

# OLED VIEWFINDER

Operating Instructions

DVF-EL200

Before operating the unit, please read this manual thoroughly and retain it for future reference.

# Overview

The DVF-EL200 is a 0.7-inch OLED color viewfinder that can be used with PMW-F5/F55 CineAlta cameras (version 6.00 and later).

It employs an OLED that features 1920×1080×RGB pixels and maximum brightness of 200 cd/m<sup>2</sup> for significantly improved resolution and brightness in comparison with the DVF-EL100.

This unit has the following features.

## Built-in OLED panel

The OLED (organic light-emitting diode) panel makes use of organic material that emits light when an electric current is applied. The organic material of the panel is self-emitting, and its luminance level can be controlled by the amount of electric current applied.

These properties bring about the following three features.

- Quick motion picture response

The luminescent state of the OLED panel can be changed instantaneously by changing the current flow in the organic material.

This enables quick motion picture response and image production with minimal blurring and ghosting. Furthermore, the panel's performance is unaffected by changes in ambient temperature, allowing shooting in outdoor locations.

- High contrast ratio and dynamic range

The OLED panel does not emit light when a black level signal is applied, enabling a pure black screen to be displayed. In addition, the panel's high peak brightness and ability to display brilliant whites in specific portions of the screen produce dazzling displays of glittering nighttime illuminations and stars, sparkling jewelry and glass, etc.

- Rich color reproduction

An OLED panel's self-luminescence also allows for great color reproduction across the entire spectrum in practically any shade or brightness.

## High-performance loupe

The 4-group 5-element lens (including aspheric lens) produces pictures with low distortion while allowing adjustment over a wide range of visibility.

## FOCUS MAG function

You can magnify the height and width of the image (2×) for easier focus adjustment.

## False color function

Display signal levels using different colors. When you use the false color function, image signals are displayed in black and white, and colors are added based on the signal levels.

*For details on which cameras and camcorders can be connected to the unit, refer to the operating instructions for each device.*

# Precautions

## Condensation

If the unit is suddenly taken from a cold to a warm location, or if ambient temperature suddenly rises, moisture may form on the outer surface of the unit and/or inside of the unit. This is known as condensation. If condensation occurs, turn off the unit and wait until the condensation clears before operating the unit. Operating the unit while condensation is present may damage the unit.

## OLED panel

The OLED panel fitted to this unit is manufactured with high precision technology, giving a functioning pixel ratio of at least 99.99%. Thus a very small proportion of pixels may be “stuck”, either always off (black), always on (red, green, or blue), or flashing. In addition, over a long period of use, because of the physical characteristics of the organic light-emitting diode, such “stuck” pixels may appear spontaneously.

These problems are not a malfunction. These phenomena have no effect on the recorded image or image output of the camcorder.

## OLED display

Due to the characteristics of the material used in the OLED panel, permanent burn-in or reduction in brightness may occur.

When still images are displayed in the same position on the screen continuously or repeatedly, permanent burn-in may occur.

These problems are not a malfunction.

Images that may cause burn-in

- Character or message displays that indicate settings or the operating state
- On-screen displays such as center markers or safety zones
- Color bars or images that remain static for a long time

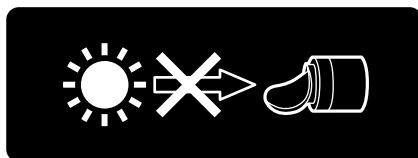
To reduce the risk of burn-in

- Use with the eye sensor setting set to ON. This unit has an anti-burn-in function for the OLED panel.
- Turn off text character display and marker display

## Eyepiece lens

Do not leave the eyepiece lens facing toward a strong light source, such as sunlight.

Burnout of the OLED panel or fire may occur if the lens focuses the sunlight or other strong light source.



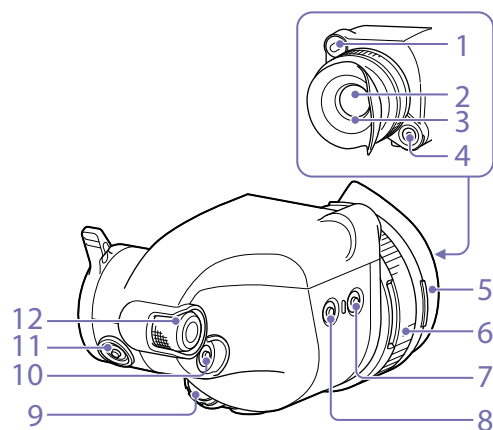
## Handling and maintenance of the eyepiece lens

The surface of the eyepiece lens is specially coated to reduce image reflection. Make sure to observe the following points as improper maintenance procedures may impair the eyepiece lens's performance. In addition, the eyepiece lens is vulnerable to damage. Do not scratch or knock against it using a hard object.

