PENTAX ▶ Optio W90

OPTIO W90	**Black**	16412
Barcode		0027075164109
OPTIO W90	**Black/Pistachio**	16427
Barcode		0027075164246
Dimensions		10.7 x 5.9 x 2.5 cm
Weight (unloaded)		144 g

THE WATERPROOF CROSSOVER

∗ **12.1 Megapixel** CCD sensor

∗ **Waterproof** to 6 m, **shockproof** to 1.2 m, **coldproof** to -10°C

∗ **Wide angle 5x** optical zoom (equ. to **28**-140mm in 35mm)

∗ Video recording in **HDTV** compatible (1280x720 pixels, **30 fps**)

∗ **Micro-HDMI output**

∗ **2.7'' 16:9 LCD** monitor, 230 000 dots

∗ **3 LED** for macro and underwater photography

∗ 1cm macro, underwater photo and underwater movie modes

∗ Optional **60m waterproof housing** available in June 2010

∗ Face recognition, Smile capture and Blink detection modes

∗ Sensitivity up to **ISO 6400**

SUPPLIED ACCESSORIES	Art No.
AV cable I-AVC7	39552
USB cable I—USB7	39551
AC cable D-CO24E	39256
Battery charger D-BC88	39775
Li-ion battery D-LI88	39774
Carabiner strap O-ST103	39861
Strap O-ST104	39857
Software S-SW102	39855

OPTIONAL ACCESSORIES	Art No.
Black neoprene pouch	50242
Green neoprene pouch	50241
Waterproof remote control O-RC1	39892
Waterproof housing (up to 60m)	50243
Sport strap O-ST81	39457
Floating strap	50195
AC adapter kit K-AC88E	39789
Battery charger kit K-BC88E	39778

Neoprene case   Neoprene case

Waterproof remote control   Waterproof housing   Sport strap

Floating strap   AC adapter kit   Battery charger

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CCD SENSOR

Number of pixels	Approx. 12.1 megapixels - effective
Sensor size	1/2.3'' CCD
Colour depth	12 bits x 3 colours
Image size	12M (4000x3000), 10.7M (3:2) (4000x2672), 9M (16:9) (4000x2256), 9M (1:1) (2992x2992), 7M (3072x2304), 5M (2592x1944), 3M (2048x1536), 2.1M (16:9) (1920x1080), 1024 (1024x768), 640 (640x480 pixels), 3 Quality levels of JPEG (good, better, best)

LENS

Focal length	PENTAX 5 - 25mm, equ. to 28-140mm in 35mm
Aperture	f/3.5 - 5.5
Construction	11 elements in 9 groups (5 aspherical elements)
Optical zoom	5x
Digital zoom	Approx. 6.25x
Intelligent zoom	Approx. 6.5x at 7M, approx. 31.3x at 640 (including optical zoom)

LCD SCREEN

Type	2.7'' (6.86cm) colour LCD, approx. 230k dots, extra wide angle viewing, with AR coating

FILE FORMATS

Photo format	JPEG (Exif 2.2), DCF 2.0, DPOF, PRINT Image Matching III
Video format	AVI (Motion JPEG)
Sound format	WAV (PCM), mono

MEMORY

External memory	Compatible with SD, SDHC, and Eye-Fi* cards
Internal memory	approx. 26.7 MB

FOCUSING

Autofocus	TTL Contrast detection Autofocus system
Focus options	Manual focus, Infinity-landscape, Pan focus
AF points	Multi-AF 9 points zone, Spot AF, Auto-tracking AF (anticipating moving subject)
Normal	0.5m - infinity (whole zoom area)
Macro	0.1m - 0.6m (whole zoom area)
1cm Macro	0.01m - 0.30m (middle zoom position) Special Macrolight (3 LED at front) AF assist lamp

EXPOSURE CONTROL

TTL Metering modes	Multi-segment metering, Centre-weighted metering, Spot metering
System	Program controlled electronic auto exposure with electronic shutter with CCD
Shutter speeds	1/1500 - 1/4 sec. 4 sec max. (Night Scene mode)
Sensitivity range	ISO auto, 80, 100, 200, 400, 800, 1600, 3200, 6400
Scene modes	Auto Picture, Program, Night Scene, Night Scene Portrait, Half-length Portrait, Movie, Underwater photo, Underwater movie, Landscape, Flower, Portrait, Digital Microscope, Digital Wide, Digital SR, Surf & Snow, Kids, Pet, Sport, Fireworks, Candlelight, Text, Food, Digital Panorama, Frame composite, Report, Green
Exposure compensation	± 2EV (1/3EV steps)

SOFTWARE

	Arcsoft Media Impression 2.0 for PENTAX

FLASH

Built-in flash	Integrated auto flash control
System	Automatic activation in low light conditions
Flash modes	Flash-on and Flash-off modes. Soft flash
Other	"Red-eye" reduction function
Flash range	Wide: approx. 0.3 - 3.9m (ISO Auto) Tele: approx. 0.3 - 2.5m (ISO Auto)

VIDEO

Movie	"Shake reduction" - stabilized video with sound
Duration	Depends on memory card capacity
Resolution	HDTV (1280x720), 30fps VGA (640x480) 30fps ; QVGA (320x240), 30 fps
Video Editing	Yes

POWER SUPPLY

Battery	Rechargeable D-LI88 Lithium-ion battery
Capacity	Approx. 205 shots and 250 min in play mode
Other sources	Optional AC adapter kit

INTERFACES

Video output	Micro-HDMI, PC/AV terminal (PAL/NTSC, mono)
USB	USB 2.0 (Hi-Speed) and AC power input

RECORDING PARAMETERS

Drive modes	One shot, Self-timer (2 or 10 sec), Continuous shooting (2.7 fps), High-speed continuous shooting (5 fps at ISO 3200 / 6400 setting) for up to 6 frames, Burst shooting, IR Remote Control, Interval shooting, Auto bracket
White balance	Auto, Daylight, Shade, Tungsten, Fluorescent, Manual setting
DRE	Dynamic Range Enlargement

OTHER FEATURES

World time	75 cities, 28 time zones
Languages	English, French, German, Spanish, Portuguese, Italian, Dutch, Japanese, Danish, Swedish, Finnish, Polish, Czech, Hungarian, Turkish, Greek, Russian, Thai, Korean, Simplified Chinese, Traditional Chinese
Digital filters	B&W, Sepia, Colours (6), Extract colour, Colour enhancement, Toy camera, Retro, High contrast, Starburst, Soft, Fisheye, Brightness
Others	Pixel Track Shake Reduction. Noise reduction if shutter speed exceeds 0.25 sec., face recognition (detects up to 32 faces), Smile capture (smile detection and auto-picture) and Blink detection modes (eyes shut detection), Small face filter, Ink rubbing filter, Collage, Slideshow, Histogram, Bright and dark portion, Calendar, Resize, Cropping, Image rotation, Original frame, Frame composite, Movie edit, Subscreen input, Red-eye compensation, Voice recording, DPOF, Protect, Image recovery, Picture selection as Start image, Date printing, Pet recognition, Face close up playback, Eye-Fi* compatible

DIMENSIONS AND WEIGHT

Dimensions	107.5 × 59 × 25 mm (including lens depth)
Weight	144 g unloaded, 161 g loaded and ready
JIS Class	Equivalent to JIS Class 8 waterproof and JIS Class 6 dustproof capabilities

SYSTEM REQUIREMENTS

Operating systems	PC: Windows XP SP2, Vista™ and 7 Mac: OS X 10.3.9 or above

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