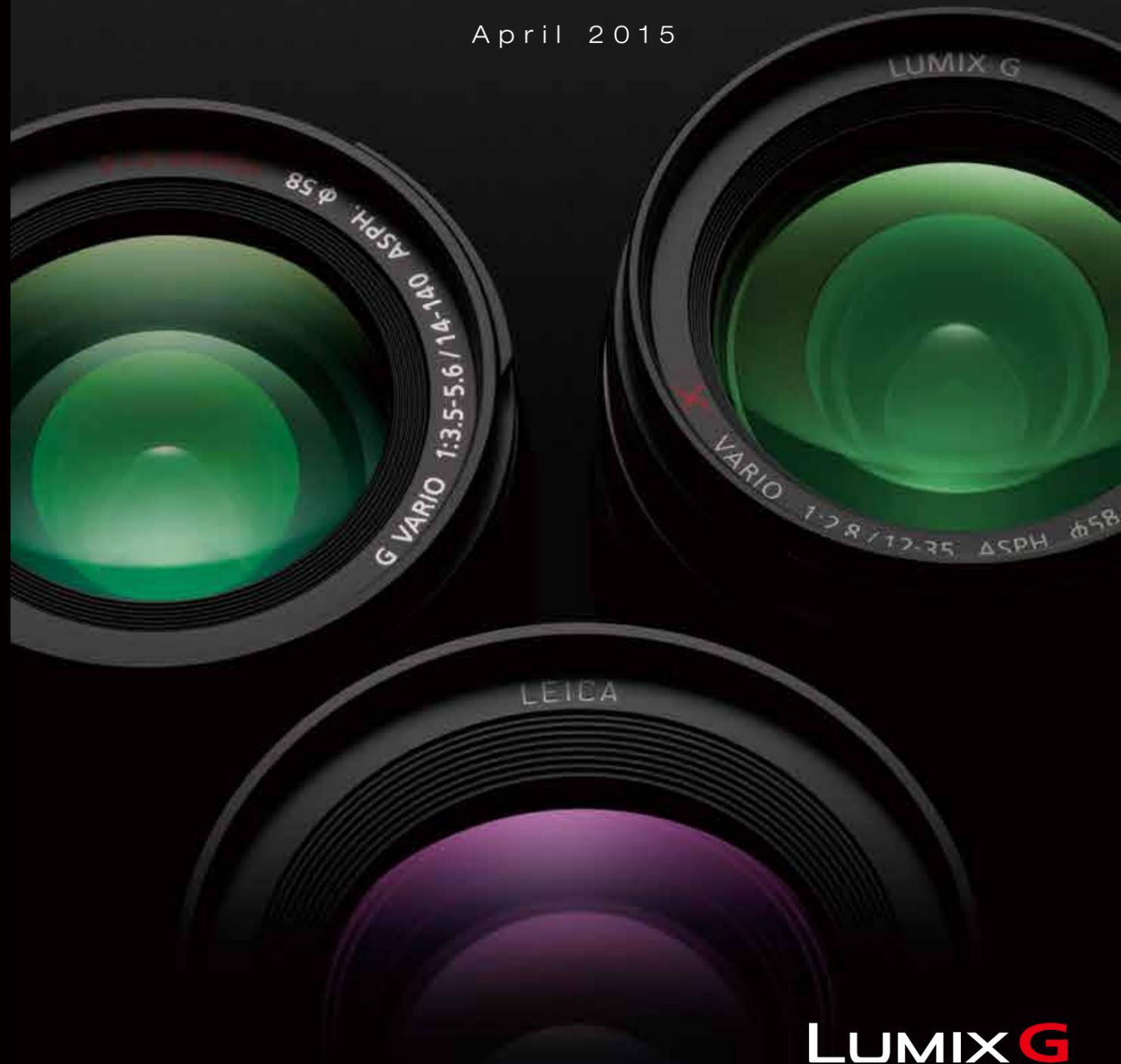


Panasonic

LENSES & ACCESSORIES

April 2015

CHANGING PHOTOGRAPHY
LUMIX G



LOCAL DEALER

Panasonic

Apr 2015 Edition

LUMIX G

The essence of aesthetics

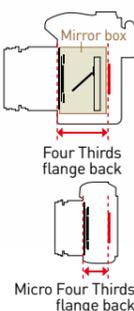
Already pioneers in the field of digital single lens mirrorless cameras, LUMIX's Micro Four Thirds lenses are once again breaking new ground. Combining state-of-the-art digital technology with cutting-edge optics, the new lenses offer uncompromising quality, exceptional image rendering, and an agility capable of capturing the most fleeting of moments, all in an amazingly compact format. From wide-angle to telephoto, the extensive range delivers top-class performance, whether you are shooting stills or high-quality video. Of one thing we are sure, this remarkable family of lenses will take your creativity to a new dimension.



A Breakthrough in Size and Weight: Mirrorless Configuration



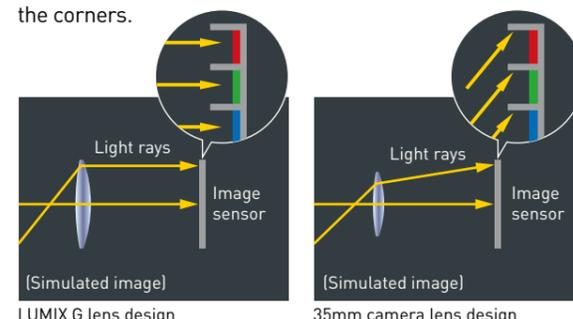
In developing LUMIX G, Panasonic set out to create a digital SLR camera system with truly superior mobility. This meant that both the camera body and all lenses had to be extremely compact and lightweight. LUMIX G's mirrorless configuration achieves exactly that, cutting the flange focal distance almost in half and reducing the body mount radius by 6 mm. With LUMIX G, you get a camera that is light in your hands, easy to maneuver, and a joy to use. And you get breathtaking pictures thanks to an image sensor that's identical in size to larger Four Thirds System standard cameras.



LUMIX G

A Digital Design that Delivers Beautiful Images from Corner to Corner

