









Thomas Dworzak RUSSIA, Moscow, 2017/07-08. Moscow City skyscraper.

It is a true pleasure for me to work with the Micro Four Thirds lens system. The compact, inconspicuous size, allows me to have the camera always ready under my jacket, in a pocket, in a pouch. Without any clunky bags, without being a visibly very equipped photographer. The fixed lens, it's low f stop, in combination with the very developed ISO of the camera allows me to photograph in many of the low light situations I often seek. This elegance and lightness allows me to work as discreet as I like.



Photo Journalist / President of Magnum Photos Thomas Dworzak



MSC



14-28mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 7-14mm F2.8 PRO EUKlane DGAlane Hillers Super EUlans Follers Associations ZERO Cooping MSC Dust-Sydash-proof

Max. dia. x Length = Φ78.9mm x 105.8mn Weight = 534g

Ultra-wide-angle zoom boasting maximum portability, brightness and optical performance

high mobility and excellent optical performance. With an F2.8 aperture at all focal lengths, this lens is perfect for capturing nightscapes and starry skies.

An ultra-wide-angle zoom lens featuring



#### 18-36mm (35mm equivalent) **OLYMPUS : M.ZUIKO DIGITAL** ED 9-18mm F4.0-5.6 DSAlens HRiens EDlens Asphericallens MSC

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 56.5 \mbox{mm x 49.5 \mbox{mm}} \mbox{ (when retracted)} \\ \mbox{Weight} = 155 \mbox{g} \quad \mbox{Filter diameter} = \Phi 52 \mbox{mm} \end{array}$ 

Ultra-wide-angle zoom with a wide angle of view







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14-28mm (35mm equivalent) Panasonic : LUMIX G VARIO 7-14mm F4.0 ASPH. ED lens Aspherical lens

Max, dia, x Length = \$70mm x ca.83.1mm Weight = ca.300g



# Development announcement: To be released in 2019 or later



20-50mm (35mm equivalent) Panasonic : LEICA DG VARIO-SUMMILUX 10-25mm F1.7 ASPH.





#### 16-36mm (35mm equivalent) Panasonic : LEICA DG VARIO-ELMARIT 8-18mm F2.8-4.0 ASPH. UHR lens Asphenical IED Lens ED Lens Asphenical Lens Nano Surface Costing Dust-/Splash-proof

 $\begin{array}{l} \mbox{Max, dia, x Length} = \Phi 73.4 \mbox{mm x ca.88 \mbox{mm}} \\ \mbox{Weight} = ca.315 \mbox{Gibber Filter diameter} = \Phi 67 \mbox{mm} \end{array}$ 

Excellent imaging with dynamic perspectives and being-there feeling Ultra-wide-angle zoom lens built to

meet the rigorous optical standards of Leica, featuring high performance, high quality with a large maximum aperture of F2.8. Supports 4K movie recording.











# **Zoom Lenses** - STANDARD enses covering focal lengths from semi-wide-angle between 12mm and 18mm (between 24mm and 36mm of 35mm equivalent) to telephoto.

#### 24-64mm (35mm equivalent) Panasonic : LUMIX G VARIO 12-32mm F3.5-5.6 ASPH. MEGA O.I.S. ED lens Aspherical lens Optical Image Stabilizer (inside lens)

Max, dia, x Length =  $\Phi$ 55,5mm x ca 24mm (when Weight = ca 70g. Filter diameter =  $\Phi$ 37mm

Compact standard zoom with 24mm (35mm equivalent) wide angle capability A compact, lightweight lens ideal for use in many different shooting situations, from taking everyday 11-11 snapshots to shooting a group photo in a small room or capturing scenic landscape while traveling.



#### 24-120mm (35mm equivalent) Panasonic : LEICA DG VARIO-ELMARIT 12-60mm F2.8-4.0 ASPH. POWER O.I.S. ED 1993 Aspherical Less Nano Surface Coating Optical Image Stabilizer (inside lens) Dust-/Splash-proof

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 68.4 \mbox{mm x ca.86 \mbox{mm}} \\ \mbox{Weight} = ca.320 \mbox{Gibber of Bilter diameter} = \Phi 62 \mbox{mm} \end{array}$ 

LEICA DG standard zoom with excellent imaging throughout the zooming range Experience the legendary power of Leica with this impressive 5X optical zoom lens. Beautiful defocusing effects in a wide range of focal #@lengths make this lens an excellent choice for artistic photography. Capture spectacular landscapes or create stunning portraits.



**OLYMPUS : M.ZUIKO DIGITAL** ED 12-200mm F3.5-6.3 ISA less Super Hillies Hillies Super ED less ED less Aspherical less ZERO Coating MSC Dust - Splash-proof

Max, dia x Length = \$\Phi 77.5mm x 99.7mm Weight = 455g Filter diameter = \$\Phi 72mm

Featuring the largest 16.6x zoom ratio among mirrorless camera lenses, ideal for travel photos

Thanks to advanced optical design, this high-magnification zoom lens provides outstanding imaging performance across the focal range from wide-angle to telephoto. Size and weight have been dramatically reduced for maximum portability.



#### 24-70mm (35mm equivalent) Panasonic : LUMIX G X VARIO 12-35mm F2.8 II ASPH. POWER O.I.S. UHI kes UED kes Appendial kes Nano Surface Costing Optical Image Stabilizer (Inside lens) Dust /Splash-proof

Max. dia. x Length =  $\Phi$ 67.6mm x ca.73.8mm Weight = ca.305g Filter diameter =  $\Phi$ 58mm

Standard zoom with bright F2.8 aperture throughout the zooming range Dustproof, splashproof and incredibly portable, this go-anywhere compact lens boasts a large F2.8 (6) - (6) aperture throughout the zooming range, making it ideal for everything from snapshots to landscapes High resolution optics and powerful Dual I.S.2 image stabilization ensure crisp, clear images.



24-80mm (35mm equivalent) **OLYMPUS : M.ZUIKO DIGITAL** ED 12-40mm F2.8 PRO EDA less DSA less HD less HR less ED less Aspherical less ZERO Coating MSC Dust-/Splash-proof

Max, dia, x Length =  $\Phi$ 69,9mm x 84mm Weight = 382g Filter diameter =  $\Phi$ 62mm

Dustproof/Splashproof with bright F2.8 throughout the zoom range With a fixed F2.8 aperture throughout the zoom range, this compact, lightweight, dustproof and splashproof zoom lens meets the requirements of professional photographers.



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#### 24-200mm (35mm equivalent) **OLYMPUS : M.ZUIKO DIGITAL** ED 12-100mm F4.0 IS PRO hore-Handy? Haufi (and extent) with a standard section 200 and galaxies 2 section and the section of the sectio

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 77.5\mbox{mm x 116.5}\mbox{mm} \\ \mbox{Weight} = 561\mbox{g} & \mbox{Filter diameter} = \Phi 72\mbox{mm} \\ \end{array}$ 

Pro-quality high-magnification zoom lens With its high image quality, high

magnification and compact size, this lens is a perfect fit for professional photographers. Features compatibility with Olympus 5-axis Sync IS enabled cameras.



MSC

24-400mm (35mm equivalent)





24-120mm (35mm equivalent)

Panasonic : LUMIX G VARIO

With an extended focal length range

starting at wide angle of 24mm (35mm

equivalent), this dustproof/splashproof

5X zoom lens is the ideal choice for just

about any shooting situation.

12-60mm F3.5-5.6 ASPH. POWER O.I.S.

Dustproof/Splashproof standard 5X zoom lens

ED lans Aspherical lens Optical Image Stabilizer (inside lens) Dust-/Splash-proof

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#### Zoom Lenses - STANDARD

enses covering focal lengths from semi-wide-angle between 12mm and 18mm (between 24mm and 36mm of 35mm equivalent) to telephoto.



#### MSC MSC 28-84mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 14-42mm F3.5-5.6 EZ R lans ED lans Aspherical lans MSC Motorized zoom

Max. dia. x Length =  $\Phi$ 60.6mm x 22.5mm (when retracted) Weight = 93g Filter diameter =  $\Phi$ 37mm

Motorized standard zoom boasts world's thinnest profile\*

Incorporating a motorized zoom mechanism in a slim profile that's just 22.5mm thick, this standard zoom lens offers high onerability, while ensuring uniform, sharp image quality throughout the image plane. As of January 29, 2014. Among standard 3x zoom lenses for mirrorless system cameras

MSC Neveral State 28-90mm (35mm equivalent) Panasonic : LUMIX G VARIO 14-45mm F3.5-5.6 ASPH. MEGA O.I.S. Asphericallens Optical Image Stabilizer (inside lens)

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 60 \mbox{mm x ca. 60 \mbox{mm}} \\ \mbox{Weight} = ca. 195 \mbox{Gibber result} \ \mbox{Filter diameter} = \Phi 52 \mbox{mm} \end{array}$ 

Compact, lightweight standard zoom lens With a wide focusing range of about

3.2X zoom ratio from wide-angle 28mm (35mm equivalent), this lens ensures exceptional shooting performance under a wide range of conditions.



MSC Movie 4 State



28-84mm (35mm equivalent) Panasonic : LUMIX G X VARIO PZ 14-42mm F3.5-5.6 ASPH. POWER O.I.S. EDLens Aspharicaliens Nano Surface Coating Opticalimage Stabilizer (inside lens) Motorized zoom

Max, dia, x Length = Φ61.0mm x ca.26.8mm (w Weight = ca.95g Filter diameter = Φ37mm





#### 28-84mm (35mm equivalent) Panasonic : LUMIX G VARIO 14-42mm F3.5-5.6 II ASPH. MEGA O.I.S. Aspherical lens Optical Image Stabilizer (inside lens)

 $\begin{array}{ll} \mbox{Max. dia. x Length} = \Phi 56 \mbox{mm x ca } 49 \mbox{mm} \\ \mbox{Weight} = ca . 110 \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

#### Sophisticated design and reduced size/weight

The compact, lightweight design of this lens lets you enjoy photography in a wide range of situations, from everyday 10 400 1 snapshots to landscape and portrait shooting.



#### 28-280mm (35mm equivalent) Panasonic : LUMIX G VARIO 14-140mm F3.5-5.6 ASPH. POWER O.I.S. ED lens Aspherical lens Optical Image Stabilizer (inside lens)

 $\begin{array}{l} \mbox{Max, dia, x Length} = \Phi 67 \mbox{mm x ca.75 \mbox{mm}} \\ \mbox{Weight} = ca.265 \mbox{g} \quad \mbox{Filter diameter} = \Phi 58 \mbox{mm} \end{array}$ 

## Sophisticated design and reduced size/weight

The compact, lightweight design and high mobility of this powerful zoom makes it an excellent choice for a wide range of applications ranging from landscape and portrait shooting to sport photography.





28-300mm (35mm equivalent) TAMRON : 14-150mm F/3.5-5.8 Di III Model C001 Miller Files Agherical Ens AD(Anomabus Dispersion) Ens UD(Low Dispersion) Ens Hybrid Aspherical Ens Max. dia. x Length =  $\Phi$ 63.5mm x ca.80mn Weight = 285g Filter diameter =  $\Phi$ 52mm Lighter. Smaller. Sharper. A high power zoom lens helps swiftly capture different views at the angle of field you choose. Incorporating





 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 63.5 \mbox{mm x 83 \mbox{mm}} \\ \mbox{Weight} = 285 \mbox{g} & \mbox{Filter diameter} = \Phi 58 \mbox{mm} \end{array}$ Compact, lightweight dustproof/splashproof zoom with excellent mobility

A lens HR lens E-HR lens ED lens Acchemical lens ZERO Coaring MSC Dust-/Splash-proof

A lightweight 10.7X zoom lens featuring ZERO (Zuiko Extra-low Reflection Optical) Coating. Its dustproof/splashproof construction allows photography even in extreme conditions.

28-300mm (35mm equivalent) OLYMPUS : M.ZUJKO DJGJTAL ED 14-150mm F4.0-5.6 II











#### 70-200mm (35mm equivalent) Panasonic: LUMIX G X VARIO 35-100mm F2.8 II POWER O.I.S. UED lans ED lans Nano Surface Coating Optical Image Stabilizer (inside lens) Dust-/Splash-proof

Max. dia x Length =  $\Phi$ 67.4mm x ca.99.9mm Weight = ca.357g Filter diameter =  $\Phi$ 58mm

Large F2.8 aperture telephoto zoom delivers high performance in a compact size With its large F2.8 aperture and powerful Dual I.S.2 image stabilization, this lens supports high-speed shutter in sports photography, ensuring sharp, crystal-clear action shots. This lens is equally adent 0++)-(0+-) at more personal level, offering a beautiful defocusing effect ideal for portrait and close up pictures.