- Be sure to turn off the power of the connected equipment before performing maintenance.
- The surface of the eyepiece lens is specially coated. Do not attach adhesive objects, such as stickers, on it. Do not touch the eyepiece lens directly.
- Wipe the eyepiece lens surface gently with a soft dry cloth to remove dirt.
- Stubborn stains may be removed with a soft cloth slightly dampened with a mild detergent solution.
- The eyepiece lens may become scratched if a cloth is dusty.

- Never use strong solvents such as alcohol, benzene, thinner, acidic or alkaline detergent, detergent with abrasives, or chemical wipe as these may damage the eyepiece lens.
- Use a blower to remove dust from the eyepiece lens surface.

# Name and Function of Parts



## 1. Eye sensor

Controls the anti-burn-in function of the OLED panel.

### [Notes]

- Do not cover or block the eye sensor.
- To prevent screen burn-in of the OLED panel, the video signal level in the display may be inverted or the image may not be displayed when your eye is not in contact with the eyecup.

## 2. Tally indicator

This is located at the top of the unit's internal screen.

This lights or blinks red or turns off according to the situation.

Lit: The camera/camcorder is recording.

Blinking: An error or warning has occurred.

*For details on the status of the indicator, refer to the operating instructions for your camera/camcorder.*

## 3. Thread groove (ø30)

Use to attach a commercial MC filter for lens protection or a commercial close-up lens for diopter correction.

## 4. C/Display button

Displays markers and text information.

The display switches between display and hide with each press of the button.

## 5. Eyecup

Blocks external light while you are shooting.

Over time the eyecup may become cracked. If this occurs, it should be exchanged.

## 6. Diopter adjustment ring

Turn the ring to adjust the diopter so that the image is clearly visible.

## 7. B/False Color button

When using the PMW-F5/F55 (version 6.00 or later), press to switch the image to false color display. This does not affect the camera's output signal.

The display switches between false color display and normal display with each press of the button.

### [Note]

This function is enabled only when the gamma setting of the PMW-F5/F55 is set to S-Log2.

## 8. A/Focus Mag button

Magnifies the image for easier focus adjustment.

This does not affect the camera's output signal.

The display switches between magnified display and normal display with each press of the button.

## 9. VF connector (26-pin round type)

Connect to the VF connector on the camera using the VF connection cable supplied with the CBK-55AT attachment kit (sold separately).

## 10. Cancel/Back button

Go back one level in the hierarchy. Unconfirmed changes are canceled.

## 11. Menu button

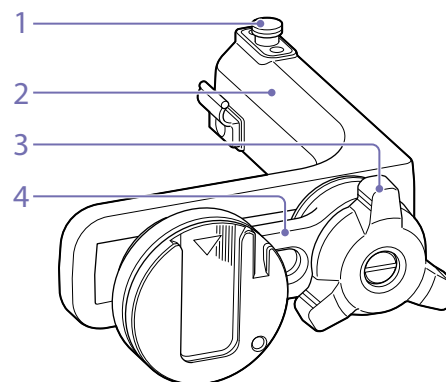
The menu switches between display and hide with each press.

## 12. SEL/SET (Enter) dial

Turn to select a menu item or setting. Press to confirm the selected item.

## CBK-55AT Attachment Kit (sold separately)

The CBK-55AT is required to attach the unit to a PMW-F5/F55. The VF connection cable is supplied with the CBK-55AT.



## 1. Slide stopper

Prevents the unit from detaching from the camera when sliding it left and right.

## 2. L-arm

Attach this to the viewfinder shoe of the camera. You can also slide the unit forward, backward, left, and right to adjust its position.

## 3. Arm lock knob

Use this when adjusting the forward/backward position and height of the unit.

## 4. Rotation arm

Rotate the arm to adjust the position of the unit.

