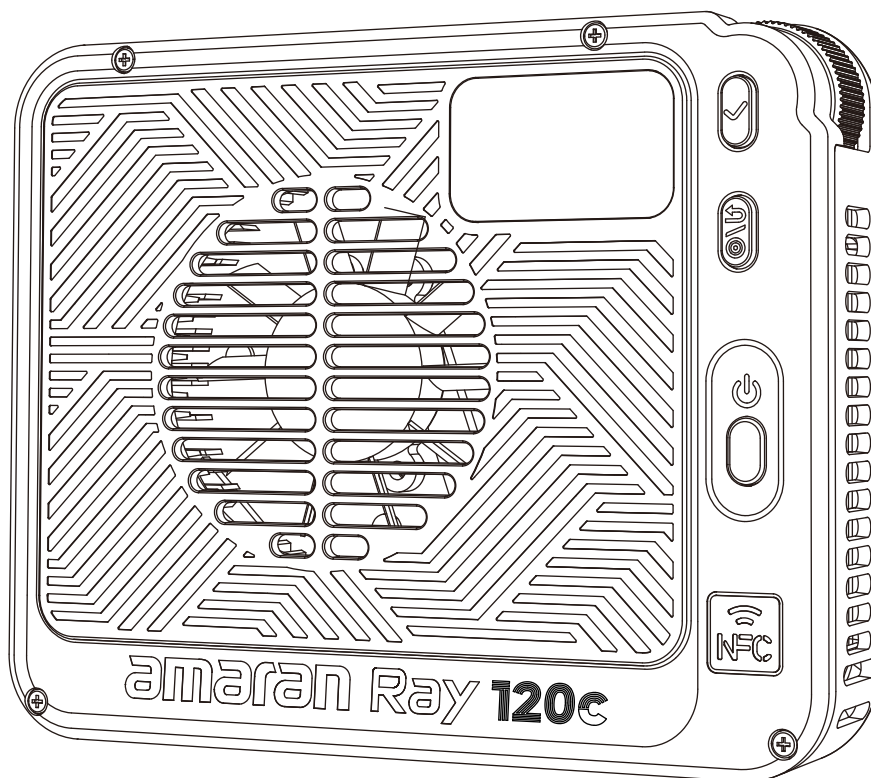


**amaran**<sup>®</sup>



# amaran Ray 120c

Product Manual

English

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## Introduction

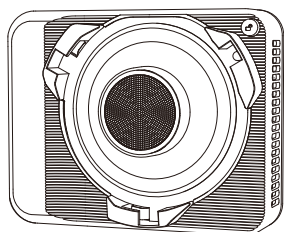
Thank you for purchasing the amaran Ray 120c.

Designed for creators on the move who need more punch, the amaran Ray 120c is an ultra-compact, 120W full-color point-source LED light powered by the OmniColor light engine – delivering class leading output and true-to-life color in a slim, travel-ready body. With an IP54-rated build for real-world shoots, amaran Ace E-Lock compatibility for mounting or pairing with the amaran Peak 75 or amaran Peak in one second<sup>1</sup>, and simplified USB-C PD power, the amaran Ray 120c moves effortlessly from outdoors to the studio.

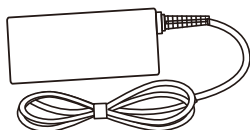
<sup>1</sup> *amaran Peak 75 and amaran Peak battery system sold separately.*

# Components List

Please make sure all accessories listed below are complete before using. If not, please contact your sellers immediately.



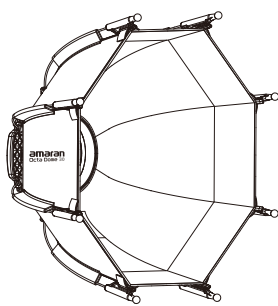
amaran Ray 120c x 1



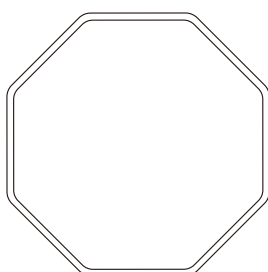
amaran AC to DC 150W  
Power Adapter (0.5m) x 1