#### 80-300mm (35mm equivalent) **OLYMPUS : M.ZUIKO DIGITAL** ED 40-150mm F4.0-5.6 R HRIENS ED IENS MSC

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 63.5 \mbox{mm x 83 mm} \\ \mbox{Weight} = 190 \mbox{g} & \mbox{Filter diameter} = \Phi 58 \mbox{mm} \end{array}$ 

employs an ED lens element to correct color aberration and a circular iris to



#### 70-200mm (35mm equivalent) Panasonic: LUMIX G VARIO 35-100mm F4.0-5.6 ASPH. MEGA O.I.S. ED lens Aspherical lens Optical Image Stabilizer (inside lens)

Max, dia, x Length =  $\Phi$ 55.5mm x ca.50mm (when Weight = ca.135g. Filter diameter =  $\Phi$ 46mm

Lightweight telephoto zoom that's retractable for easy storage Featuring a manually-operated retraction mechanism built into the cylinder, this lens ()) (D) () delivers high image quality in a compact, lightweight design made possible by matching the optical configuration to the mechanism and reducing the weight of mobile parts.



80-300mm (35mm equivalent) OLYMPUS: M.ZUIKO DIGITAL ED 40-150mm F2.8 PRO EDA lans HD lans Super ED lans ED lans Apphenical lans ZERO Costing MSC Dust-/Splash-proof

Max, dia, x Length =  $\Phi$ 79,4mm x 160mm Weight = 760g (w/o tripod adapter / tripod adapter: 120g) Filter diameter =  $\Phi$ 72mm

## Telephoto zoom with high image guality and maximum portability

Top-notch performance in every aspect from brightness and close-up capability to portability and operation. It employs the world's first\* Dual VCM focus system. realizing outstanding precision and AF speed. " Based on Olympus research.



MSC

#### 90-300mm (35mm equivalent) Panasonic: LUMIX G VARIO 45-150mm F4.0-5.6 ASPH. MEGA O.I.S.

UHR lans Aspherical lans Optical Image Stabilizer (inside lans) Max. dia. x Length =  $\Phi$ 62mm x ca.73mm Weight = ca.200g Filter diameter =  $\Phi$ 52mm

Ultra compact telephoto zoom with high optical performance

The UHR (Ultra High Refractive Index) lens and 2 aspherical lenses achieve uniform image depiction from the center to the corners. Smooth, silent focusing in both photo and video recording.



#### Panasonic : LUMIX G X VARIO PZ 45-175mm F4.0-5.6 ASPH. POWER O.I.S. ED Lass Aspherical Lass Nano Surface Coating Optical Image Stabilizer (Inside lens) Motorized zoom

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 61.6 \mbox{mm x ca.90 \mbox{mm}} \\ \mbox{Weight} = ca.210 \mbox{g} & \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

Telephoto lens with built-in motorized zoom The multi-actuator flowing inner focus mechanism enables this lens to offer sharp, clear images in a compact, lightweight design. Low-noise operation makes it suitable for movie recording.





#### 90-400mm (35mm equivalent) Panasonic : LUMIX G VARIO 45-200mm F4.0-5.6 II POWER O.I.S. ED lens Optical Image Stabilizer (inside lens) Dust-/Splash-proof

Max dia x Length =  $\Phi$ 70mm x ca 100mm Weight = ca 370g Filter diameter =  $\Phi$ 52mm

The wide zoom range expands your photo opportunities. From portraits that bring to life natural facial expressions to impressive telephoto images, this lens is a great choice for active photographers. Powerful Dual I.S.2 image stabilization and a dustoroof/splashoroof design ensure optimum performance and reliability in any situation.



#### 100-400mm (35mm equivalent) Panasonic : LEICA DG VARIO-ELMARIT 50-200mm F2.8-4.0 ASPH. POWER O.I.S. UHR lens UED lans ED lens Asphericallens Optical Image Stabilizer (inside lens) Dust-/Splash-proof

Max, dia, x Length =  $\Phi$ 76mm x ca.132mm Weight = ca.655g Filter diameter =  $\Phi$ 67mm

Super-telephoto zoom with go-anywhere mobility and superior shooting flexibility

unapproachable wild animals and zoom in on sports action. Large F2.8 aperture and high resolution assure high-quality images for portrait and movie shooting. "Dual .S.2" and dustproof/splashproof design.



150-600mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 75-300mm F4.8-6.7 HRIERS Super ED lens ED lens ZERO Coating MSC

 $\begin{array}{l} \text{Max. dia. x Length} = \Phi 69 \text{mm x } 116.5 \text{mm} \\ \text{Weight} = 423 \text{g} \quad \text{Filter diameter} = \Phi 58 \text{mm} \end{array}$ 

Super-telephoto zoom captures dynamic images of distant subjects This 600mm (35mm equivalent)

super-telephoto zoom lens is compact and lightweight enough for handheld photography. The ZERO Coating on the lens surface helps provide clear images even when shot at a long distance.



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Telephoto zoom lets you preserve great memories in grand images Featuring extremely high portability, this lightweight telephoto zoom lens

11/11 - 10 - 10 - 13render natural bokeh.



Dustproof/splashproof telephoto zoom with powerful image stabilization



This lens lets you get up close to normally





#### 200-600mm (35mm equivalent) Panasonic : LUMIX G VARIO 100-300mm F4.0-5.6 II POWER O.I.S. ED lans Optical Image Stabilizer (inside lens) Dust-/Splash-proof

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 73.6 \mbox{mm x ca.} 126 \mbox{mm} \\ \mbox{Weight} = ca.520 \mbox{G} \\ \mbox{Filter diameter} = \Phi 67 \mbox{mm} \end{array}$ 

600mm (35mm equivalent) super-telephoto zoom with dustproof/splashproof design

Compact, lightweight design and Dual LS.2 image stabilization make possible handheld super-telephoto statutation make jossitike inaminetic adject telepinot shooting – perfect for capturing brilliant images of fast-mixing ports action or unapproachable animals. Dustproof/splashproof design means this lens is ready for action under the toughest conditions. -<del>(1-0-0)</del>



#### 200-800mm (35mm equivalent) Panasonic : LEICA DG VARIO-ELMAR 100-400mm F4.0-6.3 ASPH. POWER O.I.S. UED lens ED lens Asphenical lens Optical Image Stabilizer (inside lens) Dust-/Splash-proof

Ultra-telephoto zoom – the longest in the Micro Four Thirds family







Fisheye



MSC 16mm (35mm equivalent) OLYMPUS: M.ZUIKO DIGITAL ED 8mm F1.8 Fisheye PRO Super HR land HR land Super ED land ED land Aspherical land ZERO Costing MSC Splash-Idust-proof

Max. dia. x Length =  $\Phi$ 62mm x 80mm Weight = 315g

World's first\* fisheye lens with a F1.8 aperture With a F1.8 aperture and 180° angle of view, this fisheye lens boasts superior optical performance with excellent imaging from the center to edges. A reliable dustproof/splashproof construction allows COI HIND photography in any condition. \* As of May 2015, based on Olympus research.



16mm (35mm equivalent) Panasonic : LUMIX G FISHEYE 8mm F3.5

ED lens Max, dia, x Length = Φ60.7mm(fixed hood section) x ca.51.7mm Weight = ca.165g Filter diameter = Front: Not mountable, Rear: Sheet filter holder 22mm x 22mm

World's smallest, lightest\* high-performance fisheye lens









#### 17mm (35mm equivalent) Kowa : KOWA PROMINAR 8.5mm F2.8 XD lens Aspherical lens Manual focus

Max. dia. x Length =  $\Phi$ 71.5mm x 86.8mm Weight = 440g Filter diameter =  $\Phi$ 86mm (attach to lens hood)

Ultra-wide-angle lens realistically depicts scenes with breathtaking scope With a dynamic diagonal angle of view of 106°, this lens minimizes distortion and ()))() =(() enhances contrast in peripheral areas,

providing superb optical performance suitable for use with a high-resolution 4K camera. \* Cannot be used with Panasonic LUMIX DMC-G1.



24mm (35mm equivalent) Kowa : KOWA PROMINAR 12mm F1.8 XD lens Aspherical lens Manual focus

Max, dia, x Length =  $\Phi76.5$ mm x 90.5mm Weight = 475g Filter diameter =  $\Phi72$ mm

Cannot be used with Panasonic LUMIX DMC-G1

Wide-angle lens for natural, true-to-life imaging of a wide range of scenes

Great for outdoor shooting thanks to the sharp, crisp, detailed imaging made possible by its wide angle of 24mm (35mm equivalent) and very low distortion, this lens boasts high brightness of F1.8 so it can be used indoors as well,



#### 21mm (35mm equivalent) Voigtländer : NOKTON 10.5mm F0.95 Aspherical Aspherical lens Manual focus

Max. dia. x Length =  $\Phi$ 77mm x 82.4mm Weight = 585g Filter diameter =  $\Phi$ 72mm





#### 24mm (35mm equivalent) Panasonic LEICA DG SUMMILUX 12mm F1.4 ASPH. UED lens ED lens Aspherical lens

Max, dia, x Length = Φ70mm x ca 70mm Weight = ca 335g Filter diameter = Φ62mm SUMMILUX wide-angle lens with a large F1.4 open aperture The SUMMILUX lens with the open

aperture of F1.4 delivers precise, natural imaging power featuring smooth, subtle gradations all the way to the edge of the image. **(10))))(** 



MSC 24mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 12mm F2.0 er HRIens EDilens Apphericaliens ZERO Coating MSC DSA lens

 $\begin{array}{l} \mbox{Max, dia, x Length} = \Phi 56 \mbox{mm x} \ 43 \mbox{mm} \\ \mbox{Weight} = 130 \mbox{g} \ \ \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

High-grade snapshot lens with metallic finish

With a large aperture of F2.0 and a wide angle of 24mm (35mm equivalent), this lens offers high picture quality, while boasting a more compact design optimized for snapshot shooting.





28mm (35mm equivalent) Panasonic : LUMIX G 14mm F2.5 II ASPH. Aspherical lens

Max. dia. x Length =  $\Phi$ 55.5mm x ca.20.5mm Weight = ca.55g Filter diameter =  $\Phi$ 46mm

Wide-angle pancake lens with compact size and light weight







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# Prime Lenses - WIDE Prime Lenses for Wide-Angle with Focal Length below 20mm (40mm of 35mm equivalent).



#### 30mm (35mm equivalent) Panasonic : LEICA DG SUMMILUX 15mm F1.7 ASPH. Aspherical lens

 $\begin{array}{l} \text{Max. dia. x Length} = \Phi 57.5 \text{mm x ca.36 \text{mm}} \\ \text{Weight} = 115 \text{g} \quad \text{Filter diameter} = \Phi 46 \text{mm} \end{array}$ 

Compact, lightweight F1.7 SUMMILUX lens with high image quality With brightness that surpassed Leica's most stringent optical standards, this lens features a lovely soft defocusing effect that makes it perfect for (01-99) snapshots.



34mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL 17mm F1.8 DSA lens HR lens Aspherical lens ZERO Coating MSC

Max. dia. x Length =  $\Phi$ 57.5mm x ca.35.5mm Weight = 120g Filter diameter =  $\Phi$ 46mm

High-grade F1.8 snapshot lens with metallic outer finish Combining the brightness of an F1.8 aperture and high image quality in a compact package, this lens is ideal for snapshots and 00-01 street photography. A snapshot focus mechanism is also incorporated.



32mm (35mm equivalent) SIGMA : SIGMA 16mm F1.4 DC DN I Contemporary FLD glass SLD glass Aspherical lens

Max. dia. x Length =  $\Phi$ 72.2mm x 91.1mm Weight = 395g Filter diameter =  $\Phi$ 67mm

Wide-angle lens that features both a large F1.4 aperture and a compact profile Incorporates the latest optical technology to offer F1.4 brightness, high optical performance and comfortable operability in a compact format. Movie recording KA 160100) with smooth natural AF focusing.



34mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 17mm F1.2 PRO

EC-CO-Lines El Maines Super Filling Super FD Lines Accherical lines 2 Coosing Name MSC Dust-US/List-proof Max. dia. x Length =  $\Phi$ 68.2mm x 87mm Weight = 390g Filter diameter =  $\Phi$ 62mm

Large-aperture wide-angle lens with outstanding imaging power

Wide-angle lens with large F1.2 open aperture delivers standout performance in both landscape and documentary shooting. Extensive use of special lens elements lets you enjoy both beautiful "feathered bokeh" effect and high resolution.