# Attachment and Adjustment

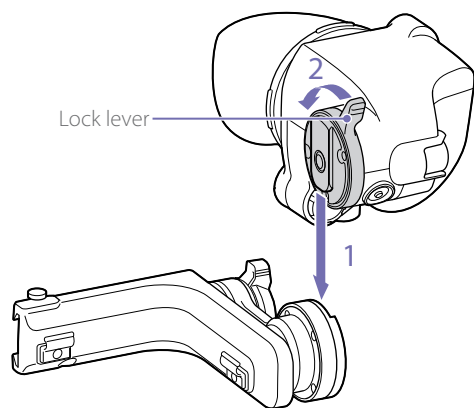
## Attaching the Viewfinder to a Camera

### [Notes]

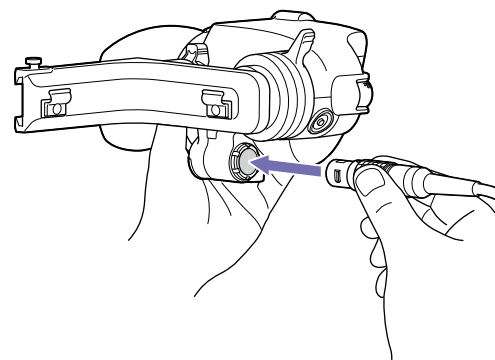
- Do not leave the eyepiece lens facing toward the sun when the viewfinder is attached. Direct sunlight may enter and focus within the eyepiece lens, resulting in fire.
- Depending on the version of your PMW-F5/F55, an image may not be displayed. In such cases, contact a Sony service representative.

1 Attach the unit to the CBK-55AT attachment kit (sold separately).

- Align the shoe of the unit with the rotation arm of the CBK-55AT attachment kit (sold separately), and attach the unit.
- Turn the lock lever in the LOCK direction to secure the unit.

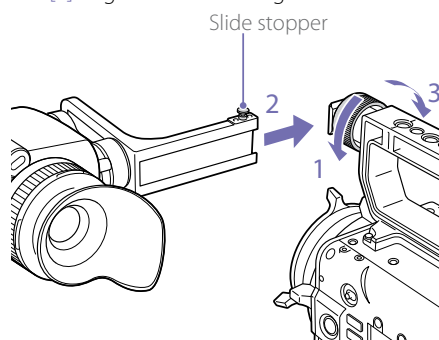


2 Connect the cable to the unit. Insert the round-type connector of the VF connection cable supplied with the CBK-55AT attachment kit (sold separately) to the VF connector of the unit. Hold the connector with the guide mark (red) at the top, and then fully insert the connector.

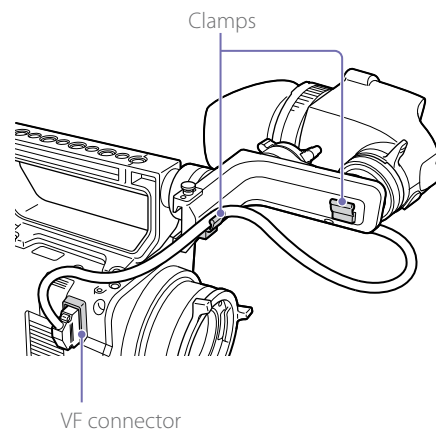


3 Attach the unit to a camera.

- Loosen the lock ring on the camera's viewfinder shoe.
- Align the groove in the L-arm of the unit with the viewfinder shoe, and attach the unit by sliding it horizontally. The slide stopper lowers automatically.
- Tighten the lock ring.



4 Connect the cable to the camera. Connect the 26-pin round type connector of the VF connection cable connected to the unit in step 2 to the camera's VF connector. Verify the orientation of the connector, and insert it until it clicks into place. Secure the cable with the clamp if necessary.



### [Notes]

- Always turn off the camera before connecting the cable to the connector on the camera. If you make the connection while the camera is on, the viewfinder may not function properly.
- Fully insert the cable connector into the VF connector and make sure it is secure. If the connector is not firmly connected, the image may be distorted and the tally indicator may not light properly.

