

OLYMPUS

Your Vision, Our Future

*THE LOGICAL CONSEQUENCE OF
DIGITAL PHOTOGRAPHY.*

The new Olympus -System.



Fashion image taken with Olympus E-1
Photographer: Joachim Baldauf

PROFESSIONALISM KNOWS NO

To date digital photography with professional SLR cameras has been a compromise between digital image recording and lenses designed for 35 mm cameras. In the new digital Olympus E-System, based on the innovative 4/3 Standard, Olympus has



Photographer: Kanjo Takeuchi



Photographer: Joachim Baldauf



Photographer: Kanjo Takeuchi

- The Olympus E-System is the first professional digital SLR system designed fully from scratch for digital photography.
- The lenses are designed specifically for digital technology, thus allowing the image sensor's potential to be fully exploited. On top of this the lenses are smaller, lighter and brighter, making the camera system as a whole more compact, more stable and easier to use.
- Thanks to a unique information exchange system lenses give shading and distortion information to the body. Based on this information the camera and the application software can precisely compensate for any shading and distortion.

COMPROMISE.

combined its outstanding expertise in the fields of digital photography and optoelectronics and is setting new standards in the world of professional photography.



Photographer: Joachim Baldauf



Photographer: Stefan Schütz



Photographer: Jo van den Berg

- The new 4/3 standard ensures optimum image quality, camera formats and system versatility, and as an open standard offers entirely new opportunities for manufacturers and photographers all over the world.
- The Olympus Global Professional Service with its worldwide organisation is offering the professional photographer the very highest standards of reliable and efficient service and support.

THE FIRST



OLYMPUS **E-1** DIGITAL SLR Camera

- 4/3 type Full Frame Transfer CCD specifically designed for still image capture (effective 5 Megapixels)
- Light and strong splashproof magnesium alloy body
- Innovative Anti-Dust Function using a Supersonic Wave Filter (SSWF)

All ZUIKO DIGITAL lenses are splashproof

ZUIKO DIGITAL 11-22 mm f2.8-3.5
(w/o figure)
Lens available approx. end 2003



ZUIKO DIGITAL 14-54 mm f2.8-3.5

- 4x zoom lens
- 3 aspherical lens elements
- Inner focus with floating mechanism



Tele Converter EC-14

- Increases the focal length by a factor of 1.4x

FULLY DIGITAL SLR SYSTEM.



Electronic Flash
FL-50

- Quick return mirror type bright & precise optical viewfinder with full photographic information
- TTL phase difference detection type quick & precise AF System with practical 3 points AF area
- TTL multi-pattern light metering system for P/A/S/M exposure mode
- Focal plane shutter with shutter speed 1/4000 to 60 sec and bulb

- GN 50 high power TTL clip-on flash dedicated for Olympus E-System
- Full range shutter speed synchronisation for FP Flash
- Wide angle light distribution, up to 8 mm at Four Thirds System with auto zoom function
- Angle free flash head



ZUIKO DIGITAL ED 50 mm Macro f2.0

- 1 ED lens element
- Floating focusing mechanism
- Magnification up to 1/1.9



- High sensitivity. ISO 100 up to 3200
- 3 frames per second up to 12 frames sequential shooting for each image quality mode (TIFF, JPEG, RAW)
- High-speed PC interface, USB2.0 & IEEE1394 for both Windows and Mac users



ZUIKO DIGITAL ED 50-200 mm f2.8-3.5

- 4x telephoto zoom lens
- 3 ED lens elements
- Inner focus mechanism



- New professional image browsing application software, "Olympus Viewer" bundled, optional "Olympus Studio 1.0" Software including camera control and image capture from PC (for Win & Mac)
- Storage Medium: CompactFlash (Type I and II)/Microdrive/ xD-Picture Card (in connection with CF-Adapter)
- Firmware update via Internet



ZUIKO DIGITAL ED 300 mm f2.8

- 3 ED lens elements
- Inner focus with floating mechanism
- Focus range limit function for more quick focusing
- Internal filters

FOCUS NOT COMPROMISE.