35mm (35mm equivalent) Voigtländer : NOKTON 17.5mm F0.95 Aspherical Aspherical lens Manual focus

 $\begin{array}{l} \mbox{Max, dia, x Length} = \Phi 63.4 \mbox{mm x 80 \mbox{mm}} \\ \mbox{Weight} = 540 \mbox{g} \ \ \mbox{Filter diameter} = \Phi 58 \mbox{mm} \end{array}$ 

F0.95, Wide-angle lens with fast aperture

Wide angle lens of 35mm (35mm equivalent) with F0.95 at wide open. "Selective Aperture Control System" allows you to set the lens precisely at any aperture settings.









#### 40mm (35mm equivalent) Panasonic : LUMIX G 20mm F1.7 II ASPH. Asphericallens

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 63 \mbox{mm x ca} 25.5 \mbox{mm} \\ \mbox{Weight} = ca .87 \mbox{g} & \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

Pancake lens with large aperture, light weight and slim design

Despite its reduced size and weight, this lens delivers impressive performance with a large high-brightness F1.7 aperture that enables you to capture gorgeous photographs with high contrast and beautiful defocusing effects.



#### 50mm (35mm equivalent) Panasonic : LEICA DG SUMMILUX 25mm F1.4 ASPH. LIHR lens Aspherical lens

Max, dia, x Length =  $\Phi63mm(\text{fixed hood section})$  x ca 54.5mm Weight = ca 200g  $\,$  Filter diameter =  $\Phi46mm$ 

#### Single-focus lens with excellent brightness

A compact lens with high imaging performance that features the soft, beautiful defocusing effect that Leica lenses are renowned for.



MSC

This large-aperture standard lens features a beautiful defocus effect to make your subjects really stand out. The F1.7 brightness at the open aperture captures beautiful, stabilized images even outdoors

50mm (35mm equivalent)

LUMIX G 25mm F1.7 ASPH.

 $\begin{array}{l} \mbox{Max, dia, x Length} = \Phi 60.8 \mbox{mm, x ca, 52 \mbox{mm}} \\ \mbox{Weight} = ca, 125 \mbox{G} & \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

at twilight outdoors or in a dimly lit room.

60mm (35mm equivalent)

Max. dia. x Length =  $\Phi$ 64.8mm x 72.1mm Weight = 260g Filter diameter =  $\Phi$ 52mm

Bright standard lens with F1.4 open aperture

lets you experience the photographic thrill that

comes from the versatility that a truly large

aperture makes possible. Enjoy the enhanced defocus effect available only with a large

aperture and crisp, clear optical performance.

SIGMA :

Aspherical lens

Standard lens that can provide a soft defocus effect for creative photography

SIGMA 30mm F1.4 DC DN I Contemporary

Large-aperture standard lens with excellent optical performance

Panasonic :

UHR lens Aspherical lens



#### 50mm (35mm equivalent) Voigtländer : NOKTON 25mm F0.95 Type II Manual focus

Max. dia. x Length =  $\Phi$ 60.6mm x 70mm Weight = 435g Filter diameter =  $\Phi$ 52mm







50mm (35mm equivalent) Kowa : KOWA PROMINAR 25mm F1.8 XD lens Aspherical lens Manual focus



F1.8 standard lens featuring beautiful defocusing effects

With a standard angle of view of 50mm (35mm equivalent) that matches natural vision and a bright open aperture of F1.8, this lens is able to realistically depict a wide range of images, from snapshots to portraits.









Max. dia. x Length =  $\Phi$ 57.8mm x 42mm Weight = 137g Filter diameter =  $\Phi$ 46mm

Bright standard lens that enhances the joy of photography with beautiful bokeh

A single focal length lens with high imaging power and beautiful bokeh produced from the F1.8 aperture. This lens features a natural angle of view similar to the human eve.



# **Prime Lenses** - TELEPHOTO rime Lenses for Medium Telephoto to Telephoto with 40mm (80mm of 35mm equivalent) and up.



#### 85mm (35mm equivalent) Voigtländer : NOKTON 42.5mm F0.95 Manual focus

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 64.3 \mbox{mm x 74.6 \mbox{mm}} \\ \mbox{Weight} = 571 \mbox{g} & \mbox{Filter diameter} = \Phi 58 \mbox{mm} \end{array}$ 

Mid-telephoto lens with fast aperture An angle of view of 85mm (35mm equivalent) and a beautiful defocusing effect produced by the ultra-fast F0.95 aperture make this lens ideal for portrait photography.



90mm (35mm equivalent) OLYMPUS : M.ZUJKO DJGJTAL ED 45mm F1.2 PRO HR long ED lons Aspherical lons Z Coating Nano MSC Dust-/Splash-proof

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 70 \mbox{mm x 84.9 \mbox{mm}} \\ \mbox{Weight} = 410 \mbox{g} & \mbox{Filter diameter} = \Phi 62 \mbox{mm} \end{array}$ 

Large-aperture medium telephoto lens brings your subject to the forefront A lens equivalent to 90mm (35mm camera) is optimum for portraits. This lens provides excellent resolution and a beautiful "feathered bokeh," adding depth to your photos.



#### 85mm (35mm equivalent) Panasonic : LEICA DG NOCTICRON 42.5mm F1.2 ASPH. POWER O.I.S. UHR lens ED lens Aspherical lens Optical Image Stabilizer (inside lens)

Max. dia. x Length =  $\Phi$ 74mm x ca.76.8mm Weight = ca.425g Filter diameter =  $\Phi$ 67mm

F1.2 large aperture lens capable of expressing beautiful defocusing effect A bright F1.2 open aperture and outstanding imaging performance enforced by Leica's rigorous optical standards make this large-aperture, mid-telephoto lens a good ())(()) choice for portrait shooting.



#### 85mm (35mm equivalent) Panasonic : LUMIX G 42.5mm F1.7 ASPH. POWER O.I.S. Aspherical lens

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 55 \mbox{mm x ca.50 \mbox{mm}} \\ \mbox{Weight} = ca.130 \mbox{g} & \mbox{Filter diameter} = \Phi 37 \mbox{mm} \end{array}$ 

Middle telephoto portrait lens with large F1.7 open aperture With a mid-range telephoto focal length of 85mm (35mm equivalent), this lens is suitable for portrait shooting. Features a natural-looking perspective, capturing the details of a subject as seen by the human eye.





90mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL 45mm F1.8 EHRIERS ZERO Coating MSC

Family portrait lens with beautiful defocusing capability

The F1.8 aperture and shallow depth-of-field of this lens lets anyone shoot portraits in which soft, beautiful background defocusing makes the subject very prominent.



MSC Constants







112mm (35mm equivalent) SIGMA : SIGMA 56mm F1.4 DC DN I Contemporary SLD glass + Aspherical lens Aspherical lens

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 66.5 \mbox{mm x} 58.1 \mbox{mm} \\ \mbox{Weight} = 265 \mbox{g} & \mbox{Filter diameter} = \Phi 55 \mbox{mm} \end{array}$ 

#### Med-telephoto lens featuring F1.4 brightness and beautiful defocus effect

SLD glass is used to reduce the size as well as to compensate for axial chromatic <u>((()</u> aberration, which is difficult to eliminate with image processing alone. The result is lens that marries reduced size/weight with sharp image quality.



scenes and indoor sports.

600mm (35mm equivalent)

effects. Suitable for shooting theatrical

150mm (35mm equivalent)



#### 400mm (35mm equivalent) Panasonic : LEICA DG ELMARIT 200mm F2.8 POWER O.I.S. UEDIans Nano Surface Coating Optical Image Stabilizer (inside lens) Dust-/Splash-prov

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 87.5\mbox{mm x ca.}174\mbox{mm} \\ \mbox{Weight} = ca.1,245\mbox{g}(\mbox{w/o}\ tripod\ adapter) & \mbox{Filter diameter} = \Phi 67\mbox{mm} \\ \end{array}$ 

TX10

(500mm F5.6)

such as wild animals or athletes. DWW-TC14 1.4x Teleconverter provideo

Super-telephoto lens optimized for sport and wildlife photography

Designed to the strict optical standards of Leica, this lens features F2.8 brightness with - (III) - (IIII) - (IIIII) - (IIII) - (IIIII) - (IIIIII) - (IIIII) - (IIIII) - (IIIII) - (IIIII) - (IIIII) - (IIIIII) - (IIIIII) - (IIIII) - (IIIII) - (IIIIIIII) - (IIIIII) - (IIIIII) - (IIIIIIIII) - (IIIIII) - (IIIIII) - ( sharp, clear imaging throughout the image plane, making it possible to capture stunning, high-quality photographs fast-moving subjects



TX17

(850mm F9.6)

In addition to excellent mobility made possible by its compact size, light weight and dustproof/splashproof design, this lens features 5-axis image stabilization making handheld shooting with a super-telephoto lens much easier than it's ever been in the past.

OLYMPUS : M.ZUIKO DIGITAL ED 300mm F4.0 IS PRO

HI Level CHIEFTER Super ED Level Z Coasting Nano MSC Optical Image Stabilizer (inside lens) Dush /Splash-proof

Max, dia, x Length =  $\Phi92.5 mm$  x 227mm(when food retracted). Weight =1,270g (w/o tripod adapter / tripod adapter: 205g). Filter diameter =  $\Phi77mm$ 

#### Micro Four Thirds System compatible Telephoto Lens Kit



TX07

(350mm F4)



#### 350mm, 500mm, 850mm.

#### Telephoto lens kit for shooting in three focal lengths with a single lens

MSC

MSC

- 11 ( - 1 100)

To minimize the chromatic aberrations (color fringing) that lenses with long focal lengths tend to produce, this lens employs one fluorite crystal and two XD (eXtra-low Dispersion) lens elements. Based on advanced optical technology developed originally for spotting scopes, this lens features the high contrast and crisp imaging performance required of a camera lens.

The standard focal length of the master lens in the Standard Kit is "500mm F5.6", but it can be converted into a brighter telescopic lens of "350mm F4.0" (using the optional TX07 mount adapter) or a more telescopic lens of "850mm F9.6" (using the optional TX17 mount adapter). The mount adapters for the 350mm and 850mm conversion are specifically designed to be combined with the master lens. Each adapter incorporates an XD lens element to ensure excellent optical performance comparable to dedicated lenses.







# **Prime Lenses** - TELEPHOTO Macro lenses with a taste proper to single focal length, other highly distinct lenses.

Macro



#### 60mm (35mm equivalent) Panasonic : LUMIX G MACRO 30mm F2.8 ASPH. MEGA O.I.S. Aspherical lens

 $\begin{array}{l} \mbox{Max. dia. x Length} = \Phi 58.8 \mbox{mm x ca.} 63.5 \mbox{mm} \\ \mbox{Weight} = ca.180 \mbox{g} & \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

Macro

Macro

Prime macro lens with 1X life-size close-up capability

With a single focal length of 60mm (35mm equivalent), this macro lens can be used in a variety of applications, <u> (al - anda</u> from high-powered macro photography to landscape shooting.



#### MSC 120mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 60mm F2.8 Macro E-HR lans HR lans ED lans ZERO Coating MSC Dust-/Splash-proof

Max. dia. x Length =  $\Phi$ 56mm x 82mm Weight = 185g Filter diameter =  $\Phi$ 46mm

Dustproof/splashproof nature macro lens

1X macro lens featuring an internal focus system that does not alter the lens length. A focus limit switch is built in for quicker focusing.







"When the aspect ratio is set at 16:9 with DMC-GH2. "As of September 21, 2010. Among the interchangeable lenses for digital SLR cameras.





60mm (35mm equivalent) OLYMPUS : M.ZUIKO DIGITAL ED 30mm F3.5 Macro EDATers DSATens Aspherical lans ZERO Coating MSC

 $\begin{array}{ll} \mbox{Max. dia. x Length} = \Phi 57 \mbox{mm x 60 \mbox{mm}} \\ \mbox{Weight} = ca.128 \mbox{g} & \mbox{Filter diameter} = \Phi 46 \mbox{mm} \end{array}$ 

## Powerful macro lens with 2.5X (35mm equivalent) shooting magnification

The 2.5X magnification (35mm equivalent) is the highest in its class and is capable of bringing into view a world difficult to see with the naked eve.