## To detach the viewfinder

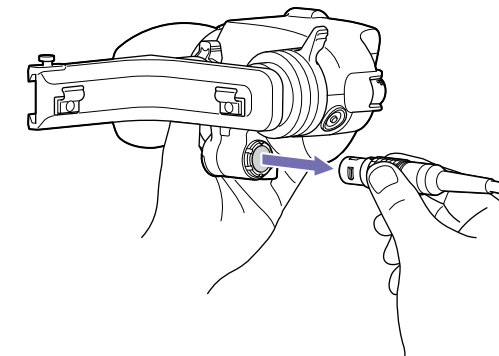
1 Remove the VF connection cable from the clamp, and disconnect the connector from the camera's VF connector. Pull the connector straight out while pressing the lock release button on the side of the connector.

### [Note]

Forcibly pulling the connector without pressing the lock release button may damage the connector.

- Loosen the lock ring on the camera's viewfinder shoe.
- Slide the unit in the opposite direction from when you attached it, and raise the slide stopper to detach it.

4 Disconnect the connector from the VF connector of the unit. Hold the center of the connector as shown in the following diagram, and pull the connector straight out.



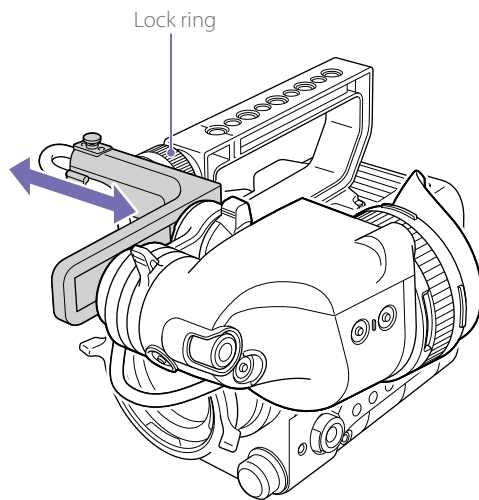
5 Turn the lock lever of the unit in the opposite direction of LOCK, and remove the unit from the CBK-55AT attachment kit (sold separately).

## Adjusting the Position

### [Note]

Rotating the unit too far in a single direction while adjusting its position and angle may pull the VF connection cable and result in disconnection.

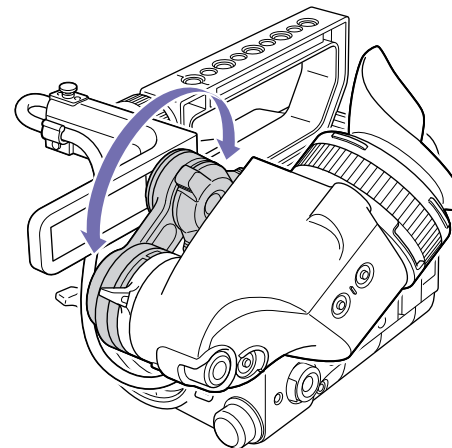
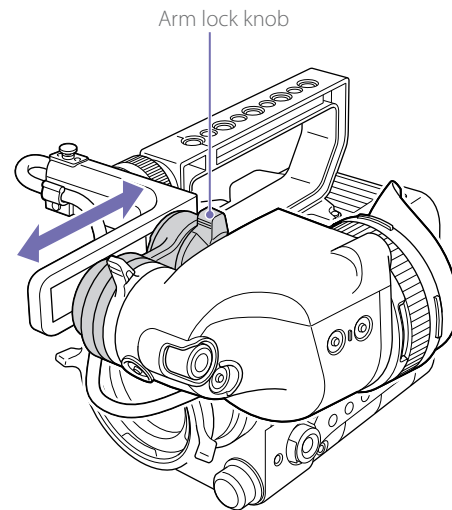
### To adjust the left/right position



Loosen the lock ring on the camera's viewfinder shoe, and slide the unit left or right to adjust its position.

When you finish adjustment, tighten the lock ring to secure in position.

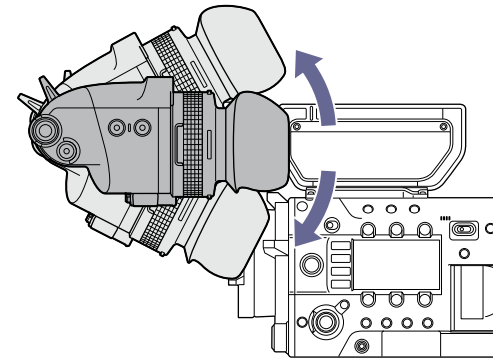
### To adjust the forward/backward position and height



Turn the arm lock knob of the unit in the opposite direction of LOCK, then slide the unit forward or backward and rotate the rotation arm to adjust its position.