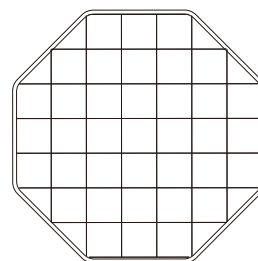
amaran AC Power  
Cable (4 m) x 1



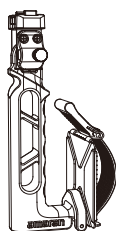
amaran Octa Dome 30 x 1



amaran Octa Dome 30  
Diffusion Cloth x 1



amaran Octa Dome 30  
Light Control Grid x 1



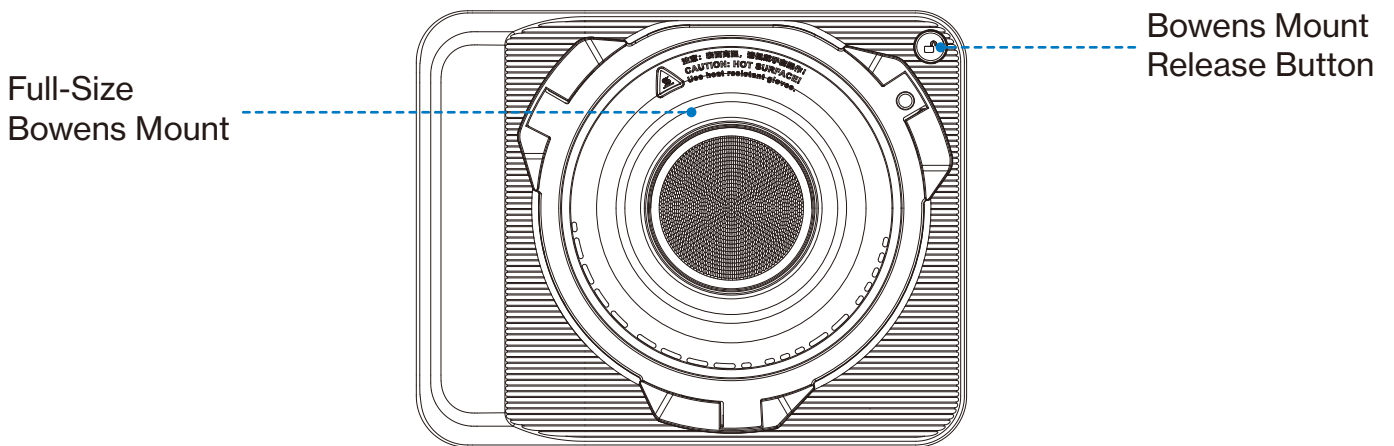
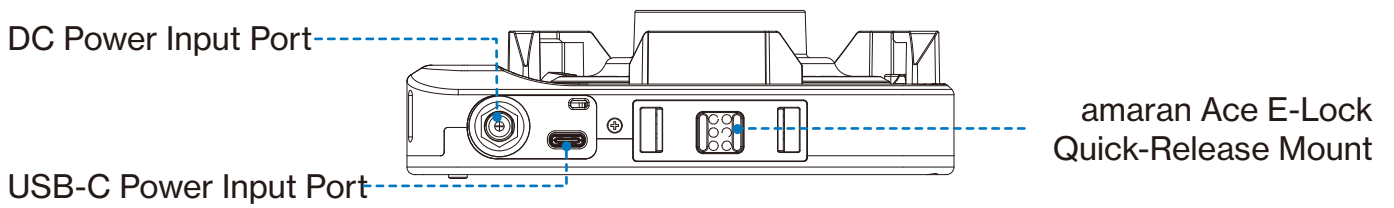
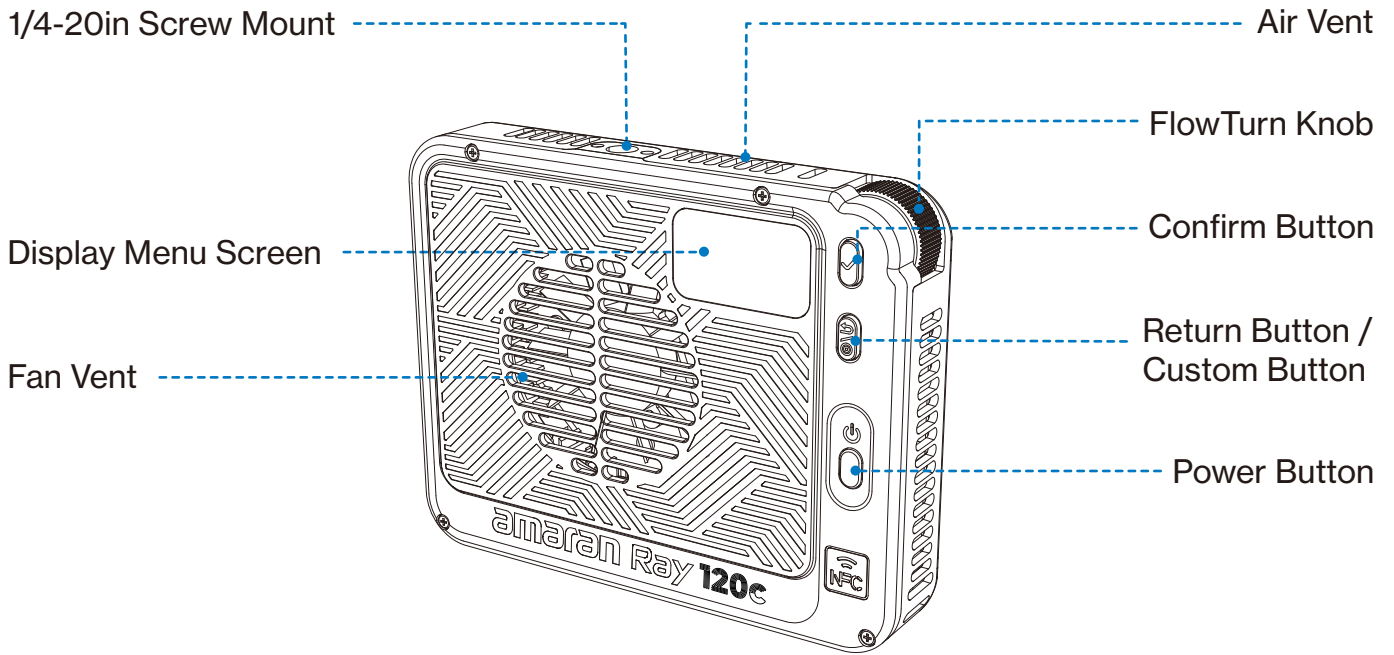
amaran  
Ace Lock to Baby Pin Adapter Grip x 1



amaran Ray  
Carrying Bag x 1

*Tip: The illustrations in the manual are diagrams for reference only. Due to the continuous development of new versions of the product, if there are any differences between the product and the user manual diagrams, please refer to the product itself.*

# Product Overview



<b>Display Menu Screen</b>	Displays settings and status of your light.
<b>FlowTurn Knob</b>	Rotate to toggle the menu or adjust values and lighting settings, such as brightness, color temperature, and color mode.
<b>Confirm Button</b>	Confirms selected settings or enters the highlighted menu.
<b>Return Button Custom Button</b>	Click to return to the previous menu screen. Hold or double click on the return button to execute customizable shortcuts set in Custom Mode.
<b>Power Button</b>	Double click to turn the light on or off.
<b>Fan Vent</b>	Helps the light dissipate heat. Please do not block the fan vent when using the light.
<b>Air Vent</b>	The temperature of the air vent may be higher after long usage. Please do not block the air when using the light as it helps the light dissipate heat.
<b>1/4-20in Screw Mount</b>	Mount the light onto 1/4-20in tripods or other equipment.
<b>USB-C Power Input Port</b>	Used to power the fixture via a PD-supported power supply.
<b>DC Power Input Port</b>	Used to power the fixture via a 12V-24V DC barrel input. Supports a wide range of external power sources.
<b>amaran Ace E-Lock Quick-Release Mount</b>	Install and disassemble the light in less than a second with the amaran Ace Lock system. The light can also be powered by the amaran Peak 75 or amaran Peak power bank accessory.
	<i>*The amaran Peak 75 and amaran Peak are sold separately.</i>
<b>Full-Size Bowens Mount</b>	Compatible with a variety of full-size, standard Bowens Mount accessories.
<b>Bowens Mount Release Button</b>	Press to release the Bowens Mount accessory.