Why it makes sense to
think the fundamental
change in photography
rigorously through to
the end.

Most previous system cameras for digital photography are designed to allow the continued use of the lenses originally designed for 35 mm cameras. This does have economic advantages for the photographer, but he has to pay through loss of image quality.

This disadvantage cannot be compensated for by using larger sensors and more pixels.

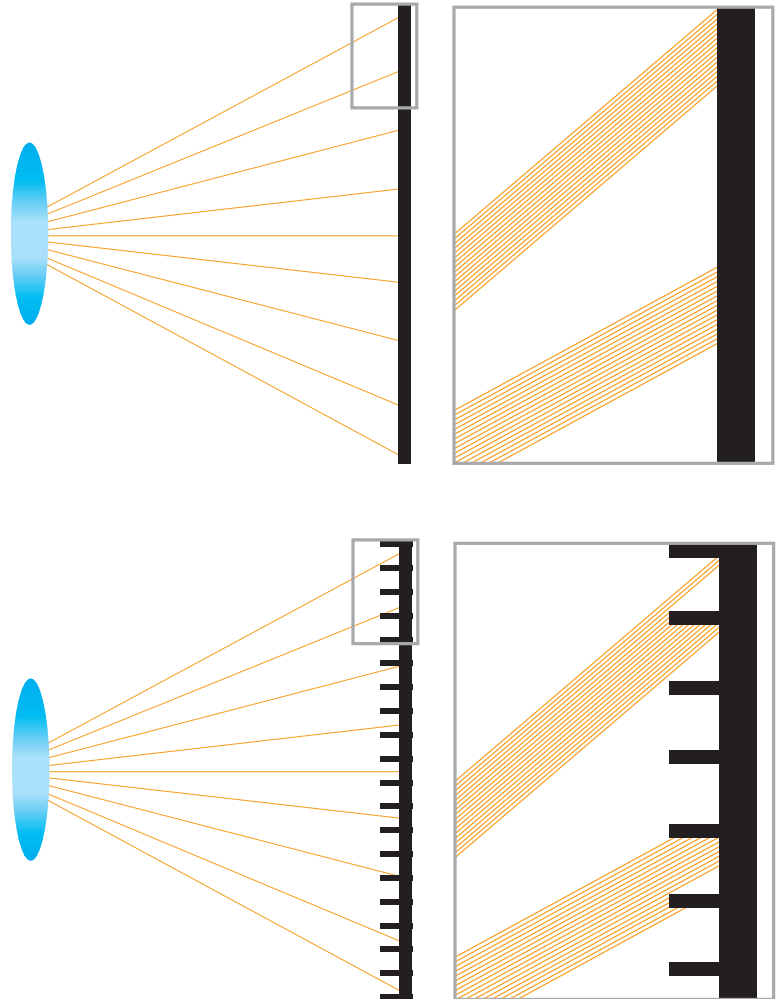
Only the use of lenses specially designed for digital photography allows their potential quality to be fully exploited.



You can't fool light.

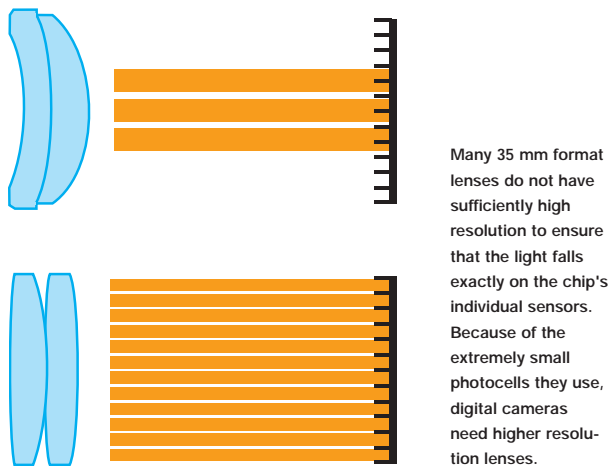
Most lenses used for 35 mm film cameras are not necessarily designed so that light hits the film from only straight ahead. This is because film can be exposed by light coming from oblique angles. The image sensor used in a digital camera is essentially a chip with pixels laid out at regular intervals on a grid, with photodiodes in the depressions inside the pixels.