When a 35mm camera lens is used on a digital SLR camera, sharpness and light intensity can be lost and colors can bleed at the frame edges, where light enters at an angle. Wide-angle lenses are especially problematic since oblique light inclined at a large angle tends to enter the peripheral areas. Not with LUMIX G lenses. Created exclusively for digital use, LUMIX G lenses are designed so that light can enter only from straight ahead. You get superb rendering, with images that are bright, sharp and vivid all the way to the corners.



LUMIX G lens design

35mm camera lens design

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LEICA Lens

A producer of precision instruments for more than a century,

Leica was among the pioneers of still photography.

Today, Leica lenses have become a watchword for quality among professional photographers — a worldwide reputation gained thanks to the inventions and innovations Leica continues to develop across its product range.

The DG LEICA lenses, developed exclusively for the LUMIX G Series and incorporating state-of-the-art optical and mechanical components, represent another innovative step forward.

These technological advances ensure gradations remain rich and sharp across the entire frame, thereby giving an exceptionally delicate and natural rendering of reality and outstanding expressive power.

The resulting images are so life-like,

they look like you could reach out and feel the texture.

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42.5mm F1.2 (35mm camera equivalent: 85mm)

LEICA DG LENS



1/320 sec, F1.2, ISO200



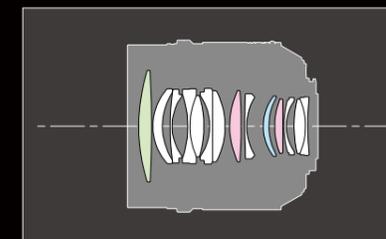
LEICA DG NOCTICRON 42.5mm / F1.2 ASPH. / POWER O.I.S. (H-NS043) **HD** Video Support **BLASO SUPPLY COATING** Premium Lens