# Operations

## 1. Power Supply

The fixture supports three power input methods: Supplying power with the included DC Adapter, with a USB-C PD power supply, and the amaran Ace E-Lock. Power specifications for each input are as follows:

1.DC IN : 12–20V, Max Power 84W

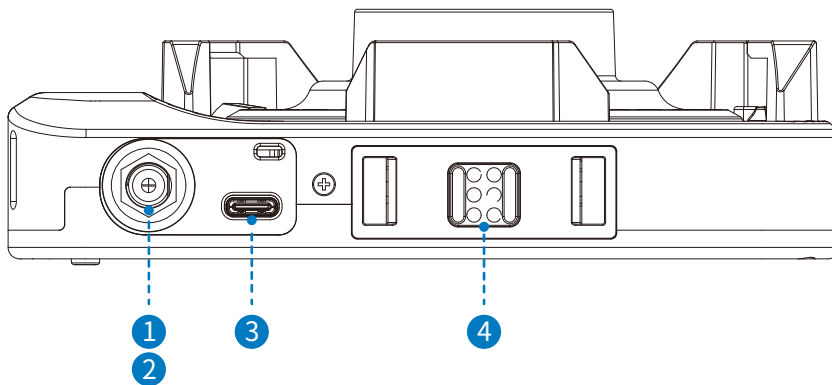
2.DC IN : 21-24V, Max Power 140W

3.USB-C IN : 9V/3A (Max 27W), 12V/5A (Max 60W), 20V/3.75A (Max 75W), 20V/5A(Max 100 W), 28V/5A(Max 140W). Supports PD fast charging protocol and is compatible with a variety of USB-C power sources.

4.amaran Ace E-Lock IN: Max Power 140W

Supports wireless, cable-free operation with the amaran Peak 75 or amaran Peak battery system via the amaran Ace E-Lock.

When using the amaran Peak 75, the light's output is limited to 50% power; when using the amaran Peak, the light can operate at full power.



**Notice:**

*\*The amaran Peak 75 and amaran Peak battery system is sold separately.*

*\*Using a power source that does not meet the rated power requirements may result in the following issues:*

*(1) The light output may be limited and unable to reach maximum brightness.*

*(2) The fixture may fail to power on or operate unstably.*

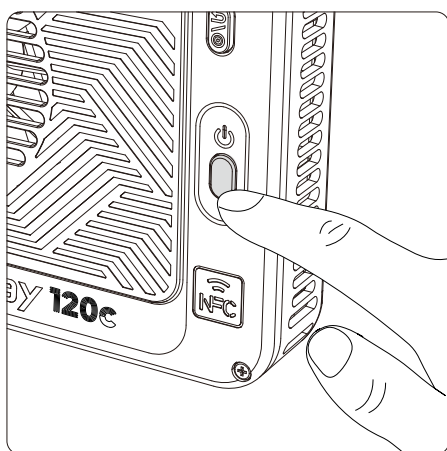
*Please use a power adapter or supply that meets the rated power specifications to ensure proper performance and safety.*

\* The amaran Ray 120c supports power supply standards of USB PD3.1, but is not compatible with some third-party private charging protocols. Please ensure to select the appropriate power supply device. If the selected power supply device cannot power the light at full power, a pop-up window will appear on the display menu screen and limit the maximum brightness.

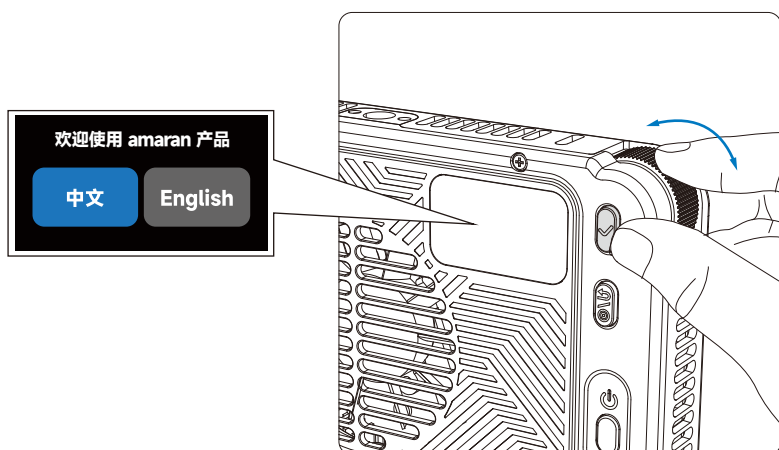
## 2.Power On/Off

Power On : After connecting to the power supply, double-press the power button to turn on the device.

Power Off : While the light is on, double-press the power switch to turn it off.



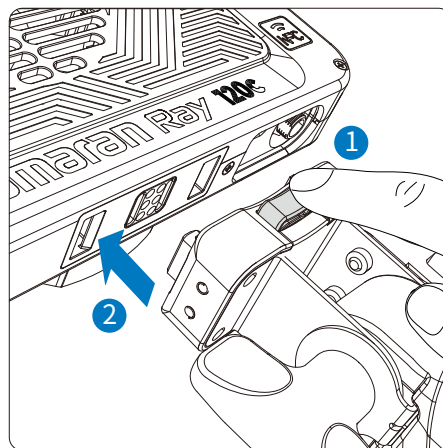
You can select your preferred language when you turn the light on for the first time. Rotate the knob to select your language. Click confirm button to confirm.