3D

65mm (35mm equivalent)\*

LUMIX G 12.5mm F12

Panasonic :



Macro

MSC

#### 90mm (35mm equivalent) Panasonic : LEICA DG MACRO-ELMARIT 45mm F2.8 ASPH. MEGA O.I.S. ED lens Aspherical lens Optical Image Stabilizer (inside lens)

Max. dia. x Length =  $\Phi$ 63mm x ca.62.5mm Weight = ca.225g Filter diameter =  $\Phi$ 46mm

#### Outstanding image quality that Leica is known for

resolution

With imaging performance that meets Leica's demanding performance evaluation criteria, this lens offers consistently high contrast and

100 + - <u>016 X</u>





# **Were** Lens Accessories

Fisheye



#### OLYMPUS : Fisheue Bodu Cap Lens BCL-0980(9mm F8.0)

Ultra-thin cap lens that gives you an ultra-wide-angle fisheye view of 140° The simplified MF lever enables easy one-touch pan-focus and close-up shooting. Available in two colors. SINUCIIII, AVAIRADE III IND COURS, Vilken using the image stabilization mechanism bulk into the camera, set the local length to Brim or Brim if the Brim setting is not available. Focus adjustment is possible by originating the MF leven manually. Autofocusing is not available.



Body cap lens usable as a pan-focus lens for snapshots Only 9 mm thickness allows this lens to be used as a body cap.

Available in two colors. When using the image stabilization mechanism built into the camera, set the focal length to 15mm or 16mm if the 15mm setting is not available. \* Focus adjustment is possible by rotating the MF lever manually.

Panasonic : 2.0x Teleconverter DMW-TC20

This extends the focal length of the master lens by double

Doubling the focal length of the master lens turns it into a more powerful

telephoto lens without degrading the optical performance. \* Applicable lenses: LEICA D6 VARID -ELMARIT 50-200mm F2.8-40. ASPH: POWER 0.LS. LEICA OS ELMARIT 200mm F2.8-POWER 0.LS.

OLYMPUS : Fisheye Converter FCON-P01 Fisheye converter lens offers a nice deformation effect

When attached to the M.ZUIKO DIGITAL 14-42mm F3.5-5.6 II R lens

(set to the wide-angle end of 14mm), enables fisheye photography that (set to the winds-angle end of ranning, endues insinge philotography offers an optimum distortion effect with an angle of view of 120°. \* Applicable lenses: M.ZUKO DIGTAL 14-42mm F3.5-5.6 II R \* Use at the wide-angle end (tocal length 14mm) is recommended. \* The decorative ring cannot be used in combination with this lens.

Fisheve

Dust\_/Solash\_proof

Autofocusing is not available. Communication function with the body not available. (Exif data not provided.)

#### Converter Lenses

Body Cap Lenses



Panasonic : 1.4x Teleconverter DMW-TC14

This extends the focal length of the master lens by 40% The focal length of the master lens turns it into a more powerful telephoto lens without degrading the optical performance. \* Applicable lenses: LEICA DG WHIG-ELMARIT 50-200mm F2.8-40.45PH, POWER QLS, LEICA DG ELMARIT 200mm F2.8 POWER QLS.



OLYMPUS : M.ZUIKO DIGITAL 1.4x Teleconverter MC-14 This extends the focal length of the master lens by 40%

This extends the focal length of the master lens with very little image quality degradation. This lens is also dustproof /splashproof and resistant to low temperatures. \* Applicable lenses: M.ZUKO DIGITAL ED 40-150mm F2.8 PR0, M.ZUKO DIGITAL ED 300mm F4.0 IS PR0 \* The effective (-number of the lens drops by one step when this converter is attached.



#### OLYMPUS : Wide Converter WCON-P01

Wide converter lens brings a more panoramic view to your images When attached to the M.ZUIKO DIGITAL 14-42mm F3 5-5.6 II R lens (set to the wide-angle end of 14mm), this converter makes it possible to shoot wide-angle pictures with a focal length of 11mm (equivalent to 22mm of 35mm film cameras). \* Applicable lenses: M.ZUIKO DIGITAL 14 42mm F3,5-5.6 II R \* Use at the wide angle and (focal length 14mm) is recommended. \* The decerative ring cannot be used in combination with this lens.



#### OLYMPUS : Macro Converter MCON-P02

Macro converter lens for easy macro photography A macro converter lens attachable to seven different M.ZUIKO DIGITAL lenses to enable macro shooting. Jenses to enable macro shooling. \* Applicable lenses: AQUID DIGTIAL 44-2mm F3.5-5.6 II R, M.ZUINO DIGTIAL ED 14-42mm F3.5-5.6 EZ, M.ZUINO DIGTIAL 50mm F1.8, The included Step-u-P IRing required for use with the three lenses listed above, M.ZUINO DIGTIAL 20mm F1.8, M.ZUINO DIGTIAL 17 Danot Bit used in the main converted to an inapplicate lense. During so could damage the lens. \* Danot be used in combandow with a production Titler and used copying the region. \* Danot be used to combandow with a production Titler and used copying the rough.

_					Lons Construction				
		Manufacturer	Color	Splash-/Dust-Proof	Lens Construction Elements - Groups	Diameter( $\phi$ ) x Length (mm / in.)	Weight (g / oz.)	Lens Rear Cap	Lens Front Cap
2	BCL-0980 Fisheye Body Cap Lens BCL-1580 Body Cap Lens	OLYMPUS	Black,White	-	5 - 4	Φ56×12.8 / Φ2.2×0.5	30 / 1.1	LR-2	-
÷	BCL-1580 Body Cap Lens	OLYMPUS	White,Red	-	3 - 3	Φ56×9 / Φ2.2×0.35	22/0.8	LR-2	-
	DMW-TC14 1.4x Teleconverter	Panasonic Black		Yes	6 - 4	Фса.58×са.22 / Фса.2.3×са.0.87	ca.120 / 4.2	Available	Available
	DMW-TC20 2.0x Teleconverter	Panasonic Black		Yes	8 - 5	Фса.58×са.34 / Фса.2.3×са.1.3	ca.160 / 5.6	Available	Available
	MC-14 M ZUIKO DIGITAL 1.4x Teleconverter	OLYMPUS	Black	Yes	6-3	Φ58.8×14.7 / Φ2.31×0.58	105 / 3.7	LR-2	BC-3
	FCON-P01 Fisheye Converter	OLYMPUS	Silver	-	3 - 3	Φ62×38 / Φ2.44×1.5	112 / 4.0	LR-3 LR-3	LC-62C
	WCON-P01 Wide Converter	OLYMPUS	Silver		2 - 2	Φ62×30.5 / Φ2.44×1.2	85/3.0		LC-62C
	MCON-P02 Macro Converter	OLYMPUS	Black		2 - 1	Φ53×15.1 / Φ2.09×0.59 (with step-up ring)	52 / 1.8 (with step-up ring)	LR-4	LC-53
Adapte	MMF-3 Four Thirds Adapter	OLYMPUS	Black	Yes	-	Φ65×19.5 / Φ2.6×0.77	42 / 1,5	LR-2	BC-1
	DMW-MA1 Four Thirds Adapter	Panasonic	Black -		-	Фса.71×са.24 / Фса.2.8×са.0.94	ca.87 / ca.3.1	-	-
	DMW-MA2M	Panasonic	Black	-	-	Фса.61×са.13 / фса.2.4×са.0.51	ca.60 / ca.2.1	-	-
	DMW-MA3R	Panasonic	Black	-	-	Фса.67×са.33 / Фса.2.64×са.1.3	ca.90 / ca.3.2	-	-



#### Four Thirds Adapters



Panasonic : DMW-MA1

Mount adapter to enable a Four Thirds lens to be mounted Mount adapter to enable a Four Thirds lens to be mounted on a Micro Four Thirds lens mount.

#### Classic Lens Adapters



on a Micro Four Thirds lens mount.

Panasonic : DMW-MA2M Mount adapter to enable an M-mount lens of Leica Camera AG to be mounted on a Micro Four Thirds lens mount.



#### Mount adapter to enable an R-mount lens of Leica Camera AG to be mounted on a Micro Four Thirds lens mount.

Panasonic : DMW-MA3R

# Mobility Change Movies.



#### Professional Cameras



Pocket Cinema Čamera 4K

Innovative Camera Systems



ZENMUSE X5S

Blackmagic

Micro Cinema Camera





Blackmagic Micro Studio Camera 4K

Blackmagic Studio Camera







OSMO PRO OSMO RAW

Photron



**C**JI



MEMRECAM MX M-CamMFT

## Panasonic JVCKENWOOD KPI





10mm T2.1 CINE / 25mm T0.95 CINE II 35mm T0.95 CINE II / 50mm T0.95 CINE



**INSPIRE 2** 



Professional Camera Systems

1000

C,

























DJI MFT 15mm F/1.7

ASPH Prime Lens





























SVCam-EXO »Tracer« SVCam-EVO »Tracer«



SLR Magic



HORSEMAN TS-pro

Tokina (Kowa) SLR Magic



Hyper Prime



28

GY-LS300CH

AG-AF105A



11-16 T3 CINEMA LENS



8.5mm T3.0 / 12mm T1.9 / 25mm T1.9

\* These products also accept the use of lenses and cameras compliant with the Micro Four Thirds System, However, as there are functional restrictions with certain models, please consult the manufacturer of each product for details, \* For inquiries about Tokina 11-16 T3 Cinema lens, please contact KPI (Kenko Professional Imaging Co., Ltd.).













Express yourself in more ways than ever M.Zuiko Lenses

#### 5-axis Sunc IS

Incorporating an image stabilization mechanism, the M.ZUIKO DIGITAL ED 300mm F4.0 IS PRO has an image blurring compensation effect equivalent to up to 4 shutter speed steps\*1 and the M.ZUIKO DIGITAL ED 12-100mm F4.0 IS PRO an effect equivalent to up to 5 shutter speed steps\*2 with the lens alone. When combined with a camera featuring 5-axis image stabilization, the stabilization effect can be expanded to as many as 7.5 steps\*3 - quite simply the world's top class. This unprecedented stabilization performance assures reliable handheld shooting free from the effects of camera shake even in super-telephoto and zoom shooting.

"1: CIPA standard compliant, under shake applied in 2 axes (yaw/nitch) 1. On estantisatio comprant, under strake apprecimie zowe (sawr prich).
2. CPA stantisatio comprant, under strake apprecimient in 2 avec (sawr prich) at a focal length of 100mm (equivalent to 200mm with 35mm camera).

2. Otry standard complant, unier stade appled in z ales (yav/pick) as a rutar region or forum regionarem a zoomi win summ canera). 3 (DPA standard complant, unier stade appled in z ales (yav/pick)) Camera body: E-MIX, Lens: M.ZUKK0 INGTALED 12-100mm IS F4.0 PR0. Focal length 100mm (equivalent to 200mm with 35mm camera). With image statistication OFF during half reses of statistication to the fast.

#### Special optical glass lens elements support high image quality in a compact design

Olympus is the world's first manufacturer to successfully mass-produce the sophisticated DSA (Dual Super Aspherical) lens, which features aspherical surfaces on both sides and an extremely large ratio between the center thickness and peripheral thickness. The aspherical design delivers excellent imaging performance by precisely compensating for various aberrations including spherical aberrations, distortions and comatic aberrations. Because this configuration enables effects that would normally require several ordinary lens elements, it makes possible an ultra-compact design. In addition, Olympus adopts a variety of special optical lenses fabricated based on full command of the inherited optical and other advanced technologies, such as the EDA and Super ED lenses, to contribute to the coexistence of high image guality and compact sizes of M.ZUIKO lenses.

ED-DSA lens (Extra-low Dispersion Dual Super Aspherical lens)

Lor Sov. (Lett) Lettra-ion uppersion Duci Super Aspherical (Lens) By incorporating ED (Extra-low Uppersion) glass in a DSA (Duci Super Aspherical) lens, the ED-DSA lens manifests the features of both. With the high color aberration compensation capability of the ED lens and the high multi-aberration (spherical, Trane and astignations aberrations) of the DSA here. The ED-DSA lens the unit-aberration (spherical, Trane and astignations aberrations) of the DSA here. The ED-DSA lens the unit-aberration (spherical, Trane and astignations aberrations) of the DSA here. The ED-DSA lens the performance.

EDA lens (Extro-low Dispersion Aspherical Lens) This is an ultrahiph-performance lens with an aspherical design that uses ED glass material featuring excellent triomatic adarration correction characteristics to ensure excellent imaging performance, While the ED glass compensates for chromatic adarration, the aspherical design effectively compensates various other aberrations including spherical adversion, site of the adversion and comfact adversions in a spherical design effectively compensates various other aberrations including spherical adversions, distortion and comfact adversions.