The speed of the fully open F1.2 NOCTICRON enables the softly defocused background that is a hallmark of Leica lenses, in this large-diameter, medium telephoto lens

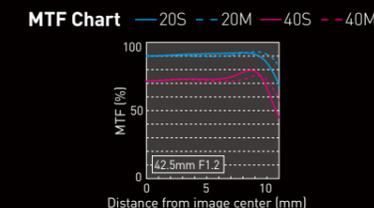
NOCTICRON speed is achieved by adhering to Leica's stringent optical standards. This single focus 85mm lens (35mm camera equivalent) has a total of 14 lens elements in 11 groups, including 2 aspherical lenses, 1 ED lens, and 1 UHR lens. The lens barrel is equipped with an aperture ring, enabling intuitive exposure adjustment. Its 240-fps drive also allows high-speed, high-precision AF. The round, 9-blade iris produces gently defocused images with a natural perspective, an exclusive 85mm (35mm equivalent) feature, for portraits. The included lens hood, which suppresses ghosts and flaring caused by sunlight, is crafted from joint-free aluminum to match the elegance of the Leica lens. The interior of the hood has a hairline finish that further helps to reduce light reflection.



- Lens construction = 14 elements in 11 groups
- Closest focusing distance = 0.5 m/1.64 ft
- Maximum image magnification = Approx. 0.1x (35mm camera equivalent: 0.2x)
- Filter size = 67 mm
- Dimensions = 74 [dia.] x Approx. 76.8 mm/2.91 [dia.] x 3.02 in
- Weight = Approx. 425 g/15.04 oz
- Supplied accessories = Lens hood, Lens storage bag



ASPH UHR ED



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

• LEICA is a registered trademark of Leica Microsystems IR GmbH. NOCTICRON is a registered trademark of Leica Camera AG. The LEICA DG lenses are manufactured using measurement instruments and quality assurance systems that have been certified by Leica Camera AG based on the company's quality standards.

15mm F1.7 (35mm camera equivalent: 30mm)

LEICA
DG LENS



1/5000 sec, F1.7, ISO200



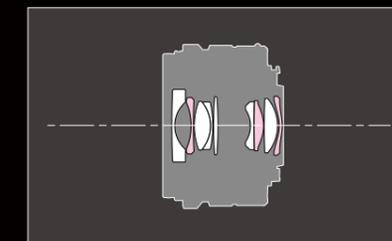
LEICA DG SUMMILUX 15mm / F1.7 ASPH. (H-X015)



Active Snapshot Shooting With a Compact, Lightweight, High-Quality F1.7

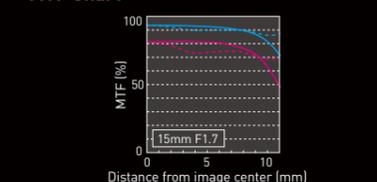
Having cleared Leica's stringent optical standards, this lens uses F1.7 SUMMILUX brightness to create photos with stunningly beautiful, softly focused backgrounds. It also features an aperture ring for easy adjustment of exposure and depth of field, and an AF/MF switch that lets you change the focus mode while framing your subject. Operation is highly intuitive, because you don't have to take your eye off the finder. And you get high performance in a compact size, with a total of 9 lens elements in 7 groups, including 3 aspherical lenses. Its excellent mobility makes this lens ideal for everything from landscapes to snapshots, capturing every scene with remarkable, true-to-life expression.

- Lens construction = 9 elements in 7 groups
- Closest focusing distance = 0.2 m/0.66 ft
- Maximum image magnification = Approx. 0.1x [35mm camera equivalent: 0.2x]
- Filter size = 46 mm
- Dimensions = 57.5 [dia.] x Approx. 36 mm/2.26 [dia.] x 1.42 in
- Weight = Approx. 115 g/4.06 oz
- Supplied accessories = Lens hood, Lens storage bag



ASPH

MTF Chart — 20S — 20M — 40S — 40M



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

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25mm F1.4 (35mm camera equivalent: 50mm)

LEICA DG LENS



©Daniel Berehulak

1/5000 sec, F1.7, ISO200



The high-speed F1.4 lens offers superb image rendering even in indoor or nighttime shooting. The exquisite soft-focusing effect of the Leica lens, which has mesmerized so many photographers around the world, turns ordinary scenes into beautiful, emotion-packed photos. This lens does a marvelous job at all times in all situations, both in everyday life and while traveling.