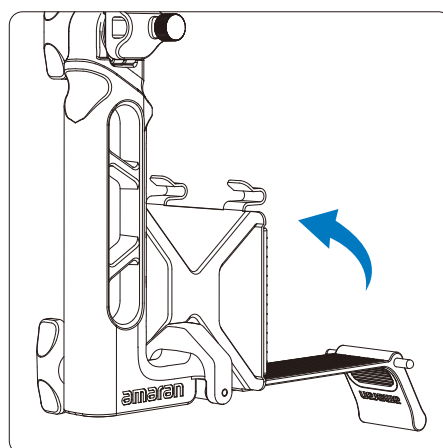
### 3.Light Installation

#### amaran Ace Lock to Baby Pin Adapter Grip

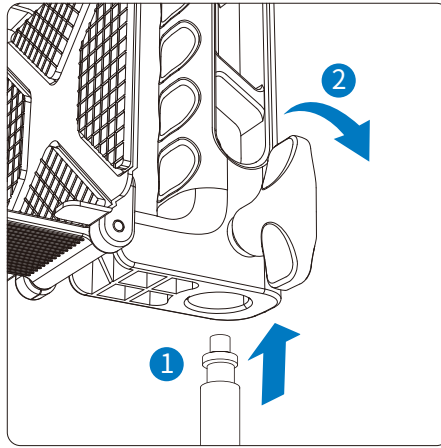
Align the contact pins on the amaran Ace Lock to Baby Pin Adapter Grip to the light's amaran Ace Lock quick release mount. Press the blue release key and push towards the bottom of the light. The Baby Pin Adapter Grip is securely attached to the light when the pins are embedded into the amaran Ace lock mount and when you hear a clicking noise. Please ensure that the blue release key is facing the back of the light to avoid reverse installation.



The front of the grip features a silicone strap for securing external power sources, such as power adapters, V-mount batteries, or power banks.



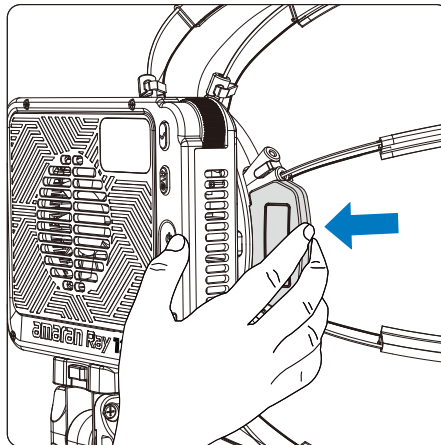
The bottom of the grip includes a Baby Pin mount, which can be directly mounted to compatible light stands and secured using the locking screw.



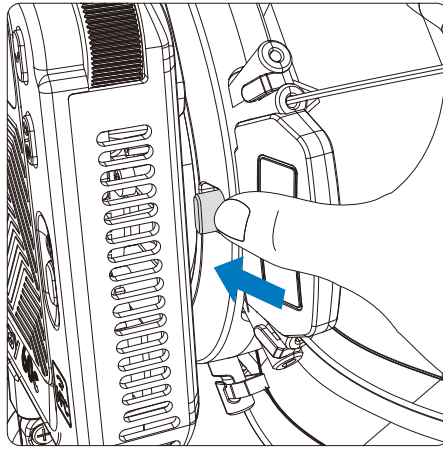
## 4. Bowens Mount Accessory Installation

The fixture comes with the amaran Octa Dome 30 pre-installed. The softbox features a one-snap setup design – simply unfold it for immediate use, with no additional assembly required.

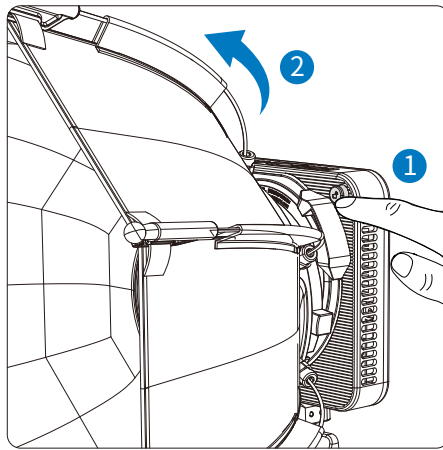
To unfold the softbox : Pull up the expansion handle in the indicated direction to fully open the softbox and ensure it is securely locked. Adjust the diffusion cloth and grid as needed to achieve the desired lighting effect.



To collapse the softbox : When removing, press the release latch on the softbox mount with your fingers. This will unlock the mechanism and allow the softbox to fold down automatically.



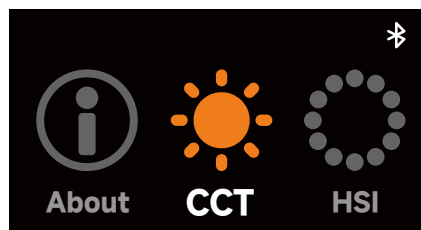
If you need to remove the softbox or replace it with another accessory, press the Bowens Mount Release Button while rotating either the accessory or the fixture to unlock and detach.



*\*When replacing with other accessories, please ensure compatibility with the fixture. For detailed compatibility information, refer to the official website.*

## 5.Main Menu

Rotate the control knob to browse through options, then press the confirm button to select a lighting mode or adjust function settings.



## 5.1.CCT Mode

Rotate the knob and press the confirm button to enter CCT Mode from the main menu. In this mode, press the confirm button to toggle between parameters, and rotate the knob to adjust the corresponding values.

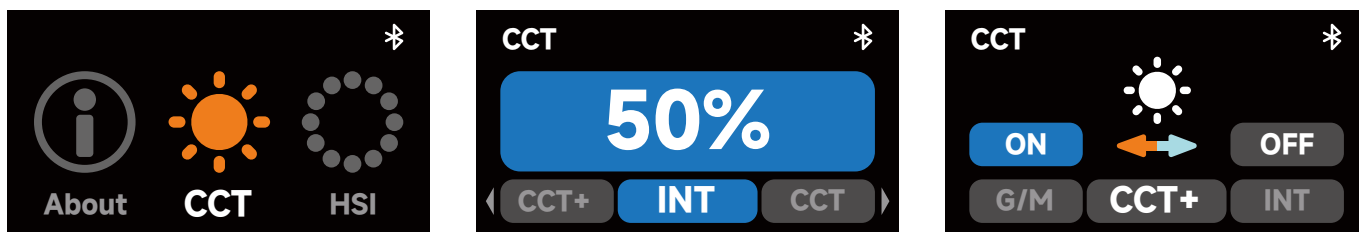
**INT (Intensity)** : Adjust your light's brightness from 0%-100%.