This means that light cannot reach the photodiodes effectively unless it comes straight through the lens. That in turn means that if a 35 mm film camera lens is attached to a digital camera, insufficient light at the periphery of the image sensor can result in a dim image with inaccurate colour reproduction. These problems tend to become even worse with wide-angle lenses.



The multi-megapixel misunderstanding.

Another problem is the question of resolution. It is generally accepted that in lenses for 35 mm film cameras a resolution of some 10 micrometers is normally sufficient to achieve optimum results from the film. However, with a CCD chip on which several million sensors have been placed, the gap between two pixels is only six micrometers or less. Thus the advantages of the higher resolution of a chip with however many million pixels simply do not come into play if using a 35 mm format lens, even one that achieves excellent results in 35 mm film photography. The Olympus E-1 achieves the ultimate in image quality by teaming a 4/3 type, 5-megapixel CCD that uses full-frame data transfer to ensure a wide dynamic range, with lenses that are specifically designed to maximise the performance potential of the CCD, and an ideally matched image processing system.



How big is a grain of dust in pixels?

One of image sensor's greatest enemies is superfine dust which can get inside the case when changing lenses and settle on the surface of the sensor. Even invisible particles can cause pixel failure and reduce image quality. Conventional cleansing methods are too crude and can damage the highly-sensitive sensor.

To counter this problem, Olympus developed a new Anti-Dust Function that uses a Supersonic Wave Filter (SSWF). Placed between the Olympus E-1's shutter unit and low-pass filter, the SSWF generates ultrasonic vibrations that instantly shake off most of the dust and debris whenever the Anti-Dust Function is on.

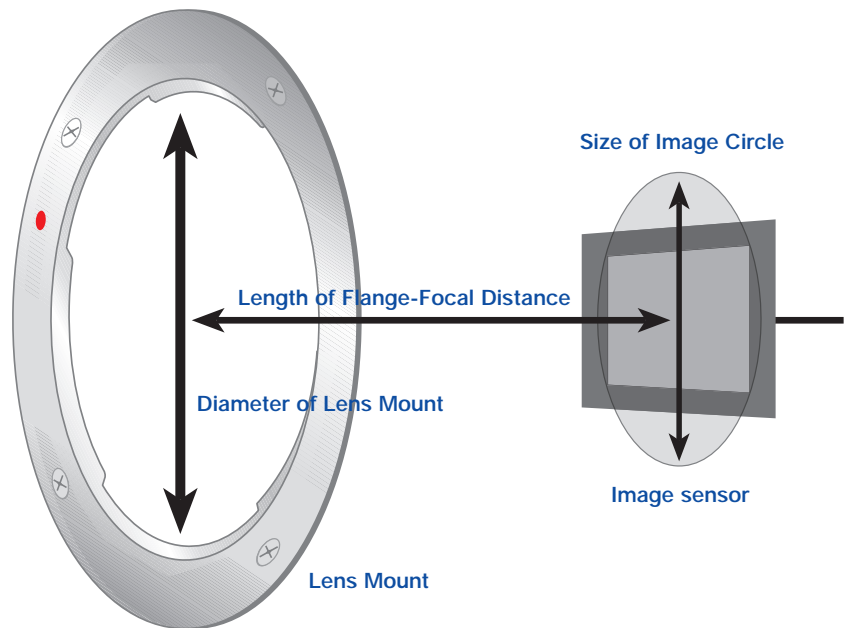
Why the new 4/3 system deserves to become the new world standard.

Lenses for digital cameras are designed so that light is correctly captured for not only the centre but also the periphery of images. Thus, if lenses were designed for light to hit all the photodiodes of a 35 mm equivalent image sensor from nearly straight ahead, they would have to be enormous.

With the Four Thirds System, in comparison to 35 mm film cameras, the diameter of the lens mount is designed to be approximately twice as large as that of the image circle. This gives wide adaptability among a variety of image sensors and greatly expands the flexibility of lens design.