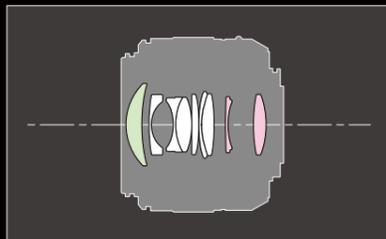
LEICA DG SUMMILUX 25mm / F1.4 ASPH. (H-X025)



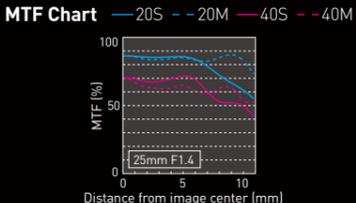
The Stunning Soft Focus of this 25mm F1.4 Single-Focal-Length Lens Charms and Surprises

This lens produces the effect that is unique to Leica. Its 3-element Inner Focus system's two aspherical lenses and an ultra high refractive (UHR) index lens boost rendering performance while keeping the body compact. Silent, high-speed Contrast AF focuses instantly, and a Nano Surface Coating minimizes ghosts and flaring. It promises you remarkable images and breathtaking transparency.

- Lens construction = 9 elements in 7 groups
- Closest focusing distance = 0.3 m/0.98 ft
- Maximum image magnification = Approx. 0.11x (35mm camera equivalent: 0.22x)
- Filter size = 46 mm
- Dimensions = 63 [dia.] x Approx. 54.5 mm/2.14 in
- Weight = Approx. 200 g/7.05 oz
- Supplied accessories = Lens hood, Lens storage bag



ASPH UHR



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

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45mm F2.8 (35mm camera equivalent: 90mm)

LEICA
DG LENS



1/200 sec, F2.8, ISO100



This macro lens does much more than make small things bigger. Not limited to beautiful soft focusing, it lets you bring the entire frame – from corner to corner – into sharp focus. That gives you the freedom to create a wide variety of compositions, from portraits to telephoto shots to landscapes, making this lens a true all-round performer.

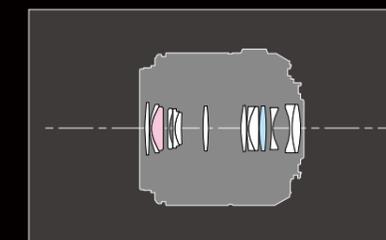


LEICA DG MACRO-ELMARIT 45mm /
F2.8 ASPH. / MEGA O.I.S. (H-ES045)

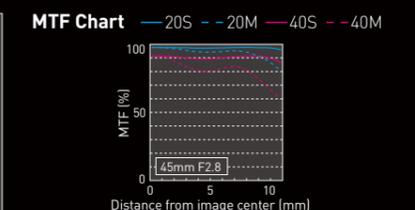
A Superior Macro Lens Brings Tiny Worlds into View

Designed and manufactured to meet Leica's stringent performance standards, this high-quality macro lens minimizes distortion, ghosts, flaring and decreased peripheral resolution. With 14 elements in 10 groups, including one aspherical lens and one ED lens, it provides stable contrast and high resolution all the way from 1:1 macro (35mm camera equivalent: 2x) to infinity. By using a floating Inner Focus system that shifts three groups of lenses, the elaborate focusing that's so essential to a macro lens has become both faster and quieter. Also featured is MEGA O.I.S., which fights blurring from hand-shake to help you capture clear, sharp images with everything from macro and medium-telephoto portraits to wide landscapes and long telephoto shots.