When you finish adjustment, turn the arm lock knob in the LOCK direction.

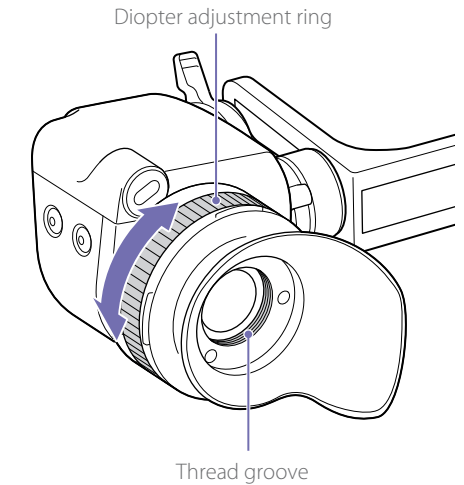
### To adjust the angle



Hold the unit and adjust its angle.

## Adjusting the Focus

Turn the diopter adjustment ring until the image is sharpest for your eyesight.



### [Note]

The scale on the diopter adjustment ring is an indicator only. It does not represent a diopter measurement.

### To shift the diopter range in the far-sighted direction

Mount a commercial close-up lens ( $\varnothing 30$ ) to the thread groove of the eyepiece lens.

## Adjusting the Screen

*For details about menu operations, see "Menu Operation" (page 8).*

### To sharpen edges of images

Adjust the peaking value in [PEAKING] in the basic menu.  
Increasing the value makes edges easier to discern.

#### [Note]

The detail setting for the PEAKING function is set on the camera. For details about configuration, refer to the operation manual of the camera.

### To adjust the contrast and brightness of the screen

- 1 Set [PRESET] (page 9) to OFF in the basic menu.
- 2 Set the contrast value in [CONTRAST] (page 9).  
Increasing the value increases the contrast of the screen.
- 3 Set the brightness value in [BRIGHTNESS] (page 9).  
Increasing the value increases the brightness of the screen.

#### [Note]

You can set the contrast and brightness of the screen to fixed preset values by setting [PRESET] to ON in the basic menu or setup menu. The preset values can be set using [PRESET] (page 10) in the setup menu.

## About the Eye Sensor

Controls the anti-burn-in function of the OLED panel.

*For details about menu operations, see "Menu Operation" (page 8).*

Set [EYE SENSOR] to ON using [OLED] in the setup menu.

#### [Notes]

- Use with the [EYE SENSOR] setting set to ON.  
The OLED panel is more susceptible to burn-in when set to OFF.
- Do not cover or block the eye sensor. Attaching a commercially available eyecup may cover the eye sensor, depending on its size, and prevent the burn-in prevention function from operating. In this state, the OLED panel is more susceptible to burn-in.
- To prevent screen burn-in of the OLED panel, the video signal level in the display may be inverted or the image may not be displayed when your eye is not in contact with the eyecup.

# Menu Operation

Various settings of the unit can be configured in the basic menu and setup menu.

## [Note]

The viewfinder menu can be displayed at the same time as a picture or menu from the camera is being displayed on the viewfinder screen.

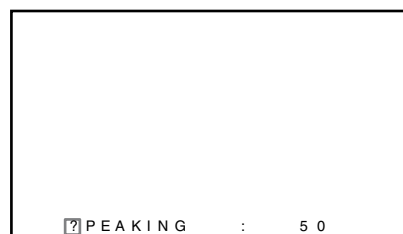
## Operation in the Basic Menu

- 1 Press the Menu button.  
Menu mode is invoked, and the menu appears on the viewfinder screen.

### Example:



- 2 With a "?" mark displayed to the left of the item name (page select mode), turn the SEL/SET (Enter) dial to select the menu page.  
The menu changes to another page.



? mark

- 3 Display the desired page, and press the SEL/SET (Enter) dial.  
A "?" mark appears to the left of the setting and the settings screen is activated (value setting mode).