**CCT (Correlated Color Temperature)** : Adjust your light's color temperature from warm white (2,300K CCT) to cool white (10,000K CCT)

**G/M (Green-Magenta)** : Adjust the green-magenta shift in  $\pm 10$  increments.

**CCT+ (Expanded CCT)** : Enables or disables extended CCT range. When enabled, the adjustable color temperature in CCT mode is expanded to 1,800K to 20,000K CCT.

Please note that the color rendering when in the expanded CCT range is lower.



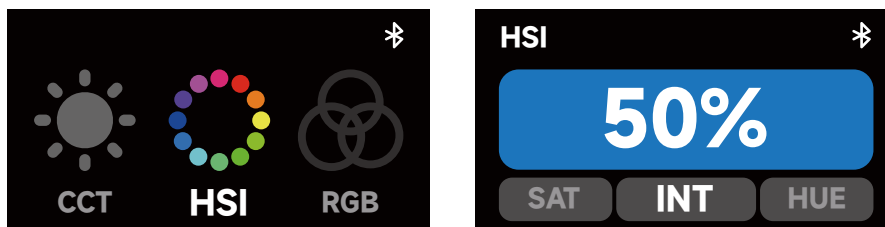
## 5.2.HSI Mode

Rotate the knob and press the confirm button to enter HSI Mode from the main menu. In HSI, press the confirm button to select INT, HUE, or SAT and rotate the knob to adjust the corresponding value.

**INT (Intensity)** : Adjust your light's brightness from 0%-100%.

**HUE** : Adjust your light's hue value from 1° to 360°.

**SAT (Saturation)** : Adjust the saturation of the color from 0%-100%.



## 5.3.RGB Mode

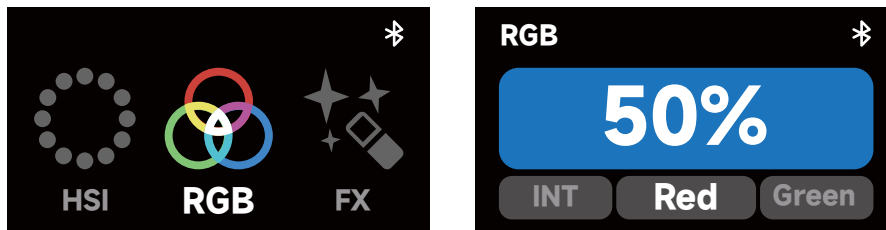
Rotate the knob and press the confirm button to enter RGB Mode from the main menu. In this mode, press the confirm button to select INT, Red, Green, or Blue and rotate the knob to adjust the corresponding value.

**INT (Intensity)** : Adjust your light's brightness from 0%-100%.

**Red** : Adjust your light's Red value from 0%-100%.

**Green** : Adjust your light's Green value from 0%-100%.

**Blue** : Adjust your light's Blue value from 0%-100%.

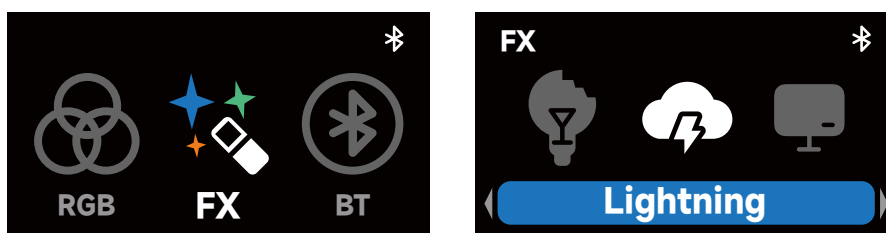


## 5.4.FX Mode

Rotate the knob and press the confirm button to enter FX Mode from the main menu. In FX mode, rotate the knob to switch between different lighting effects. After entering an effect's settings, you can rotate the knob to adjust the corresponding value.

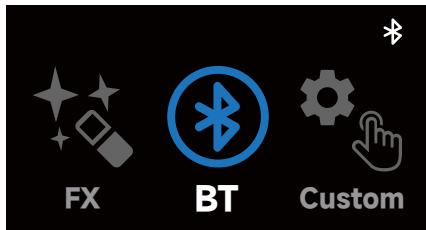
**Supported lighting effects:**

Fireworks	Faulty Bulb	Lightning	TV	Pulsing	Strobe
Explosion	Fire	Paparazzi	Welding	Cop Car	Party Lights



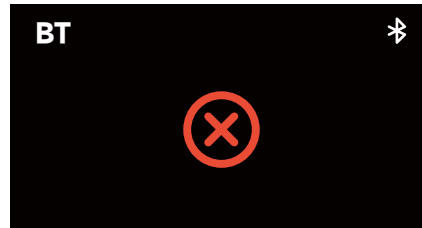
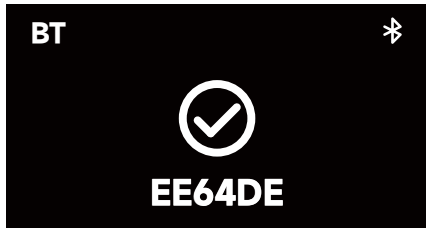
## 5.5.BT Bluetooth Reset

Rotate the knob and press the confirm button to enter BT mode from the main menu. Press and hold the confirm button until the end of the progress bar. Release the knob to cancel.