#### Super ED lens (Super Extra-low Dispersion lens)

Support Lot Cetta Support extract-low Utspersion (ens) This lens is made of Support Dajass that has optical properties very close to fluorite and even better chromatic aberration compensation capability than the ED lens. With a nolicably lower change in refractive index in the weekingths from bito re detth and an ordinary optical lens, the support ED lens significantly reduces the chromatic aberrations that cause color bleeding and contrast deterioration and offers sharp, high-contrast imaging performance.





#### ED lens (Extra-low Dispersion lens)

ED LERIS Listrat-ow Dispersion Less The EU hera lab has properties close to fluorite. With a lower change in refractive index in the wavelengths from blue to red than an ordinary optical lares, the ED lens significantly reduces the chromatic aberrations that cause color bleeding and contrast deterioration and offers sharp, high-contrast imaging performance.

E-HR lens (Extra-low Dispersion & High Refractive Index lens) This lens is made of an extra-low dispersion lens material similar to that used in the ED lens. While it is capable of reducing chromatic aberrations, the high refractive index allows this lens to compensate for other types of aberrations as well.

Super HR lens (Super High Refractive Index Lens) The very high light refractivity of this lens provides it with a higher aberration compensation capability as well as smaller implementation size than the HR lens.

HR lens (High Refractive Index tens) The high reflectivity of this lens provides it with a high aberration compensation capability as well as small implementation size.

HD Lens (High Refractive Index & Dispersion Lens)

romatizing lens, this lens enables both a high chromatic aberration compensation and size reduction.

# With their outstanding imaging capabilities, Lumix and Leica lens technologies deliver superb picture quality







#### LEICA DG Lens

Leica, the pioneer of compact camera systems, has long impressed professionals the world over with its lenses. Its worldwide fame as a manufacturer of precision optical devices is built on a constant stream of innovations and inventions that go back more than a century. The LEICA DG lens designed for Panasonic's LUMIX G Series is another innovation made possible by LEICA's command of the latest technology in optics and mechanisms. Natural imaging performance with rich gradations throughout the image plane creates an extraordinary sense of texture so real you can almost touch it. The result is extraordinary expressive power that will allow you to truly realize your creative vision.

#### Aspherical Lenses

To assure superior image guality while reducing size and weight, each LUMIX G / LEICA DG lens features a number of appherical lenses that effectively prevent lens aberrations. such as spherical or distortion aberration. Each aspherical lens has the effect of several spherical lenses, so a higher magnification ratio can be achieved with fewer lenses. The result is smaller overall size and weight. Aspherical lenses are extremely difficult to produce, however, because they demand high dimensional accuracy. In the past this restricted the applicable lens shapes and materials, but Panasonic has made great strides in this area. Our Yamagata Plant began developing cutting-edge production technologies for molded lenses early on, and today the plant manufactures a wide variety of lenses, including concave lenses that have a large difference in thickness and measure a mere 0.3mm at the thinnest part. The aspherical lenses with superb image rendering ability produced at this plant are now in widespread use.

#### Image stabilization by interlocking the body and lens - Dual I.S.2 / Dual I.S.

With real-time interlocked control of the 5-axis Body Image Stabilization (B.I.S.) and the 2-axis Optical Image Stabilizer (0.I.S.), Dual I.S. offers powerful support for users who need blur-free high-definition images. While B.I.S. on its own has difficulty stabilizing telephoto side images as the focal length is increased, Dual I.S. is able to effectively stabilize the image in the medium telephoto range, as well as throughout the telephoto ranges by interlocking the five axes in the body and the two axes in the lens.



# Introducing Sigma's all-new DN series of lenses -the ultimate lenses for mirrorless interchangeable lens cameras

#### Mirrorless-camera-dedicated DN Lenses

Optimized for exclusive use with mirrorless cameras with short flange back, SIGMA's DN lens series was first introduced in early 2012 with the release of the SIGMA 30mm F2.8 EX DN and SIGMA 19mm F2.8 EX DN, which both featured high performance, compact design, and quiet operation. In 2013, SIGMA added the 60mm F2.8 DN | Art was added to the lineup. Now known as the Art line, the rejuvenated series included wide-angle, standard and medium-telephoto models. In 2016, SIGMA launched a new series, starting with the "standard" 30mm F1.4 DC DN | Contemporary which boasted a large F1.4 aperture combined with a streamlined, compact profile. The Contemporary lineup was soon expanded with the "wide-angle" 16mm F1.4 DC DN | Contemporary in 2017 and the "medium-telephoto" 56mm F1.4 DC DN | Contemporary in 2018.

## F1.4 DC DN lens with large-aperture

The high optical performance and compact, lightweight profile that defines the Contemporary line have been inherited by this new DN lens. Taking advantage of all the latest technologies, including the latest optical design, advanced techniques for correcting aberrations inside the camera, and quiet, fast auto focusing, this lens captures bright, exquisitely detailed images. And since the design also takes movie shooting into consideration, features like an optical design and a stepping motor compatible with movie AF enable smooth, natural auto focusing during movie shooting. The lens is also compatible with face- or eye-priority AF in the camera, making it possible to keep the subject's face or eyes in focus even when the subject moves during shooting. All of this in a compact, easy-to-operate design that offers F1.4 brightness, a generous defocusing effect and high image quality.

## To offer excellent products

For evaluation of lens performance, the unique MTF test instrument A1\* employing the 46-mega-pixel FOVEON direct image sensor was developed. This has made it possible to inspect high-frequency components that were previously undetectable. All SIGMA products are subjected to the A1 100% inspection before shipment to ensure maximum performance. "A1: Alzu 1

#### "Made in Japan"

All Sigma's manufacturing plant, everything right down to molds and parts is carried out under an integrated production system. We are now one of the very few manufacturers whose products are solely "made in Japan". We like to think our products are somehow imbued with the essence of our homeland, blessed as it is with clean air and water, and focused, hard-working people. We pride ourselves on the authentic quality of Sigma products, born of a marriage between highly attuned expertise and intelligent, advanced technology. Our sophisticated products have satisfied professionals and lovers of photography all over the world, because our manufacturing is based on genuine craftsmanship, underpinned by the passion and pride of our experts.





# The "Lichtriesen" of Voigtländer - Nokton series



NOKTON 10.5mm F0.95 Aspherical



NOKTON 17.5mm F0.95 Aspherical



NOKTON 25mm F0.95 Type II



NOKTON 42.5mm F0.95

# Four of the Voigtländer lenses are specifically designed for use on Micro Four Thirds-cameras.

**They are real stars – the "Lichtriesen" of Voigtländer –** Serving as a so-called "standard lens", the Nokton F0.95 / 25mm Type II provides pictures that correspond to the angle of view of the human eye. Aperture is critical to the impression that people receive from a photograph. The extremely fast F0.95 aperture makes it easy for you to capture stunning, crystal-clear images under virtually any conditions. By using a shallow depth of field, you can create a series of different impressions from the same scene. The superb bokeh of the Nokton makes the subject stand out for extraordinary overall results.

Video- and film-making enthusiasts will be especially impressed by the Selective Aperture Control System featured on Nokton Micro Four Thirds-lenses. This enables smooth, stepless and noiseless changing of the aperture.

Another highlight of four lenses is the very short closest focusing distance. At macro setting, coupled with the fast aperture, this gives you tremendous scope for image design.

With their large, fast aperture, these lenses are extremely bright, making them able to operate very effectively in low light. With a Nokton lens, you'll suddenly find yourself seeking out difficult lighting conditions such as those at dawn or under heavy clouds, so that you can capture beautiful atmospheric images.

The outstanding manufacturing quality of these lenses puts them at the top of their class in every respect. A smooth turning focus ring and click-response aperture ring reflect the high precision of our manufacturing process.









# Tamron's constantly evolving high-magnification zoom lenses have finally arrived in the world of Micro Four Thirds

## 14-150mm F/3.5-5.8 Di III Model C001

The essence of Tamron technology in a compact, all-in-one™ zoom that minimizes aberrations and maximizes image quality

The optical design of Tamron 14-150mm includes one LD (Low Dispersion) glass element, two AD (Anomalous Dispersion) glass elements, two Molded-Glass Aspherical elements, and one Hybrid Aspherical element. This formula reduces aberrations to a bare minimum

formula reduces aberrations to a bare minimum to achieve exceptional class-leading image quality. The 14-150mm zoom is the fruit of Tamron's 20+ years of experience in designing and manufacturing world-class all-in-one zoom lenses.

Building an impressive 10.7X zoom range into an ultra-compact lens body is made possible by adopting a more sophisticated multi-stack-cam layout. This advanced cam layout draws on Tamron's extensive engineering expertise, which is focused on innovative space-saving zoom cam structures.

## A Stepping Motor for quick, quiet auto-focusing

The stepping motor provides fast, quiet, and comfortable auto focus. The stepping motor's actuator allows precise control of angular rotation, and since it drives the focusing mechanism directly without any intermediary reduction gear, it is also exceptionally quiet.

These features also give the lens a seamless, fluid auto-focusing action when shooting video.



# Stepping Motor Schematic Diagram

# Kowa Micro Four Thirds lenses – carrying on the tradition of the prestigious PROMINAR brand

### PROMINAR - A half century of excellence -

Beginning with the Kalloflex Automat twin-lens reflex in 1954, Kowa Optical Works produced a succession of one-of-a-kind cameras for about 25 years, culminating with the Kowa Super 66. For over half a century that tradition of original design and advanced technology has been diligently maintained until finally reborn under the name of PROMINAR Micro Four Thirds lenses.







#### PROMINAR - Inherited design concept -

"To reproduce natural colors as they are seen by the human eye" – this is the key concept driving the design of Kowa PROMINAR lenses. Comprising XD (eXtra-low Dispersion) lens, high-precision aspherical lenses and a multilayer film coating, these lenses are able to capture brilliant images with extremely accurate color reproduction, crisp high resolution and the lowest possible distortion all the way to the edges.

## PROMINAR - The quality of tradition -

Crafted individually by master artisans who fabricate each part individually, then carefully assemble and inspect them, these lenses are reminiscent of a bygone era. Metallic materials are painstakingly shaved to produce a lens with a luxurious texture that feels good to the touch and provides the precision response you would expect from a "made-in-Japan" product.

#### PROMINAR

still picture and movie shooting.

Technologies leading the way to what's next –
 The use of a 9-blade circular aperture diaphragm enables beautiful and natural defocusing effects appropriate to a PROMINAR lens. The aperture ring has a

dual link iris system with click/silent switching capability compatible with both





Blackmagic Pocket Cinema Camera 4K

# New style of movie recording made possible by the Blackmagic design

Blackmagic Pocket Cinema Camera 4K

#### Introducing the next generation handheld 4K digital film camera!

The revolutionary new Blackmagic Pocket Cinema Camera 4K is the camera you've been asking for! It features an all new handheld design that puts the latest advanced digital film technology into the palm of your hand! The Blackmagic Pocket Cinema Camera 4K has a Fourthirds size sensor, 13 stops of dynamic range and dual gain ISO up to 25,600. That means you get stunning HDR images and incredible low light performance! The external controls give you quick access to essential functions, while the large 5 inch touchscreen makes it easy to frame shots, focus accurately and change camera settings. Images are recorded onto standard SD/UHS-II or CFast 2.0 cards in RAW and Pro Res at up to 120 frames per second! In addition, the Blackmagic Pocket Cinema Camera 4K has an MFT lens mount, built-in microphones, mini XLR input, full sized HDMI, 3D LUT support, Bluetooth, USB-C Expansion Port and more!

#### Blackmagic Micro Cinema Camera

Introducing the Blackmagic Micro Cinema Camera, a miniaturized Super 16mm digital film camera with 13 stops of dynamic range and a revolutionary expansion port with PWM and S. Bus inputs! You can operate Micro Cinema Camera remotely and capture the action anywhere by using commonly available model airplane remote controllers and video transmitters! Imagine adjusting focus, iris and zoom wirelessly! Micro Cinema Camera is a true digital film quality camera with up to 13 stops of dynamic range, an MFT lens mount and built in RAW and Pro Res recording!

#### Blackmagic Micro Studio Camera 4K

The Blackmagic Micro Studio Camera is an incredibly small Ultra HD studio camera that can be remote controlled via SDI and completely customized so you can mount it virtually anywhere! You get a broadcast quality Ultra HD sensor, MFT lens mount, built in primary color corrector, talkback, tally and a unique expansion port that features PTZ control, lens control and more! Micro Studio Camera is the perfect camera for live studio production, sports flyovers and hidden camera work in both HD and Ultra HD!