- 4 Turn the SEL/SET (Enter) dial to change the value of the setting.  
If the setting is a numerical value, turn the dial clockwise to increase the value, and counterclockwise to decrease the value.  
Turning the dial quickly changes the value rapidly, and turning it slowly allows you to make fine adjustments.
- 5 Press the SEL/SET (Enter) dial to confirm the setting.  
The setting is entered and the menu returns to page select mode.  
If you press the Cancel/Back button before pressing the SEL/SET (Enter) dial, the setting returns to the value that was previously set and then the menu returns to page select mode.
- 6 Repeat steps 2 to 5 to set other menu items.

- 7 Exit menu mode.  
Press the Menu button.

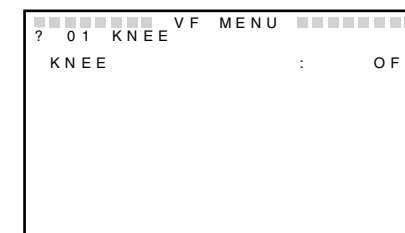
## [Note]

Changed values are saved, even if you exit menu mode before applying the changed values.

## Operation in the Setup Menu

- 1 Press and hold the SEL/SET (Enter) dial and press the Menu button.  
Menu mode is invoked, and the menu appears on the viewfinder screen.

### Example:



- 2 With a "?" mark displayed to the left of the page number (page select mode), turn the SEL/SET (Enter) dial to select the menu page.  
The menu changes to another page.



- 3 Display the desired page, and press the SEL/SET (Enter) dial.  
A "→" mark appears to the left of the menu item on the selected menu page (item select mode).  
– To select another menu page, press the Cancel/Back button to return to page select mode.

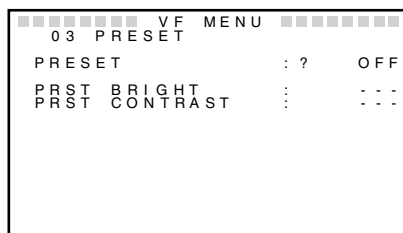


- If a “?” mark appears to the left of the setting (value setting mode), press the Cancel/Back button to change to item select mode. Press the Cancel/Back button again to change to page select mode.

- 4 Turn the SEL/SET (Enter) dial to select an item. To move the “→” mark downward, turn the dial clockwise. To move the “→” mark upward, turn the dial counterclockwise.



- 5 Move the “→” mark to the item you want to set, and press the SEL/SET (Enter) dial. A “?” mark appears to the left of the setting and the settings screen is activated (value setting mode).



To select another item, press the Cancel/Back button to return to item select mode.

- 6 Turn the SEL/SET (Enter) dial to change the value of the setting. If the setting is a numerical value, turn the dial clockwise to increase the value, and counterclockwise to decrease the value. Turning the dial quickly changes the value

rapidly, and turning it slowly allows you to make fine adjustments.

- 7 Press the SEL/SET (Enter) dial to confirm the setting. The setting is entered and the menu returns to item select mode. If you press the Cancel/Back button before pressing the SEL/SET (Enter) dial, the setting returns to the value that was previously set and then the menu returns to item select mode.

- 8 Repeat steps 2 to 7 to set other menu items.

- 9 Exit menu mode. Press the Menu button.

**[Note]**

Changed values are saved, even if you exit menu mode before applying the changed values.

### To restore a setting to its factory default value

Position the “→” mark to the left of the desired menu item, or while the “?” mark appears to the left of the menu item to be restored, press the SEL/SET (Enter) dial for three seconds or more.

## Menu List

### Basic menu

Default values are shown underlined and in **bold** text.

Item	Settings	Description
BRIGHTNESS	–99 to <u>0</u> to 99	Adjusts the brightness of the screen.  <b>[Note]</b> Cannot be set when [PRESET] is set to ON.
CONTRAST	–99 to <u>0</u> to 99	Adjusts the contrast of the screen.  <b>[Note]</b> Cannot be set when [PRESET] is set to ON.
PEAKING	0 to <u>50</u> to 99	Enhances the edges of images.
PRESET	ON/ <u>OFF</u>	Selects whether to enable the settings of [BRIGHTNESS] and [CONTRAST] in the basic menu or the preset values set using [PRST BRIGHT] and [PRST CONTRAST] in the setup menu. ON: Enable the preset value set in the setup menu. OFF: Enable the value set in the basic menu.  <b>[Note]</b> The [PRESET] setting in the basic menu and setup menu are linked. When the [PRESET] setting is changed in one menu, it also changes in the other menu.