Thanks to this lens mount design, most light can strike the image sensor from nearly straight ahead, ensuring clear colours and sharp details even at the periphery of images.

In addition, the 4/3 type image sensor has 4 to 5 times the area of a 2/3 or 1/1.8 type image sensor.



The Four Thirds System standardizes the diameter of the lens mount, the size of the image circle, the flange-focal distance, and more.

Sometimes less is more.

Another advantage of the Four Thirds System is that its image sensor will allow the downsizing of camera bodies and lenses.

For example, since the required focal length is half that of 35 mm film cameras, a 600 mm telephoto effect can be achieved with a 300 mm lens, meaning that the entire lens can be radically reduced in size.

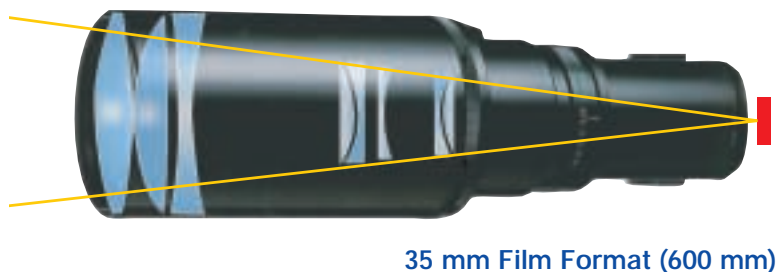
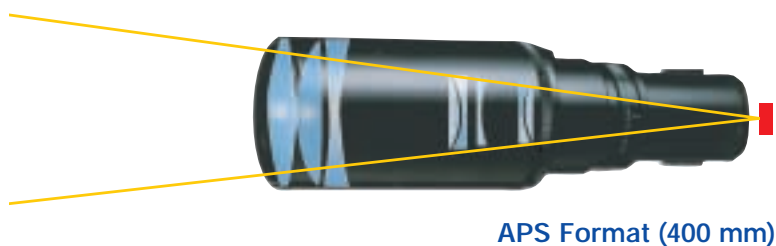
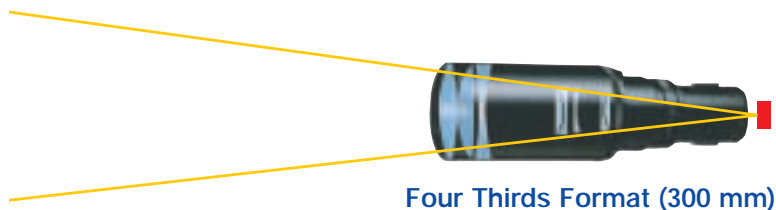
Moreover, since the effective aperture of the lens can be made smaller compared to that of 35 mm film cameras, bright lenses can consequently be made much shorter in length. This will give users more flexibility when shooting in low-light conditions or with a high-speed shutter.

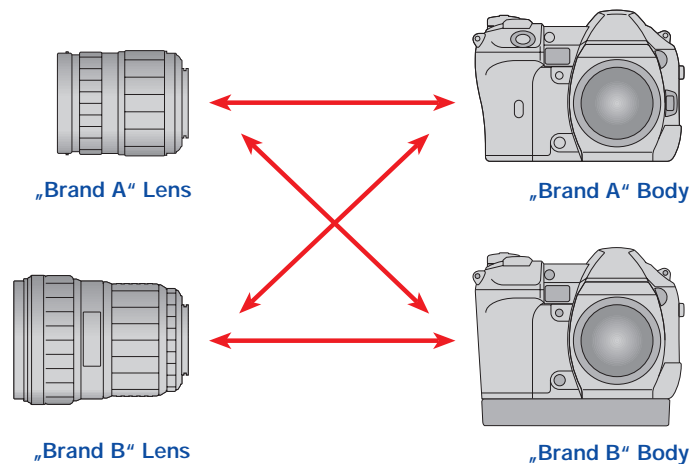
The first ZUIKO DIGITAL lenses of Olmypus are available with the following focal lengths:

- 14-54 mm (28-108 mm)
- 50 mm macro (100 mm)
- 50-200 mm (100-400 mm)
- 300 mm (600 mm)
- 11-22 mm (22-44 mm)

Available approx. end 2003

(Figures in brackets are the equivalent 35 mm camera values)





From a quality tool to quality work.