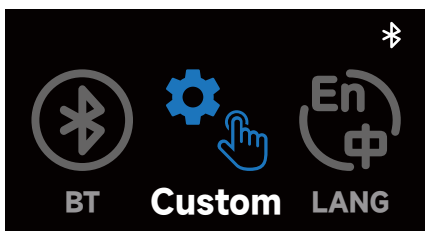
1. Bluetooth reset is successful.

2. Bluetooth reset is unsuccessful. Please reset Bluetooth again.



## 5.6. Custom Mode

Rotate the knob and press the confirm button to enter Custom Mode from the main menu. In Custom mode, press the knob to select customizable shortcuts for long press (Hold) or double click (Double) of the Return button. Rotate the dial to select between None/SOS/Bluetooth Reset/CCT Mode/HSI Mode/RGB Mode/FX Mode/Rotation/CCT+/Fan Mode shortcut functions. Press the confirm button again to confirm your selection.



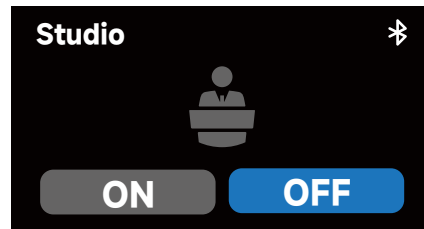
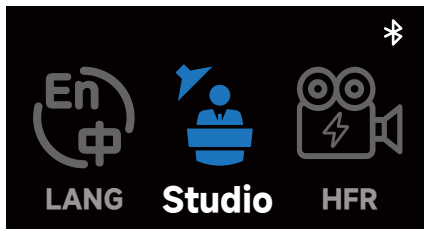
## 5.7. LANG (Language)

Rotate the knob and press the confirm button to enter Language settings from the main menu. In this menu, rotate the knob to switch between English and Chinese. Press the confirm button to confirm your selection.



## 5.8. Studio Mode

Rotate the knob and press the confirm button to enter Studio Mode from the main menu. Rotate the knob to toggle between On and Off, then press the confirm button to confirm your selection. When Studio mode is turned on, the light will automatically turn on after connecting to a power supply, reducing the need to manually press the power button.

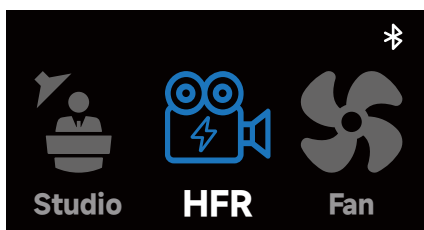


## 5.9. HFR Mode (High Frame Rate)

Rotate the knob and press the confirm button to enter High Frame Rate Mode from the main menu. In High Frame Rate mode, rotate the knob to toggle between On and Off, then press the confirm button to confirm your selection.

**HFR Mode On :** Optimized for high-speed shooting at up to 240fps, ensuring minimal flicker for smooth and stable image capture.

**HFR Mode Off :** The fixture operates in standard mode.



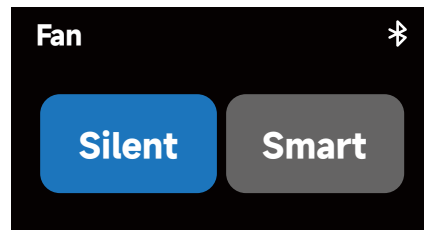
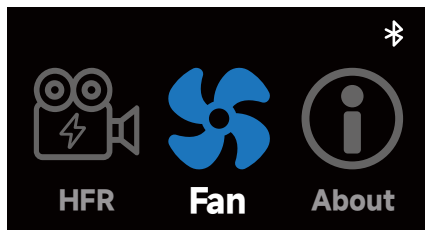
*\*When High Frame Rate Mode is enabled, the minimum brightness will be limited to 50%. To adjust the brightness below 50%, please disable High Frame Rate Mode first.*

## 5.10.Fan Mode

Rotate the knob and and press the confirm button to enter Fan mode from the main menu. In Fan mode, rotate the dial to toggle between Silent and Smart fan mode. Press the knob to confirm your settings.

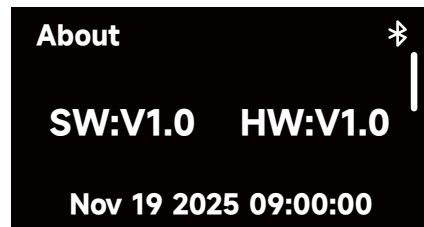
**Silent Mode :** The fan will be completely turned off, and the light will not produce any noise. To ensure safe operation, the maximum power output will be limited to 18W.