•Lens construction = 14 elements in 10 groups •Closest focusing distance = FULL: 0.15 m/0.50 ft LIMIT: 0.5 m/1.64 ft •Maximum image magnification = Approx. 1.0x (35mm camera equivalent: 2.0x) •Filter size = 46 mm •Dimensions = 63 [dia.] x Approx. 62.5 mm/2.48 [dia.] x 2.46 in •Weight = Approx. 225 g/7.94 oz •Supplied accessories = Lens hood, Lens storage bag



ASPH ED



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

•LEICA is a registered trademark of Leica Microsystems IR GmbH. ELMARIT is a registered trademark of Leica Camera AG. The LEICA DG lenses are manufactured using measurement instruments and quality assurance systems that have been certified by Leica Camera AG based on the company's quality standards.



LUMIX G **X** Lens

How much beauty can an image hold? Let the premium lens brand "X" show you.

This new lens series takes a major leap in photographic potential, and strikes a bold challenge to the limits of image rendering.

It delivers sharp, corner-to-corner contrast and features a Nano Surface Coating to bring ghosts and flaring to an absolute minimum.

It also produces crisp textures and incredible transparency.

The X Lens aims to capture the mood, right down to the surrounding breezes, that exist at the instant that the shutter is snapped,

to produce images that reflect the hopes and joys of the person shooting.

Indeed, the photos you're looking for are right here.

The ultimate lens series, made possible by Panasonic optical technologies.

Breaking through the limits to expressive power.

12-35mm F2.8 (35mm camera equivalent: 24-70mm) **X**



This is the first* zoom with full-range, high-speed F2.8 in a DSLM camera. Its focal length of 24-70mm (35mm camera equivalent) covers a wide shooting range, from wide-angle to standard to medium telephoto. The compact size makes it ideal for capturing landscapes while traveling, and the wide lens diameter gives you top-quality indoor shots of your family and friends — versatile shooting at its best. Perceptive and defocusing effects add to the features, giving you exactly the kind of photos and videos you're looking for.

* For a digital interchangeable lens as of May 12, 2012.



1/125 sec, F8.0, ISO200



LUMIX G X VARIO 12-35mm / F2.8 ASPH. / POWER O.I.S.

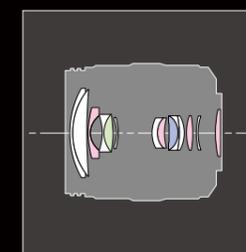
(H-HS12035)



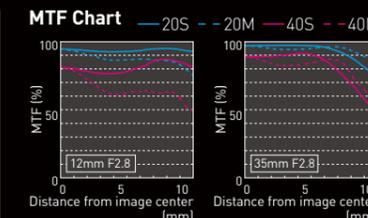
High Performance and Mobility A Standard Zoom Lens with Full-Range, High-Speed F2.8

This 24-70mm (35mm camera equivalent) F2.8 zoom lens combines excellent practicality with nimble agility. Comprising 1 Ultra Extra-Low Dispersion (UED) lens, 1 Ultra High Refractive (UHR) lens, and 4 aspherical lenses, it compensates for chromatic aberration of magnification, spherical aberration, and other forms of distortion, while a low-reflectivity Nano Surface Coating minimizes ghosts and flaring. The resulting high performance exemplifies the X Lens by rendering images with superb contrast and crisp clarity. A splash/dustproof design also ensures safe outdoor use.

- Lens construction = 14 elements in 9 groups • Closest focusing distance = 0.25 m/0.82 ft
- Maximum image magnification = Approx. 0.17x (35mm camera equivalent: 0.34x)
- Filter size = 58 mm • Dimensions = 67.6 [dia.] x Approx. 73.8 mm/2.7 [dia.] x 2.9 in
- Weight = Approx. 305 g/10.8 oz
- Supplied accessories = Lens hood, Lens storage bag



ASPH UED UHR



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

14-42mm F3.5-5.6 (35mm camera equivalent: 28-84mm)



Ideal for a wide range of shooting situations, from landscapes all the way to daily snapshots and portraits. Retractable optics in this ultra-compact lens increase mobility while covering a focal distance of about 3x to take you from wide-angle to medium telephoto. Precisely what you need to capture stunning images while traveling.