The Four Thirds System is an open standard. It will allow far greater compatibility, meaning that photographers will be able to freely interchange bodies and lenses produced by different manufacturers adopting the Four Thirds System. The cameras and lenses are smaller, lighter and more robust than comparable systems for 35 mm photography. This makes them handier, more comfortable and more intuitive to use, especially for outdoor and reportage photography. The lenses' greater brightness increases their potential for use in the field of available light photography. On Top of all this come the many-sided possibilities of digital photography, from immediate

direct control of the photograph to post image processing. Photography is no different from other fields of work: The tool is the medium standing between the person and the object of his or her work. It must be in the service of the person, and ideally it should function as a direct extension of the hand, eye and brain. The perfect tool is one that you don't even notice any more.

"The perfect tool for perfect results".

The new Olympus E-System.

Main Specifications

Body

Model	Olympus E-1
Type	Interchangeable Digital SLR Camera
Lens Mount	Four Thirds Mount
Body	Magnesium Alloy
Media	Compact Flash Card (Type I, II), Micro Drive
Camera Effective Pixel Number	5 Million Pixels
Image sensor	
Type	4/3 Type Full Frame Transfer CCD Solid-State Image Sensor
Total Pixel Number	5.50 Million Pixels
Viewfinder	
Type	Eye Level Pentaprism Type Optical View Finder
Viewfield Coverage	Approx. 100%
Diopter Adjustment	Built-in Type -3.0 to +1.0 Dioptre
Eye Piece Shutter	Built-in Type
Auto Focus	
Type	TTL Phase Difference Detection System
Focus Mode	Single AF / Continuous AF / Manual Focus
AF Assist Lamp	Built-in Body Type and Built-in Optional Olympus Dedicated Flashes
Exposure Control	
Light Metering System	TTL Full Aperture Light Metering by 3 Zones Multi-pattern Sensing System
Light Metering Mode	Digital ESP / Center Weighted Average / Spot (1.8 %)
Exposure Mode	Program with Program Shift / Shutter Priority / Aperture Priority / Manual
Exposure Bracketing	3 or 5 Frames in +/- 1, 1/2, or 1/3 EV step
Sensitivity	
Auto	ISO 100 to 400
Manual	ISO 100 / 200 / 400 / 800, Expandable to 1600 / 3200
Shutter	
Type	Electronic Controlled Focal Plane Shutter
Shutter Speed	P/A: 1/4000 to 2 Sec., S: 1/4000 to 60 Sec., M: 1/4000 to 60 Sec. and Bulb (up to 8 Minutes)
X-Sync Speed	X = 1/180 Sec. Super FP (FP) up to 1/4000 Sec. for Fill Flash
Drive System	
Sequential Shooting Speed	3.0 fps.
Max. Frame Number on Sequential Shooting	12 Frames (TIFF, JPEG, RAW, RAW+JPEG, Except Advanced Noise Filter Setting)
White Balance System	
Auto WB System	Hybrid Detection System with White Balance Sensor and CCD Imager
Preset WB	12 Types (3000K / 3300K / 3600K / 3900K / 4000K / 4300K / 4500K / 4800K / 5500K / 6500K / 6600K / 7500K)
WB Bracketing	3 Frames with +/- 5/10/15 Mired Steps
Color Space	sRGB / AdobeRGB
Flash Control	
Type	TTL Auto FP / TTL Auto for Olympus Dedicated Flash, Auto or Manual
Intensity Control	Up to +/- 2 EV in Each 1, 1/2, or 1/3 EV Step for Exclusive Flash
Playback Monitor	
Type	Low Temperature Polysilicon TFT Color LCD
Size	1.8 inch / 4.6 cm
Pixel Number	134,000 Pixels
Playback Function	
Display Mode	Single / Zoom (2 / 3 / 4x) / Index (4 / 9 / 16 frames) / Slide Show
Exposure Level View	Histogram, High Light Point Warning
Recording System	
Type of File Format	RAW (12bit), TIFF Ver. 6.0 (Exif 2.2), JPEG (SHQ, HQ, SQ)
RAW + JPEG Recording	Yes
Menu Languages	English (Set as Default), German, French, Spanish, Japanese, Hangul
PC Interface	IEEE 1394, USB 2.0
Power supply	
Battery	Rechargeable Li-ion Battery Pack BLM-1/BLL-1 (Optional; Power Battery Holder SHLD-2)
AC Adapter	Optional AC Adapter: AC-1; 100V-240V, 50-60Hz; DC 9V
Size / Weight	
Dimensions	141 x 104 x 81 mm
Weight	660 g (Without Batteries and CF Card).