Blackmagic Micro Cinema Camera

Blackmagic Micro Studio Camera 4K





4K Camcorder GY-LS300CH

JVCKENWOOD

# Super 35 CMOS image sensor creates professional 4K images

JVC



#### JVC's unique variable scan mapping allows you to dynamically map the pixels on the GY-LS300 4K image sensor to your target output resolution. It enables

view for a varietu of lenses

use of a wide variety of high quality lenses maintaining their native field of view without vignetting.

Variable Scan Mapping maintains native anale of

This feature, coupled to the zoom control capabilities of the camcorder, allows you to magnify the image of fixed focus lenses, or extend the range of zoom lenses while shooting.

#### JVC Log (J-Log1) Gamma Modes for Truly Cinematic Results and HDR solution

JVC provides the Log Gamma modes, expanding the recorded image dynamic range by 800% with film-like latitude by preserving more information over the entire dynamic range of the sensor for grading and manipulation in postproduction. In this gamma mode, 80% coverage of the "ITU-R BT.2020" wide color space is possible. JVC provides 3 type LUTs converting J-Log1 to color gamut of "ITU-R BT.709", "ITU-R BT.2020", "ITU-R BT.2100 (HDR Hybrid Log Gamma)" for color grading in post. These LUTs expand utility of J-Log1 including HLG workflow, and give you the opportunity to create truly cinematic results and HDR solution.

# Cinema 4K, Cinema 2K recording for the ultimate cinema look, and more...

Cinema 4K (4096 x 2160) and Cinema 2K (2048 x 1080) with 17:9 aspect ratio recording expand GY-LS300's range of applications, for cinema quality documentaries or for film-quality resolution and presence.

#### - New DCI-LUTs

New LUT files are released which convert J-Log1 video to color gamut of "DCI-X'Y'Z'" or "DCI-P3(R'G'B')", digital cinema standard. "DCI-X'Y'Z'" LUT files enables color grading with as wide color space as DCP for cinema theater.









# The first GigEVision industrial camera with controllable Micro Four Thirds lenses

#### The SVS-Vistek Tracer Series

In 2014, the SVS-Vistek Tracer series was the first GigEVision industrial camera with controllable Micro Four Thirds lenses. In 2018 SVS-Vistek added several new cameras with sensors up to 20 MP. High-quality sensors from Sony and ON Semiconductor are the perfect optical match for the Micro Four Thirds standard. The Tracer series is an extremely compact all-in-one solution for situations requiring different distances and picture details in machine vision. The GenICam interface permits full control of focus, aperture and zoom. The camera functions are supplemented with an integrated multi-channel flash control with a maximum output current of up to 3A. A comprehensive feature set for industrial machine vision including burst mode, Safe Trigger and PLC functions simplifies integration even in the case of demanding projects.

# Birger Engineering supports the use of Micro Four Thirds System and Four Thirds System lenses in "non-traditional applications"

#### Remote and Automated Control

Birger lens control systems enable the remote and automated control of low cost consumer and professional camera lenses. These control systems are utilized in the Machine Vision, Broadcast, Security, Surveillance and Entertainment markets. Closed loop control and feedback with a high degree of precision and repeatability for focus, aperture and zoom. Now supporting Micro Four Thirds System, and Four Thirds System lenses.

With the addition of a Birger controller, Micro Four Thirds lenses can be a perfect match for sensors and cameras that would typically be provided with a C-mount or CS-mount interface. Typically, the Four Thirds System lenses are faster, sharper, smaller, and more cost effective than photographic lenses designed for a larger image circle. Unlike lenses made specifically for these markets, Four Thirds System lenses with a Birger controller allow for complete automation of all aspects of image acquisition.

#### **EVO Tracer**

Complex industrial machine vision in tandem with high speeds is the domain of the EVO Tracer. Dual GigE M12 connectors ensure robust and error-proof field cabling. RS232 and RS422 interface supplement the digital inputs. The state-of-the-art Global Shutter CCD sensors from ON Semiconductor with 4 or 8 mega pixels achieve data rates of up to 240 MB/s.



#### EXO Tracer

EXO is the platform for high-resolution CMOS industrial cameras with MFT lenses. The EXO304 Tracer with the 12-megapixel Sony IMX304 sensor or the EXO183 Tracer with 20 MP and 5 tps are available for immediate delivery. The Standard RJ45 Ethernet and Hiros 12-pin connector ensure maximum physical compatibility. A sharply enhanced I/O interface with a 4-channel flash controller, optical input and an RS232 interface satisfy even the most demanding scenarios in industrial automation.





#### **BEI** Device Interface Software

Control your lenses from a computer running Mac OS or Windows using the "BEI Device Interface Software". This is a free download from the Birger website. Or, control your lenses using a simple command protocol that is the same, regardless of lens manufacturer or lens mount type. This Birger protocol is open, and insulates the user from any lens compatibility or lens platform differences. Birger offers software updates free for the life of the platform.

#### "Any Lens. Any Camera."

Birger provides mechanical and electrical adapters for dozens of different camera types and industry standard interfaces. The connection to the computer controlling the adapter can be RS-232, USB, or Ethernet, allowing for control from as far as half a world away. The Birger command interface is supported by many of the world's leading Machine Vision camera companies. Now, without any additional software engineering work, these same companies can offer support for Micro Four Thirds System, and Four Thirds System lenses, with this new generation of controllers from Birger.



# Making a difference in Micro Four Thirds lenses by bridging the gap between photo and cinema

#### SLR Magic

From humble beginnings of manufacturing Toy Lens for interchangeable lens cameras, SLR Magic now offers high quality optics for the Cinema, Broadcast and Photo industries. SLR Magic is also a proud member of the Micro Four Thirds consortium and are committed to producing world class products for creative professionals, photographers and cinematographers.

#### Magical Speeds :

Amongst a comprehensive range, SLR Magic carries ultra fast speciality lenses from T0.95 for all your low light requirements. SLR Magic offers a plethora of focal lengths at super fast speeds without compromising sharpness and clarity.



#### Photo equipped while made for cinema :

Almost all our lenses are form fitted with precision made 0.8 pitch lens gears for cinema requirements, one of very few offerings in the ecosystem of Micro Four Thirds lenses. This provides all the professional functionality of cinema lenses and allows camera assistants and focus pullers to map the lens with follow focus systems.

#### Anamorphic Magic :

SLR Magic have been manufacturing anamorphic adapters for use with Micro Four Thirds lenses but were the first company ever to offer an incredibly cost effective anamorphic prime lens set to be used with Micro Four Thirds system for both creative professionals and independent filmmakers to utilise and experience the aesthetics of wide screen content and signature flares.





# Benefits of Micro Four Thirds

#### Benefit 1

#### **Compact and Lightweight System**

Traditional interchangeable lens SLRs use a mirror box to ensure that the photographer can look through the viewfinder and see exactly what will be captured. However, the image viewed on the focusing screen after being reflected by the mirror is not the same as the image formed on the film or image sensor surface. Furthermore, this design is a major factor contributing to increasing the size and weight of the camera.

The Micro Four Thirds camera eliminates the mirror box and brings the high image quality of the Four Thirds standard to a broader range of applications thanks to the more compact size and optimized video recording facility. Micro Four Thirds is a new standard that has greatly expanded the photographer's freedom to explore various possibilities that would have been impossible with traditional interchangeable lens SLRs.



# Benefit 2

# Optical Design that Provides Mobility and Image Quality

However good the image sensor and processing engine are, image quality will be inferior if the lens is of poor quality. The size of the Micro Four Thirds image sensor is based on the minimum size limit for a lens that can be easily carried, while still providing high image quality.

The light passing through the lens is output from the output lens (rear-end lens) and forms a circular image on the imaging plane (image sensor). The circular area that contains an accurate image is referred to as the image circle. In most cases, the sensor is sized so that it can deal with image deformation due to low light intensity outside the image circle. However, the area used in actual shooting is the area called the effective pixel area, which is inside the image circle. The size of this area is defined as the effective sensor size. Diagram O shows the relationship between the image circle and effective sensor size. Due to the strict physical principles between the light passing through the lens and the subsequent output from the lens, it is generally necessary to design a lens with a large dimater and length in order to obtain a large image circle. In addition, the flange back should also be optimized to avoid unnatural refractions of light.

Micro Four Thirds lenses have a flange back about half the size of those used in Four Thirds lenses while using a sensor that's the same size ①. The mount diameter has also been reduced by about 6 mm to further support lens size reduction ②.

Theoretically, a short flange back or back focus can facilitate improvement of wide-angle lens performance by rendering the front and rear of the lens symmetrical. However, if the flange back is extremely short compared to the diagonal length of the sensor, undesirable effects such as distortion and deformation of peripheral image will be noticeable. Based on the physical principles described above, the Micro Four Thirds standard was developed by targeting the optimal balance between mobility and image quality by determining how much lens size could be reduced while maintaining the image quality.





