Two-In-One Non-Mydriatic and Mydriatic Fundus Cameras.

Kowa VX-10α
Kowa VX-10i
(With ICG function)
VX-10α / VX-10i, Two-In-One Non-Mydriatic and Mydriatic Fundus Cameras. Highly effective and ergonomically designed, the ideal tool for eye-care photography!

Various Photographic Modes

The easy to use navigation panel located at hand allows the selection of 3 modes (nonmydriatic / mydriatic / fluorescein) with just one touch switch for fast operations.

Mydriatic Photography

Mydriatic fluorescein angiography and mydriatic color photography are possible in this mode. In the mydriatic fluorescein mode, the fluorescein filter is inserted and removed electrically; in the mydriatic color mode, the use of optional filter enables red-free photography.

● 2 Optical Angles
In this mode, angles 50° and 30° are possible, directly selectable.

● Small Pupil Photography
For patient’s eye with insufficient pupillary dilatation, the built-in small pupil mode enables photography if the pupil diameter is more than ø4.0mm. (angle 45° or 27°)

Non-Mydriatic Photography

● 2 Optical Angles
In this mode, angles 45° and 27° can directly be selected, making enlargement fast and easy.

● Fixation Target Switching
3 fixation targets: 2 internal targets (posterior and central optic nerve head) and 1 external target (peripheral) are also selected in one touch switch, for easy guidance to the targeted area.

VX-10i’s ICG Angiography

● Optional ICG filter and KD-144IF
The VX-10i features almost all VX-10α functions; using the optional ICG filters enables ICG angiography. In ICG mode, LCD monitor observation of the retina is possible. In addition, the use of the optional 1.4 megapixel black and white CCD camera allows high-resolution ICG still image photography.

● 2 Optical Angles
The mydriatic mode enables 50° and 30° photography. The 30° angle is particularly effective for retinal disease diagnosis (50° angle only for ICG).
Non-myriatic color / mydriatic color / fluorescein angiography in just one camera VX-10i, featuring an optional ICG function, is adding enhanced capabilities to an already powerful fundus camera.

Simple operations

Multiple Step Flash, Matching Point Method, Long Eye Relief Design, all were meticulously elaborated to make the VX-10α/VX-10i the simplest thus most effective and accurate tools ever.

Multiple Step Flash for Various Photographic Modes

A wide range of light exposures assures proper exposure in every mode. Moreover, strobe light being extremely low when taking digital images, photophobia is significantly reduced.

LCD Observation Monitor

In the mydriatic color and FA modes, alignment and focusing adjustment are possible with the LCD monitor, reducing photophobia and making photography smoother.

Working Distance Guidance and Focus Detection Functions for Clear and Sharp Images

Alignment is made by simply adjusting the 2 right-and-left luminous spots with the joystick at hand; focusing adjustment is also easy with the point matching method.

Operationally Focused, Darkroom Adapted Navigation Panel

This navigation panel at hand has its buttons illuminated to allow quick and acute operations even in darkroom. Only usable switch buttons are illuminated according to each mode.

Clear Viewfinder with the Long Eye Relief Design

With a long eye distance, the clear viewfinder allows comfortable photography.
Both VX-10α and VX-10i can be linked to the advanced Kowa VK-2 Digital Imaging System, enabling all images taken to be saved and efficiently organized. Furthermore, the VK-2 system is especially designed to create an ideal and original clinical environment where all images can be shared anywhere as you wish through a LAN (Local Area Network).

**Comparison with Perimetry**

**Comparison Image Display**

**One Click Image Processing**

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**Adapted for the latest digital cameras**

- Adapted to the latest high resolution cameras for best detailed images possible
  - 2.1 megapixel digital color CCD camera, Kowa “KD-211C”
  - 2.1 megapixel x 3 (total 6.3 megapixel) CCD digital color camera, Kowa “KD-630C”
  - 1.4 megapixel B/W digital CCD camera, Kowa “KD-144iF” exclusively for iCG photography

**Examples of combinations with the VX-10α exclusive video adapter**

- Kowa KD-630C
  - Image size: 1600x1216 pixels
- Kowa KD-211C
  - Image size: 1600x1216 pixels
- Nikon Digital SLR Camera
Montage Function, enhanced with advanced algorithm to obtain panorama images that are easy to observe: automatic positioning with fine rotation adjustments and smoothing function.

Montage

Normal lens
Blue filter
Negative filter
Magnifying Glass

PDT area measurement

Sony analog 3CCD RGB color camera
Nikon Digital SLR camera

Example of combinations with the VX-10i exclusive video adapter
Adapted to KD-630C, KD-211C, Sony DXC-990 cameras and Nikon Digital SLR camera. In addition, one of those 4 can be fixed while the KD-144F is attached.

Kowa KD-144IF
Image size: 1344x1024 pixels

With KD-144IF + Nikon

Created to be easier, and more user-friendly

VX-10 α exclusive options
Video Adapters (For KD-630C, DXC-990)
With KD-630C
With DXC-990

Video Adapter (For KD-211C)

Video Adapter (For Nikon Digital SLR Camera)

VX-10i exclusive options
Video Adapters (For KD-144IF,KD-630C,DXC-990)
With KD-144IF + KD-630C
With DXC-990

Video Adapters (For Nikon Digital SLR Camera)

Video Adapters (For KD-144IF, KD-211C)

ICG Filter

VX-10 α / VX-10i Common Options
Green Filter
Manual setting of this filter in the mystic color mode allows red-free photography to obtain high contrast fundus blood vessels and retina.

Internal Fixation Device

Digital Imaging System Kowa VK-2

35mm Camera Back
<table>
<thead>
<tr>
<th>Photographic Angles</th>
<th>50° - 30° (Small pupil mode: 45° - 27°) (VX-10i: 50° for ICG(option))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Distance</td>
<td>39mm (between objective lens and cornea)</td>
</tr>
<tr>
<td>Minimum Pupil Diameter</td>
<td>Non-Mydriatic mode: 4 mm, Mydriatic mode: 5.5 mm (small pupil mode 4 mm)</td>
</tr>
<tr>
<td>Focusing Luminescence</td>
<td>Point Matching Method (ON/OFF switch)</td>
</tr>
<tr>
<td>Diopter Compensation Range (Patient's Eye)</td>
<td>-12D + 13D&lt;br&gt;+10D + 35D (with + compensation lens)&lt;br&gt;-10D - 32D (with - compensation lens)</td>
</tr>
<tr>
<td>Diopter Adjustment Range</td>
<td>-8D + 8D</td>
</tr>
<tr>
<td>Internal Fixation Target</td>
<td>4 fixed dots right or left eye switching (Non-Mydriatic mode)</td>
</tr>
<tr>
<td>Flash Compensation</td>
<td>± 3 steps</td>
</tr>
<tr>
<td>Amount of Exposure</td>
<td>0.6WS - 300WS 19 steps Proper exposure automatically set, based on angle of field and film sensitivity</td>
</tr>
<tr>
<td>Filter</td>
<td>Barrier filter, excitic filter electronic powered insertion</td>
</tr>
<tr>
<td>ICG Function</td>
<td>Option for VX-10i only</td>
</tr>
<tr>
<td>Monitor</td>
<td>5.5 inch, LCD monitor</td>
</tr>
<tr>
<td>Dimensions</td>
<td>400(W) x 520(D) x 420(H) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>35.5Kg/78lbs</td>
</tr>
</tbody>
</table>

*1 When using 35mm film, OD  *2 Without video adaptor

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Distribution name: KOWA VX-10α
Distribution name: KOWA VX-10β

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