**Smart Mode :** The fan speed will automatically adjust according to the temperature of the light.



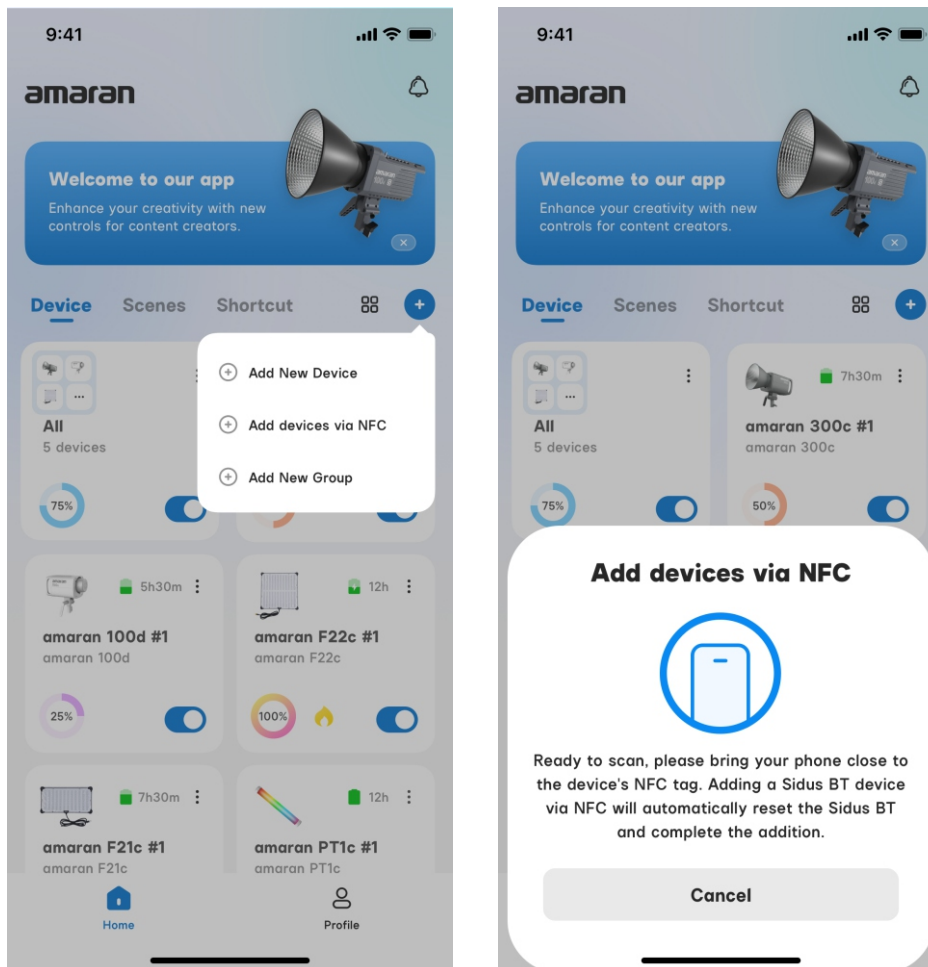
## 5.11.Firmware Update

Firmware updates can be updated online via the amaran app.



## 5.12. Pairing via NFC

To pair your light to the amaran app via NFC, open the amaran mobile app, tap the + sign, and select NFC Add Device. Place the NFC sensor area of your phone to the fixture's NFC tag. Hold your phone still until the fixture has been detected and successfully paired before removing your phone. Even if the light is powered off, pairing via NFC is still supported. The light will automatically connect to the app once it is turned on.



## Using the amaran App

You can download the amaran mobile app from the iOS App Store, Google Play Store, and other platforms for enhancing the functionality of the light. You can download the amaran desktop app for Mac and Windows from the amaran website. Please visit [amarancreators.com](http://amarancreators.com) for more details on how to use the app to control your amaran lights.



amaran App



[amarancreators.com](http://amarancreators.com)

# Specifications

<b>Power Consumption</b>	140 W(Max)	<b>Power Output</b>	120 W(Max)
<b>CCT</b>	Standard:2,300-10,000K Expanded(CCT+): 1,800-20,000K	<b>Luminous Flux</b>	8,719 lumens
<b>CRI</b>	95+	<b>TLCI</b>	95+
<b>TM-30 Rg (Average)</b>	100	<b>TM-30 Rf (Average)</b>	94
<b>SSI(D32)</b>	87	<b>SSI (D56)</b>	80
<b>Operating Voltage</b>	AC 100V-240V	<b>Power Supply Methods</b>	PD 3.0 DC 12-24V amaran Ace E-Lock
<b>Control Methods</b>	On-board,amaran App	<b>Firmware Upgradeable</b>	amaran App
<b>Screen Type</b>	TFT	<b>Wireless Operating Rang</b>	≤80m / ≤262.5ft
<b>Cooling Method</b>	Active Cooling	<b>Max Noise Level</b>	≤28 dBA @ 30°C
<b>Operating Temperature</b>	-10°C-40°C	<b>Storage Temperature</b>	-20°C-80°C
<b>Fixture Dimensions</b>	14.5×11.5×5.1cm/ 5.7×4.5×2.0in	<b>Fixture Weight</b>	0.59kg/1.32 lb
<b>Octa Dome 30 Dimensions</b>	18x6.5x34.6cm/ 7.09x2.56x13.62in	<b>Octa Dome 30 Weight</b>	0.34kg/0.75 lb
<b>Carrying Bag Dimensions</b>	40.8x26.4x11cm/ 16.06x10.39x4.33in	<b>Carrying Bag Weight</b>	0.49kg/1.08 lb

*\*The above technical specifications are from the Aputure laboratory, and there may be some variation between individual units*

# Photometrics

amaran Ray 120c						
RGB	Dis.	No Accessories	Octa Dome 30	Mini Reflector	Mini Fresnel	
					Spot 15°	Flood 30°
2300K	1m	4,770Lux	1,968Lux	24,500Lux	29,900Lux	11,540Lux
		443fc	183fc	2,276fc	2,778fc	1,072fc
	3m	530Lux	219Lux	2,722Lux	3,322 Lux	1,282Lux
		49fc	20fc	253fc	309fc	119fc
3200K	1m	6,850Lux	2,497Lux	35,600Lux	43,100Lux	16,620Lux
		636fc	232fc	3,307fc	4,004fc	1,544fc
	3m	761Lux	277Lux	3,956Lux	4,789Lux	1,847Lux
		71fc	26fc	368fc	445fc	172fc
4300K	1m	6,770Lux	2,470Lux	35,400Lux	42,600Lux	16,480Lux
		629fc	229fc	3,289fc	3,958fc	1,531fc
	3m	752Lux	274Lux	3,933Lux	4,733Lux	1,831Lux
		70fc	25fc	365fc	440fc	170fc
5600K	1m	6,520Lux	2,378Lux	34,000Lux	41,100Lux	15,840Lux
		606fc	221fc	3,159fc	3,818fc	1,472fc
	3m	724Lux	264Lux	3,778Lux	4,567Lux	1,760Lux
		67fc	25fc	351fc	424fc	164fc
6500K	1m	6,370Lux	2,326Lux	33,300Lux	40,200Lux	15,520Lux
		592fc	216fc	3,094fc	3,735fc	1,442fc
	3m	708Lux	258Lux	3,700Lux	4,467Lux	1,724Lux
		66fc	24fc	344fc	415fc	160fc
10000K	1m	5,830Lux	2,128Lux	30,500Lux	36,800Lux	14,190Lux
		542fc	198fc	2,834fc	3,419fc	1,318fc
	3m	648Lux	236Lux	3,389Lux	4,089Lux	1,577Lux
		60fc	22fc	315fc	380fc	147fc

Continued Table:

amaran Ray 120c						
RGB	Dis.	No Accessories	Octa Dome 30	Mini Reflector	Mini Fresnel	
					Spot 15°	Flood 30°
Red	1m	1,045Lux	/	/	/	/
		97fc				
Green	1m	3,070Lux				
		285fc				
Blue	1m	846Lux				
		79fc				

# Declaration of Toxic and Hazardous Substances in Electronic Information

Component	Toxic and Hazardous Substances or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr VI)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCB	X	○	○	○	○	○
Plastic	○	○	○	○	○	○
Metal	X	○	○	○	○	○
Accessories	○	○	○	○	○	○

This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that the content of the toxic and hazardous substance in all homogeneous materials of the component is below the limit specified by GB/T 26572.