Lenses

Model	ZUIKO DIGITAL ED300 mm f2.8	ZUIKO DIGITAL ED50-200 mm f2.8-3.5
Focal Length	300 mm	50 mm – 200 mm
35 mm Equivalent Focal Length	600 mm	100 mm – 400 mm
Lens Construction	13 Elements in 11 Groups, including 3 ED Lens Elements and 1 Filter Holder	16 Elements in 15 Groups, including 3 ED Lens Elements
Angle of View	4.2 Degree	24 to 6 Degree
Closest Focusing Distance	2 m	1.2 m
Maximum Image Magnification	0.15x	0.21x
35 mm Equivalent Magnification	0.30x	0.42x
Aperture Range	f 2.8 - f22	f 2.8 (Wide) / f 3.5 (Telephoto) - f22
Size / Weight		
Dimension	Diameter 129 x 281mm	Diameter 87 x 157 mm
Weight	3290 g with Tripod Adapter	1070 g with Tripod Adapter

Model	ZUIKO DIGITAL ED50 mm f2.0 Macro	ZUIKO DIGITAL 14-54 mm f2.8-3.5
Focal Length	50 mm	14 – 54 mm
35 mm Equivalent Focal Length	100 mm	28 – 108 mm
Lens Construction	11 Elements in 10 Groups, including 1 ED Lens Element	15 Elements in 11 Groups, including 3 Aspherical Lens Elements
Angle of View	24 Degree	75 to 23 Degree
Closest Focusing Distance	0.24 m	0.22 m
Maximum Image Magnification	0.52x	0.26x
35 mm Equivalent Magnification	1.04x	0.52x
Aperture Range	f 2.0 - f22	f 2.8 (Wide) / f3.5 (Telephoto) - f22
Size / Weight		
Dimension	Diameter 71 x 61.5 mm	Diameter 73.5 x 87.5 mm
Weight	300 g	435 g

Tele Converter

Model	Tele Converter EC-14
Magnification	1.4x
Lens Construction	6 Elements in 5 Groups
Size / Weight	
Dimension	Diameter 68 x 22.4 mm
Weight	170 g