# Specification

Number         Number<	Lens	Manufacturer	Color	35mm Equivalent Focal length	Splash / Dust Proof	Motorized zoom	Image Stabilizer* Cons	Lens struction	Angle of View	Number of Blades	Minimum Aperture	Closest Focusing Distance	Maximum Image Magnification	Filter Size	Diameter( $\phi$ ) x Length	Weight (g / oz.)	Lens Rear Cap	Lens Front Cap	Lens Hood (): Optional
Image: Solution (Solution (Soluti	M.ZUIKO DIGITAL ED 7-14mm F2.8 PRO	OLYMPUS	Black			-	- 14	4 - 11	114° - 75°	7(Circular aperture diaphragm)			0.12x(0.24x)	(mm)	Φ78.9×105.8 / Φ3.12×4.17		LR-2	LC-79	-
Bit Model Number 1988 100 100 100 100 100 100 100 100 100 1	EUMIX G VARIO 7-14mm F4.0 ASPH.			14-28mm	-		- 10	6 - 12				0.25 / 9.84	0.08x(0.15x)	-	Ф70×са.83.1 / Ф2.76×са.3.27	ca.300 / ca.10.58	Available (DMR-LRC1)		-
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Normality of the second seco	M.ZUIKO DIGITAL ED 9-18mm F4.0-5.6	OLYMPUS	Black	18-36mm	-	-	- 1	12 - 8	100°- 62°	7(Circular aperture diaphragm)	22		0.1x(0.2x)	52		i) 155 / 5.5	LR-2	LC-52C	(LH-55B)
Image: Note:	LUMIX G VARIO 12-32mm F3.5-5.6 ASPH. MEGA 0.I.S.	Panasonic	Black,Silver	24-64mm	-	-	Yes 8	8 - 7	84°- 37°	7(Circular aperture diaphragm)	22		0.13x(0.26x)	37	Φ55.5×ca.24 / Φ2.19×ca.0.94 (when retracted)	ca.70 / ca.2.47	Available (DMR-LRC1)	Available (DMW-LFC37)	-
No.2         No.2 <th< td=""><td>LUMIX G X VARIO 12-35mm F2.8 II ASPH. POWER 0.I.S.</td><td>Panasonic</td><td>Black</td><td>24-70mm</td><td>Yes</td><td>-</td><td>Yes 1</td><td>14 - 9</td><td>84°- 34°</td><td>7(Circular aperture diaphragm)</td><td>22</td><td></td><td>0.17x(0.34x)</td><td>58</td><td>Ф67.6×са.73.8 / Ф2.66×са.2.91</td><td>ca.305 / ca.10.76</td><td>Available (DMR-LRC1)</td><td>Available (DMW-LFC58)</td><td>Available</td></th<>	LUMIX G X VARIO 12-35mm F2.8 II ASPH. POWER 0.I.S.	Panasonic	Black	24-70mm	Yes	-	Yes 1	14 - 9	84°- 34°	7(Circular aperture diaphragm)	22		0.17x(0.34x)	58	Ф67.6×са.73.8 / Ф2.66×са.2.91	ca.305 / ca.10.76	Available (DMR-LRC1)	Available (DMW-LFC58)	Available
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No.         No. <td>M.ZUIKO DIGITAL ED 12-200mm F3.5-6.3</td> <td>OLYMPUS</td> <td>Black</td> <td>24-400mm</td> <td>Yes</td> <td>-</td> <td>- 10</td> <td>6 - 11</td> <td>84°-6.2°</td> <td>7(Circular aperture diaphragm)</td> <td>22</td> <td></td> <td></td> <td>72</td> <td>ф77.5×99.7 / ф3.05×3.93</td> <td>455 / 16.05</td> <td>LR-2</td> <td>LC-72D (LC-72C)</td> <td>LH-76C (LH-76B)</td>	M.ZUIKO DIGITAL ED 12-200mm F3.5-6.3	OLYMPUS	Black	24-400mm	Yes	-	- 10	6 - 11	84°-6.2°	7(Circular aperture diaphragm)	22			72	ф77.5×99.7 / ф3.05×3.93	455 / 16.05	LR-2	LC-72D (LC-72C)	LH-76C (LH-76B)
Bit         Description         Descripion <thdescription< th=""> <thdesc< td=""><td>M. ZUIKO DIGITAL ED 14-42mm F3.5-5.6 EZ</td><td>OLYMPUS</td><td>Black,Silver</td><td>28-84mm</td><td>-</td><td>Yes</td><td>- 8</td><td>8 - 7</td><td>75°- 29°</td><td>5 (Circular aperture diaphragm)</td><td>22</td><td>0.25 / 9.84 (at 42mm of focal length)*1</td><td>0.23x(0.46x)</td><td>37</td><td>(when retracted)</td><td>93 / 3.27</td><td>LR-2</td><td>LC-37B(LC-37C)</td><td>-</td></thdesc<></thdescription<>	M. ZUIKO DIGITAL ED 14-42mm F3.5-5.6 EZ	OLYMPUS	Black,Silver	28-84mm	-	Yes	- 8	8 - 7	75°- 29°	5 (Circular aperture diaphragm)	22	0.25 / 9.84 (at 42mm of focal length)*1	0.23x(0.46x)	37	(when retracted)	93 / 3.27	LR-2	LC-37B(LC-37C)	-
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Number 103         Number	LUMIX G VARIO 14-45mm F3.5-5.6 ASPH. MEGA 0.1.S.	Panasonic	Black	28-90mm	-	-	Yes 1	12 - 9	75°- 27°	7(Circular aperture diaphragm)	22		0.17x(0.34x)	52	Ф60×са.60 / Ф2.36×са.2.36	ca.195 / ca.6.88	Available (DMR-LRC1)	Available (DMW-LFC52)	Available
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Normality         Normal         Back         Storm         -					· ·	· ·													Available
Model         Model         Backs, Biver         Zerm         I         8         84*         Treader generation starting         22         0.02/7.87         0.080/0100         46         955-56-42/92.20.160         100/4.6         H2-2         LC-46/LC-489           LEXA DS INTRATE 25 ILASPH         Pressone         Back, Sker         Zomm         -         15         -         16         -         16         -         16         -         16         -         16         -         16         -         16         -         16         -         16         -         16 <td< td=""><td></td><td></td><td></td><td></td><td>Yes</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Available Available</td></td<>					Yes														Available Available
Process         Parasonic         Bick Short         2000         C - S         57         7/most metros signappi         22         0.18/1200         0.15/12.20         64         0.55/12.0.31         C - S5/12.0.31         C - S5/12.0.3         C - S5/12.0.31         C - S5/12.0.25         C - S5/12.0.25 <thc -="" 12.0.25<="" s5="" th="">         C - S5/12.0.25</thc>																	, manabio	, manaabro	(LH-48)
Lick Do SUMMULY Same FLA SPH.         Pansonic         Bask Share         Sign A Homme FLA SPH.         Pansonic         Bask Share         Sign A Homme FLA SPH.         Optimization and the second secon			Diadoit																(LII*40)
SRM         SIGM         Black         32mn         -         -         10-13         68.1*         90cadar servine disroppin         16         0.23/783         0.10(2,a)         67         972-8-37/72.28/3.43         399/13.9         10.711           M.ZUKO DIGTAL ED 17mm F1.2 BNO.         DLMMUS         Black.Sher         34mn         -         -         15-11         65°         90cadar servine disroppin         22         0.27/87         0.150(0.01         40         9057.53.57         22.89/2.28/1.40         309/13.0         U/14/2.3         LR-4         LC-461LC-468           NUCKTON 17.5mm F0.35 Skphercial         Vigitiander         Black         35mn         -         -         13-9         6.6°         7.0°cradar areure distroppin         16         0.27/7.87         0.250(0.50)         68         9653.43.57 (42.69.43.0         20/4.70.3.0         Available					-									46			Available (DMR-LRC1)	Available (DMW-LFC46)	Available
M.ZURO DIGITAL 17mm F1.8         OLYMPUS         Black Silver         34mm         -         -         0         65         7 Creade agents etageness         22         0.25 / 9.84         0.06/0.05/0         46         95/3-25.5 / 92.28:1.40         120 / 4.23         LB-2         LC-46(LC-488)           NORTON 17.5mm F1.03 Skghercal         Voigtlander         Black         35mm         -         -         613 - 9         64.6*         10         66         0.15 / 5.31         0.25x/0.50         46         463.4xa01 / 9.025x.35.5 / 92.28:1.70         Available         Availab	SIGMA 16mm F1.4 DC DN I Contemporary	SIGMA	Black	32mm	-	-	- 16	6 - 13	68.1°	9(Circular aperture diaphragm)		0.25 / 9.84	0.1x(0.2x)	67	ф72.2×91.1 / ф2.84×3.59	395 / 13.9	LCR II	LCF III 67	LH716-01
NORTON 17.5mm F0.95 Aspherical         Voigtlander         Black         35mm         -         -         13 - 9         64.6*         10         16         0.15 / 5.91         0.28x(0.5x)         58         Ф63.4×80 / Φ2.50×3.15         540 / 19.0         Available         Available           UMUX G 20mm F0.31 Sype II         Voigtlander         Black         50mm         -         -         7.5         57°         7/Croat agence stupment         16         0.27/78         0.33x(0.28)         52         Φ00.6X7/0 V2.48×ca.10         c.a87 / c.a.07         Available					Yes	-	- 18	5 - 11		9 (Circular aperture diaphragm)									LH-66C
LUMIX 6 20mm F1.7 II ASPH.         Panasonic         Black, Silver         40mm         -         -         7.5         5.7°         7 (Creatar agenue distriggin)         16         0.2 / 7.87         0.13x(0.25)         46         Φe63×ca25.5 / Q2.48×ca1.00         ce.8.7 / ca.3.07         Available (MW-LFC46)           MOXIDO 25mm F1.2 PRO         0.V/MPUS         Black         50mm         -         1.1         47.3°         10         16         0.37/16.81         0.1110.0220         62         ΦP07.42.75×.32         410         1.4         42.8         LeGabe           MZURO DIGTAL 02 25mm F1.2 PRO         0.V/MPUS         Black         50mm         -         1.9         1.4         47°         9/Coclear agenue distriggin)         16         0.3/11.81         0.1110.0220         46         Φ63×ca5.45 / Q2.48×ca2.15         ca.200 / ca.705         Available (MW-LFC46)           UMIX G 25mm F1.7 ASPH.         Panasonic         Black, Silver         50mm         -         8-7         47°         7/Coclear agenue distriggin)         22         0.257 / 9.84         0.110(0.28)         66         Φ60.8×ca5.47 / 42.48×ca2.15         ca.200 / ca.705         Available (MW-LFC46)           MUX G 0 25mm F1.2         MASTMA         Black, Silver         50mm         -         -         8.7         7/Co		0211111 00	Diddit,Oirfor	0 1111	· ·	· ·		· · · · · · · · · · · · · · · · · · ·				01201 0101	01004(01104)			1207 1120	611.6		(LH-48B)
NORTON 25mm F0.35 Type II         Voigtlander         Black         50mm         -         -         11 - 8         47.3°         10         16         0.17 / 6.69         0.26k(0.52k)         52         0.406.470 / 42.39×2.75         435 / 15.34         Available         Available           MD/LINO DIGITAL ED 5mm F1.2 PR0         01/WPUS         Black         50mm         -         -         9 - 7         47"         7(Condura areutre dispraym)         16         0.3 / 11.81         0.11 k(0.22k)         62         \$\phi 0.0 k(07.47 k(0.2 k) 4.82, 2.62 k(0.2 k)         46.00 \$\phi 0.0 k(0.0 k)         46.0 \$\phi 0.0 k(0.0 k) <td></td> <td></td> <td></td> <td>0011111</td> <td>•</td> <td>-</td> <td></td> <td></td> <td>0 110</td> <td></td> <td></td> <td></td> <td>OTEOR(OTON)</td> <td>00</td> <td></td> <td>0107 1010</td> <td>71141141510</td> <td></td> <td>Available</td>				0011111	•	-			0 110				OTEOR(OTON)	00		0107 1010	71141141510		Available
Prof         M2UKO DIGITAL ED 25mm F1.2 PRO         OLYMPUS         Black         Somm         Yes         -         -         -         9 -7         47°         7/Circular agentre dightragm)         16         0.3/11.81         0.11x(0.22x)         62         Φ70×87/42.75×3.42         410/14.5         LP-2         LLC-62F           LEICA DG SUMMLUX 25mm F1.4 ASPH.         Panasonic         Black.         Somm         -         -         9 -7         47°         7/Circular agentre dightragm)         16         0.3/11.81         0.11x(0.22x)         46         Φ608×ca.54.57/Q.248×ca.2.15         ca.200 / ca.70.41         Available (MM-LFCd)           V/M PADMINAR 25mm F1.8         Kowa         Black.Silver         Somm         -         -         8 -6         50.2°         9/Circular agentre dightragm)         22         0.257 / 9.84         0.15x(0.28)         46         Φ608×ca.54.27 / 0.26×a.7.4         4/Wailable         Available         Available <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td>Available</td></t<>													+						Available
Prop         ElicA DG SUMMILUX 25mm F1.4 ASPH.         Panasonic         Black         50mm         -         -         9-7         47°         7(Croader aperture diaphragm)         16         0.3 / 11.81         0.11x(0.22x)         46         963×ca.5.4.5 / 92.48×ca.2.15         ca.200 / ca.7.05         Available (DMR-LRC1)         Available (DMR					Yes														LH-66B
Person         Parasonic         Black-Silver         50mm         -         8 - 7         47°         70create agenture digatingam         22         0.25 / 9.84         0.14x (0.25x)         46         460 abscs.52 / 92.33xca.2.05         cal25 / ca.4.41         Available         Available <td>TI EICA DG SUMMILUX 25mm F1.4 ASPH.</td> <td>Panasonic</td> <td>Black</td> <td>50mm</td> <td>-</td> <td></td> <td>- (</td> <td>9-7</td> <td>47°</td> <td></td> <td>16</td> <td>0.3 / 11.81</td> <td>0.11x(0.22x)</td> <td>46</td> <td></td> <td>ca.200 / ca.7.05</td> <td>Available (DMR-LRC1)</td> <td>Available (DMW-LFC46)</td> <td>Available</td>	TI EICA DG SUMMILUX 25mm F1.4 ASPH.	Panasonic	Black	50mm	-		- (	9-7	47°		16	0.3 / 11.81	0.11x(0.22x)	46		ca.200 / ca.7.05	Available (DMR-LRC1)	Available (DMW-LFC46)	Available