X: Indicates that the content of the toxic and hazardous substance exceeds the limit specified by GB/T 26572 in at least one homogeneous material of the component.

The information in this table is provided to suppliers in the form of data and testing results that comply with RoHS environmental requirements.



## IC regulatory conformance

This device complies with CAN ICES-003 (B)/NMB-003(B) and CAN RSS-216 / CNR-216.

This device contains licence-exempt transmitter( s) /receiver( s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme CAN ICES-003 (B)/NMB-003 (B) et CAN RSS-216 / CNR-216.

Cet appareil contient des émetteurs / récepteurs exempt (s) de licence qui sont conformes aux RSS exemptes de licence d'Innovation, Sciences et Développement économique Canada. Son fonctionnement est soumis aux deux conditions suivantes:

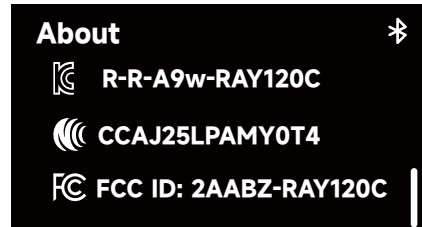
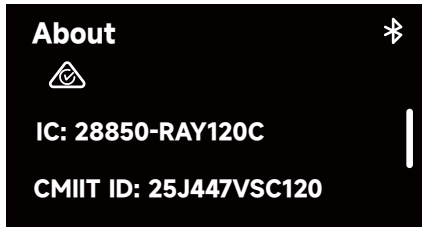
- (1) Cet appareil ne doit pas provoquer d'interférences.
- (2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition aux radiations de la IC définies pour un environnement non contrôlé.

# Certification Information

Rotate the knob and press the confirm button to enter the “About” menu from the main screen. In this menu, rotate the knob to view the electronic label and certification numbers. This product has been certified by the following regulatory bodies: FCC, IC, KCC, RCM, NCC, and SRRC.



# FCC

FCC regulatory conformance:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

## WARNING

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

## NOTICE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

**UL**

NOT FOR RESIDENTIAL USE

NON DESTINÉ À UN USAGE DOMESTIQUE

Notice: This control circuit is not isolated – see installation instructions.

Note: ce circuit de commande n'est pas isolé - voir les instructions d'installation.

# CSA

NOT FOR HOUSEHOLD USE

NON DESTINÉ À UN USAGE DOMESTIQUE

DISCONNECT POWER BEFORE SERVICING

COUPER L'ALIMENTATION AVANT L'ENTRETIEN

# Important Safety Instructions

When using the amaran Ray 120c, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions before using.
2. Close supervision is necessary when any fixture is used by or near children. Do not leave the fixture unattended while in use.
3. Care must be taken as burns can occur from touching hot surfaces.
4. Do not operate the fixture if any power cable is damaged, or if the fixture has been dropped or damaged, until it has been examined by qualified service personnel.
5. Position any power cables such that they will not be tripped over, pulled, or come into contact with hot surfaces.
6. Always unplug the fixture from the power outlet before cleaning, servicing, or when not in use. Never pull on the power cord to unplug from the outlet.
7. Allow the fixture to cool down completely before storing. Unplug all cables and store them properly. If a carrying case is used, place cables in their designated compartments.
8. Do not immerse the fixture in water or any other liquid to avoid electric shock.
9. Do not disassemble the fixture to avoid the risk of fire or electric shock. For service, contact [cs@aputure.com](mailto:cs@aputure.com) or consult qualified service personnel. Improper reassembly may result in electric shock when the fixture is in use.
10. Using any accessory not recommended by the manufacturer may increase the risk of fire, electric shock, or personal injury.
11. Power this fixture only by connecting it to a properly grounded outlet.
12. Do not block the ventilation openings. Do not look directly at the LED light source when it is powered on, and never touch the LED emitters under any condition.
13. Do not place the fixture near flammable materials or volatile solvents, as this may cause damage.
14. Use a soft, dry cloth to clean the device.
15. When operating in humid or wet environments, ensure that all ports and plugs are completely dry to avoid short circuits or electric shock.

16.All service and maintenance should be performed by authorized personnel only. Any malfunctions caused by unauthorized disassembly are not covered under warranty and may result in repair costs borne by the user.

17.This product is certified by RoHS, CE, KC, PSE, and FCC. Please operate the product in full compliance with the regulations of your country or region. Malfunctions caused by improper use are not covered under warranty and may result in repair costs borne by the user.

18.This User Manual is based on extensive testing conducted by the company. Design and specifications are subject to change without prior notice.

# Disclaimer

Before using this product, please read the product manual to ensure correct use under the complete understanding. After reading, please keep the product manual properly for future reference. In case of not operating this product correctly, it may seriously harm yourself or others, or result in product damage and property loss. When using this product, it shall be deemed that you have understood, recognized and accepted all clauses and contents of this document. The user commits to be responsible for their own behaviors and all consequences thereof, amaran shall not be liable for any loss due to the user who does not use this product in accordance with the product manual.

Under the laws and regulations, our company holds the final explanation right of this document and all related documents of this product. No prior notice will be given for any update, revision or termination. Please visit the official amaran website for the latest product information.