Extension Tube

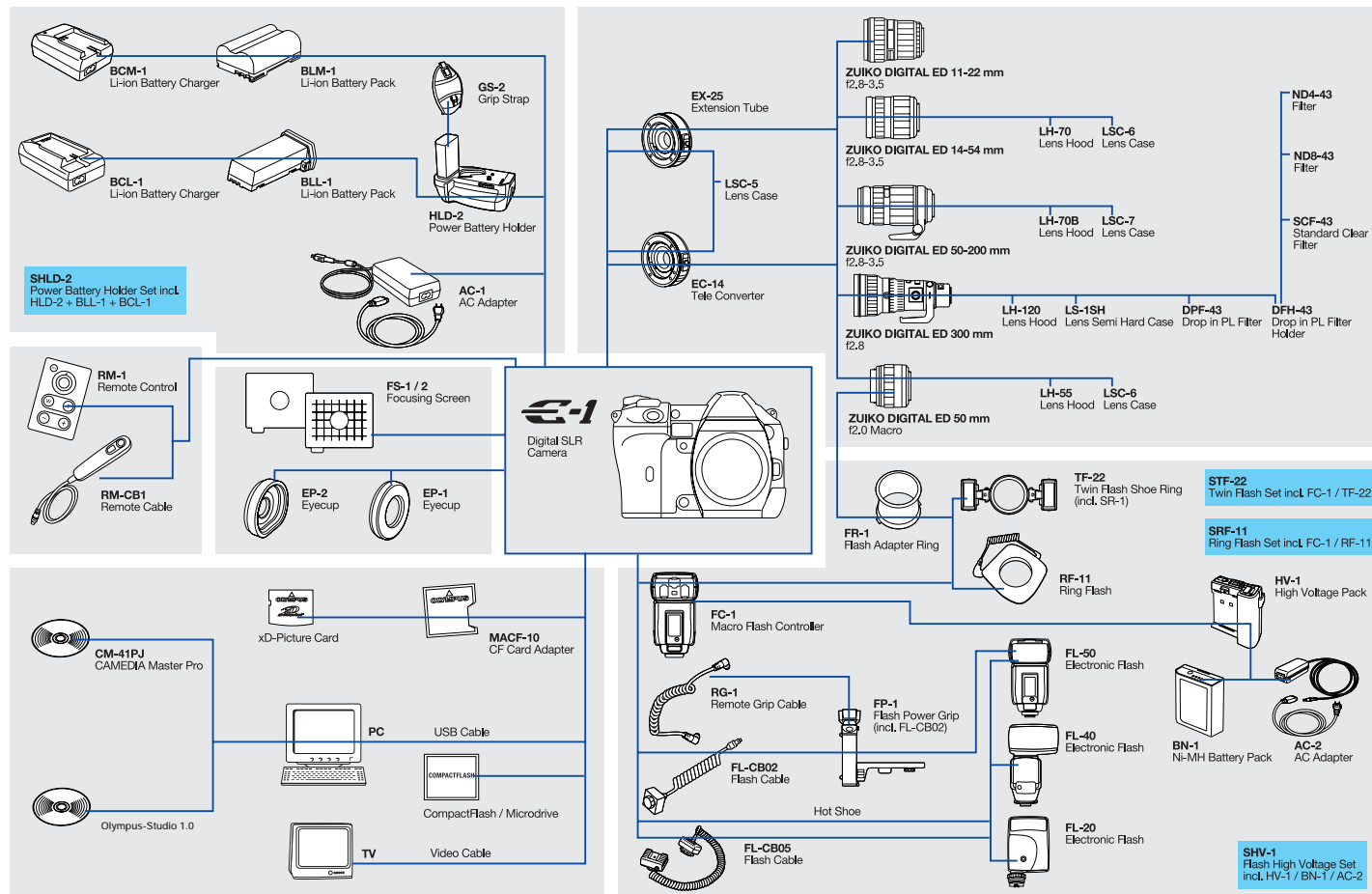
Model	Extension Tube EX-25
Extended Length	25 mm
Size / Weight	
Dimension	Diameter 68 x 25 mm
Weight	170 g

Flash

Model	Electronic Flash FL-50
Guide number	Automatic Switching from 50 at 42 mm to 28 at 12 mm
Firing angle	Automatic Switching At 12 mm: Up-down 61deg. , Left-right 78 deg. At 42 mm: Up-down 21deg. , Left-right 28 deg. When the Wide Panel is Used for 8 mm
Flash modes	TTL AUTO, AUTO, MANUAL, FP TTL AUTO, FP MANUAL
Bounce angles	Up to 90 deg. ,Down 7 deg. ,Left 0 to 90 deg. ,Right 0 to 180 deg.
Power supply	AA Type Batteries x 4
Dimension	78 mm (W) x 133 mm (H) x 102 mm (D) (Protuberances Not Included)
Weight	380 g (Without Batteries)

Specifications are subject to change without any notice or obligation on the part of the manufacturer.
For detailed and most up-to-date specifications please refer to www.olympus-pro.com

OLYMPUS E-SYSTEM



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