M. ZUKO DIGTAL 25mm F1.8         OLYMPUS         Black. Silver         50mm         -         9 - 7         7/7°         7/0° reader agenture digategraph         22         0.22/0.25/9.84         0.12/0.22x1.65         137/4.83         L.P-2         L.C-46           BIGMA 30mm F1.4 0C DN L Contemporary         SIGMA         Black         60mm         -         -         9 - 7         39.6°         9/0° concert agenture digategraph         16         0.3/1.181         0.14/0.28x0         52         064.3.87.4 / 0.22.82.44         260.2         LCRII         CRIII         CRIII <thc< td=""><td>ម្លាំ ថ្មី LUMIX G 25mm F1.7 ASPH.</td><td></td><td></td><td>50mm</td><td>-</td><td>-</td><td>- 8</td><td>8 - 7</td><td>47°</td><td></td><td>22</td><td></td><td></td><td>46</td><td></td><td></td><td>Available</td><td>Available (DMW-LFC46)</td><td>Available</td></thc<>	ម្លាំ ថ្មី LUMIX G 25mm F1.7 ASPH.			50mm	-	-	- 8	8 - 7	47°		22			46			Available	Available (DMW-LFC46)	Available
SIGMA 30mm F1.4 DC DN I Contemporary         SIGMA         Black         60mm         -         -         9 - 7         39.6°         9(cheat agentue daptragm)         16         0.3 / 11.81         0.14 (0.28x)         52         Φ66.48×72.1 / 42.55×2.84         260 / 9.2         LCR II         LCF III 52           NORTON 42.5mm F1.2 ADD NUEF0.01S         Parasonic         Black         85mm         -         -         11 - 8         30.5°         10         16         0.23 / 10.60         0.25k(0.5x)         58         Φ66.43×74.6 / 42.53×2.94         571 / 20.14         Available         Available           LECA DG NOCTICRON 42.5mm F1.2 ASPH. POWER 0.LS         Parasonic         Black         85mm<-					•	•									1.00.00.000				Available
Norton 42.5mm F0.95         Voigtländer         Black         85mm         -         11-8         30.5°         10         16         0.23/9.06         0.25(0.5)         58         Ф664.3x74.6 / 42.53x2.9.4         571 / 20.14         Available         Available           LEGA DG NOCTIGON 42.5mm F1.2 ASPH. POWER 0.1S.         Panasonic         Black         85mm         -         Yes         14-11         29°         9(concur agenture diaphragm)         16         0.5/19.69         0.1X(0.2x)         67 $\phi74xca.76.8 / 42.91xca.3.02         ca.425 / ca.4.50         Available (DMW-LFG67)           MJUK 0 LGITAL ED 45mm F1.2 SPM, POWER 0.1S.         Panasonic         Black         85mm         -         Yes         10-8         29°         7(croater agenture diaphragm)         16         0.5/19.69         0.1X(0.2x)         67         \phi74xca.76.8 / 42.91xca.3.02         ca.425 / ca.4.59         Available (DMW-LFG67)           MJUK 0 LGITAL ED 45mm F1.2 SPM, POWER 0.1S.         Panasonic         Black         90mm         Yes         -         14-10         27°         9(concur agenture diaphragm)         16         0.5/19.69         0.1X(0.2x)         67         \phi57xc8.3/9.42,7xx3.34         410/14.5         LC-62F         LC-62F           MJUK D LGITAL ED 54mm F1.2         Black         112mm         -       $					· ·	· · ·													LH-49B
LECA DG NOCTICRON 42.5mm F1.2 ASPH. POWER 0.1.S.         Panasonic         Black         85mm         -         -         Yes         14 - 11         29°         9(Drodar genture digingam)         16         0.5/19.69         0.1x(0.2x)         67         \$\phi^2 + \cca.3.02         c.2.425 / ca.15.0         Available (DMW-LFC67)           LUMX 6 42.5mm F1.7 ASPH. POWER 0.1.S.         Panasonic         Black, Silver         85mm         -         Yes         10 - 8         29°         7(Crodar genture digingam)         22         0.31 / 12.00         0.2x(0.4x)         37         \$\phi5x ca.5.0 / 0.217 x ca.3.02         ca.42.5         Available (DMW-LFC67)           M_ZUKO DIGITAL ED 4 mm F1.2 FPD         01/MPUS         Black         90mm         -         -         9 - 8         27°         7(Crodar genture digingam)         16         0.5 / 19.69         0.11x(0.22)         37         \$\phi5x ca.5.0 / 0.217 x ca.3.34         110 / 14.5         LE-2         LC-37E           M_ZUKO DIGITAL ED 4 mm F1.2         01/MPUS         Black         90mm         -         -         9 - 8         27°         7(Crodar genture digingam)         12         0.5 / 19.69         0.11x(0.22)         37         \$\phi5x + 64/(0.42) 2x + 181         116 / 4.5         LE-2         LC-37E           SIGMA 56mm F1.4 0C DNI Contemporary					-	-			0010						10.000.000				LH586-01 Available
LUMIX 6 42.5mm F1.7 ASPH. POWER 0.1.5.         Panasonic         Black. Silver         85mm         -         1         -         Yes         10-8         29°         7(Croater aperture daphragm)         22         0.31 / 12.20         0.2V(0.4x)         37         Ф55×св.50 / Ф2.17×св.1.97         ca.130 / ca.4.59         Available         Available (DMW-LFC37)           M_ZUIKO DIGITAL ED 45mm F1.2 PRO         OLYMPUS         Black         90mm         -         -         9.8         27°         7(Croater aperture daphragm)         16         0.5 / 19.69         0.1% (0.2x)         37         Ф55×св.50 / Ф2.17×св.1.97         ca.130 / ca.4.59         Available (DMW-LFC37)           M_ZUIKO DIGITAL ED 45mm F1.2 PRO         OLYMPUS         Black         90mm         -         -         9.8         27°         7(Croater aperture daphragm)         22         0.5 / 19.69         0.1% (0.2x)         37         Ф55×cs.60 / Ф2.27×.334         410 / 14.5         LR-2         LC-63F           SIGMA 56mm F1.4 DC DNI Contemporary         SIGMA         91mm -         -         0.10-9         10-6         91/0rceater aperture daphragm         16         0.5 / 19.69         0.1% (0.2x)         37         Ф55×cs.61 / Ф2.2×.22         205 / 10.5         LR-2         LC-63F           M_ZUKO DIGITAL ED 75mm F1.8         0LYMUS																			Available
M         Wildle         Dig         M         Yes         -         14-10         27°         9 Glocular agenture daptragm         16         0.5 / 19.69         0.1x (0.2x)         52         Ф70x84.9 / 42.75×3.34         410 / 14.5         LR-2         LC-62F           M.ZUKO DIGITAL ED 45mm F1.2 PRO         0LYMPUS         Black         90mm         -         -         9-8         27°         7(croaler agenture daptragm)         22         0.5 / 19.69         0.11x (0.22x)         37         Φ56x46 / 02.2×1.81         116 / .41         LR-2         LC-37B           SIGMA 56mm F1.4 DC DN1 Contemporary         SIGMA         Black         110mm         -         -         10-6         21.9°         9(Croaler agenture daptragm)         16         0.5 / 19.69         0.11x (0.22x)         37         Φ56x46 / 02.2×1.81         116 / .41         LR-2         LC-37B           SIGMA 56mm F1.4 DC DN1 Contemporary         SIGMA         510mm         0.5 / 19.69         0.13x (0.26x)         55         Φ664x56 / 02.2×1.81         116 / .41         LC 41         LC 411         LC 58F(LC 58F(LC 51)         0.2x (0.2x)         4064x56 / 02.2x -2.72         205 / .0.5         LC 6.58F(LC 58F(LC 51)         LC 58F(LC 58F(LC 51)																			Available
PP         M_ZUKO DIGITAL, 45mm F1.8         OL/MPUS         Black. Sliver         90mm         -         -         98         27°         7(creater agentrare digatingam)         22         0.5 / 10.69         0.11% 0.22x         37         Φ656-44/ 0.22-1.81         116/.4         LP-2         LC-37B           SIGMA 56mm F1.4 DC DNI Contemporary         SIGMA         Black         112mm         -         0         9.9         82/.9         9/0colear agentrare digatingam)         66         0.5 / 10.69         0.13% 0.26h         55         Φ665.58.1 / Φ2.22-2.29         26.5 / 10.69         LC-37B           M_ZUKO DIGITAL ED Tomm F1.8         0L/MPUS         Black         150mm         -         0.1         9.0         60         0.5 / 10.69         0.13% 0.26h         55         Φ664.59.9 / 40.22.22.27         20.5 / 10.65         LC-37B         LC-37B <td< td=""><td></td><td>OLYMPUS</td><td></td><td>90mm</td><td>Yes</td><td>-  </td><td></td><td></td><td></td><td></td><td></td><td>0.5 / 19.69</td><td>0.1x(0.2x)</td><td>62</td><td>***************************************</td><td></td><td>LR-2</td><td>LC-62F</td><td>LH-66B</td></td<>		OLYMPUS		90mm	Yes	-						0.5 / 19.69	0.1x(0.2x)	62	***************************************		LR-2	LC-62F	LH-66B
M.ZUIKO DIGITAL ED 75mm F1.8         OLYMPUS         Black, Silver         150mm         -         -         10 - 9         16°         9(Dicutar aperture dispiragin)         22         0.84 / 33.07         0.1x(0.2x)         58         Φ64×69 / 92.52×2.72         305 / 10.76         LR-2         LC-58F(LC-61)           LEICA DG ELMARIT 200mm F2.8 POWER 0.I.S.         Panasonic         Black         400mm         Yes         -         Yes         15 - 13         6.2°         9(Dicutar aperture dispiragin)         22         1.15 / 45.28         0.2x(0.4x)         77         Φ87.4×ca.174 / 493.44×ca.6.85         ca1.245 / ca3.9 <sup>rd</sup> Available (DMR-LRC1)         Available (DMR-LRC1) <t< td=""><td><b>Z</b></td><td></td><td></td><td>0011111</td><td>ŀ</td><td>. ·</td><td></td><td>· · · · · · · · · · · · · · · · · · ·</td><td></td><td></td><td></td><td></td><td>+</td><td></td><td></td><td></td><td></td><td></td><td>(LH-40B)</td></t<>	<b>Z</b>			0011111	ŀ	. ·		· · · · · · · · · · · · · · · · · · ·					+						(LH-40B)
LECA DG ELMARIT 200mm F2.8 POWER 0.1.S.         Panasonic         Black         400mm         Yes         15 - 13         6.2°         9(Diceater appartume diaphragmi)         22         1.15 / 45.28         0.2×(0.4x)         77         0#87.4×ca.174 / 0#3.44×ca.6.85         ca.1245 / (za.43).4°         Available (DMW-LFC77)	· · · · · · · · · · · · · · · · · · ·	Or Gillion 1																	LH582-01
													+						(LH-61F)
M.ZUIKO DIGITAL ED 300mm F4.0 IS PRO 0LYMPUS Black 600mm Yes - Yes 17-10 4.1° 9(Circular aperture dispirage) 22 1.4/55.12 0.24x(0.48x) 77 0.24x(0.48x) 1,270/44.7 43 LR-2 LC-77B		Panasonic OLYMPUS																	Available Build in
M. CUNV DIGITAL EU SQUIIITE A SPH, MEGA OLS. Parasonic Black 60mm Yes 9-9 40° 7(crocate aperture daparture daparte daparture daparture daparture dapartu			Biddit	00011111	105		100 11	1 10					STE IN(STION)			112101111	6116	20110	Available
M_ZUKO DIGITAL ED 300mm 7.5 Marcin 2000 012/04/2014 2000 012/04/2000 012/04/2000 012/04/2000 012/04/2000 012/04/2000 012/04/2000 012/04/2000 012																			-
2 LEICA DG MACRO-ELMARIT 45mm F2.8 ASPH. MEGA 0.1.S. Panasonic Black 90mm Yes 14 - 10 27° 7( <i>Orcelar apprutue daptingani</i> ) 22 0.15/5.91/FULLU.0.5/19.69(LIMIT) 1.0x(2.0x) 46 Φ63×ca.6.2.5 / Φ2.48×ca.2.46 ca.225 / ca.7.94 Available (DMR-LRC1) Available (DMR-LR	LEICA DG MACRO-ELMARIT 45mm F2.8 ASPH. MEGA 0.I.S.	Panasonic	Black	90mm	· ·	- I	Yes 14	4 - 10	27°	7(Circular aperture diaphragm)		0.15 / 5.91(FULL) 0.5 / 19.69(LIMIT)	1.0x(2.0x)	46	ф63×ca.62.5 / ф2.48×ca.2.46	ca.225 / ca.7.94	Available (DMR-LRC1)	Available (DMW-LFC46)	Available
M.ZUKO DIGITAL ED 60mm F2.8 Macro         OLYMPUS         Black         120mm         Yes         13-10         20°         7(Circular aperture diaphragm)         22         0.19/7.48         1.0x(2.0x)         46         Ф56×82/42.20×3.23         185 / 6.53         LP-2         LC-46					Yes	L.													(LH-49)
2 LUMIX G 12.5mm F12 Panasonic Black 65mm * + + + + + + + + + + + + + + + + +	LUMIX G 12.5mm F12	Panasonic	Black	65mm *2	-	-	- 4 -	- 3 (x2)	37° *2	Fixed diaphragm	12(Fixed)	0.6 / 23.62	0.02x(0.1x)*2	-	ф57×ca.20.5 / ф2.24×ca.0.81	ca.45 / ca.1.59	Available (DMR-LRC1)	Available	-

\*1: 0.29 in certain focal length range. \*2: When setting the aspect ratio to 16:9 with DMS-GH2. \*3: Weight without the tripod adapter. \* Since Olympus incorporates image stabilizers in the bodies of its cameras, image stabilization is available with any lens. (Corresponding models: OLYMPUS OM-D series, OLYMPUS PEN series)

The compression level of product photographs shown in this catalog varies. Check the above tables for actual sizes.
 Specifications and design are subject to change without notice.