## Setup menu

Default values are shown underlined and in **bold** text.

Page	Menu	Item	Settings	Description
01	KNEE	KNEE	ON/ <u>OFF</u>	Turns the function for compressing highlight areas on/off. ON: Compress highlights to prevent washed out highlights. OFF: Do not compress highlights.
02	TALLY	TALLY	<u>ON</u> /OFF	Turns the function for lighting the TALLY indicator during recording on/off. ON: Light TALLY indicator during recording. OFF: Do not light TALLY indicator during recording.
03	PRESET	PRESET	ON/ <u>OFF</u>	Selects whether to enable the settings of [BRIGHTNESS] and [CONTRAST] in the basic menu or the preset values set using [PRST BRIGHT] and [PRST CONTRAST] in the setup menu. ON: Enable the preset value set in the setup menu. OFF: Enable the value set in the basic menu.  [Note] The [PRESET] setting in the basic menu and setup menu are linked. When the [PRESET] setting is changed in one menu, it also changes in the other menu.
		PRST BRIGHT	-99 to <u>0</u> to 99	Sets the level for [BRIGHTNESS] used when [PRESET] is set to ON.
		PRST CONTRAST	-99 to <u>0</u> to 99	Sets the level for [CONTRAST] used when [PRESET] is set to ON.
04	OLED	EYE SENSOR	<u>ON</u> /OFF	Turns the function for preventing OLED panel burn-in on/off. Set to ON for normal operation. When set to OFF, the OLED panel is susceptible to burn-in. ON: Enable the OLED panel burn-in prevention function. OFF: Disable the OLED panel burn-in prevention function.

# Specifications

## General

### Power requirements

10.5 V to 17.0 V DC (supplied by the camera)

### Power consumption

Approx. 2.5 W

### Operating temperature

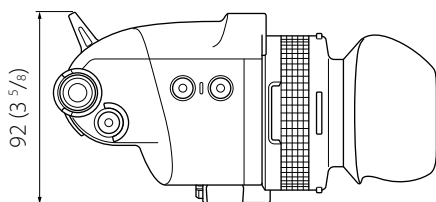
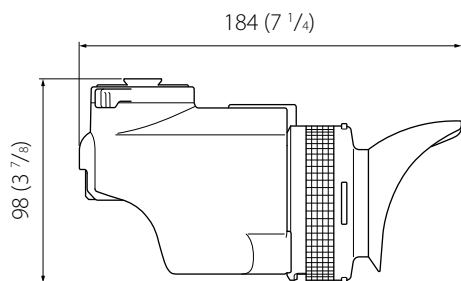
0 °C to 40 °C (32 °F to 104 °F)

### Storage temperature

-20 °C to +60 °C (-4 °F to +140 °F)

Mass Approx. 640 g (1 lb 6.6 oz) (main body)

### Dimensions



Unit: mm (inches)

Dimensions are approximate values.

### Bottom plate mounting screw size

1/4 inch diameter, 6 mm length or shorter

## Performance

Brightness 200 cd/m<sup>2</sup> (typical)

Resolution 1920×1080

Color temperature D65

## Colors and signal levels for false color display (during S-Log2)

Color display	Signal level
Red	105.4% or higher
Yellow	102.4% to 105.4%
Pink	41.3% to 45.3%
Green	30.3% to 34.3%
Blue	2.5% to 4.0%
Purple	0% to 2.5%

## Connector

VF connector LEMO 26-pin female (1)

## Supplied accessories

Before Using this Unit (1)

Operating Instructions (CD-ROM) (1)

## Related accessories

PMW-F5, PMW-F55 Solid-State Memory Camcorder

Design and specifications are subject to change without notice.

## Notes

- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.
- SONY WILL NOT BE LIABLE FOR CLAIMS OF ANY KIND MADE BY USERS OF THIS UNIT OR MADE BY THIRD PARTIES.
- SONY WILL NOT BE LIABLE FOR THE TERMINATION OR DISCONTINUATION OF ANY SERVICES RELATED TO THIS UNIT THAT MAY RESULT DUE TO CIRCUMSTANCES OF ANY KIND.