1/2000 sec, F7.1, ISO160



LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S.

[H-PS14042]

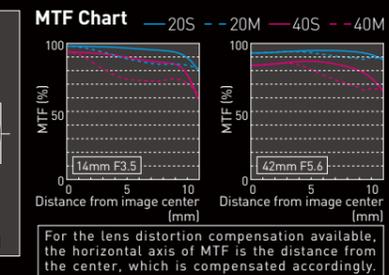
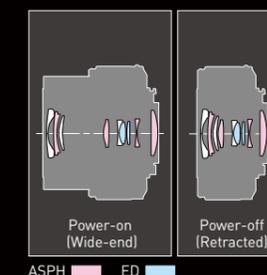


The World's First* Digital Interchangeable Power Zoom Lens with Retractable Optics for Superb Mobility

When retracted, this ultra-compact lens is approx. 26.8 mm. Two extra-low dispersion (ED) lenses and four aspherical lenses correct aberrations, and a Nano Surface Coating minimizes ghosts and flaring. Images are crisp and clear with rich textures from corner to corner. And the silent-design, Light Speed AF with super-fast auto focusing, HD-compatible lens and electric-powered zoom dramatically improve the comfort level for shooting videos.

*For a digital interchangeable lens as of August 26, 2011.

•Lens construction = 9 elements in 8 groups •Closest focusing distance = 0.2 m/0.66 ft in 14mm-20mm, 0.3 m/0.98 ft in 21mm-42mm •Maximum image magnification = Approx. 0.17x (35mm camera equivalent: 0.34x) •Filter size = 37 mm •Dimensions = 61.0 [dia.] x Approx. 26.8 mm (When the lens is retracted)/2.4 [dia.] x 1.1 in •Weight = Approx. 95 g/3.4 oz •Supplied accessories = Lens storage bag



ASPH  ED 

35-100mm F2.8 (35mm camera equivalent: 70-200mm) X



©Bence Máté

1/500 sec, F2.8, ISO640



This zoom lens goes all the way from 70-200mm (35mm camera equivalent) with high-speed F2.8. It softly blurs the background for portraits and close-ups, and delivers high shutter speeds to freeze-frame subjects such as passing trains and fast-moving athletes. While offering plenty of large-diameter advantages, this lens is ideal for a wide range of subjects. Its splash/dustproof design also makes it durable enough for shooting both photos and videos outdoors, even under harsh conditions.



LUMIX GX VARIO 35-100mm / F2.8 / POWER O.I.S.

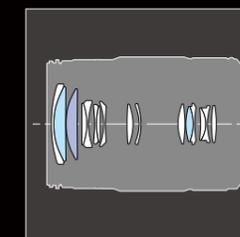
[H-HS35100]



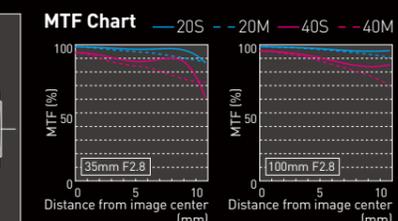
A Full-Range F2.8 Zoom Lens with Both High Performance and a Compact Size

This zoom lens covers the range from 70-200mm (35mm camera equivalent) with high-speed F2.8, but does it with a compact size and excellent mobility thanks to its 99.9-mm length. Incorporating a full-length 5-element Inner Focus system (with a zoom system using a non-changing lens length), it uses 2 ED lenses and 1 UED lens to correct a variety of aberrations in order to provide uniform, stable image quality over its wide zooming range. The Nano Surface Coating minimizes ghosts and flaring, resulting in the crisp images and high level of performance that is expected from an X Lens.

•Lens construction = 18 elements in 13 groups •Closest focusing distance = 0.85 m/2.8 ft •Maximum image magnification = Approx. 0.1x (35mm camera equivalent: 0.2x) •Filter size = 58 mm •Dimensions = 67.4 [dia.] x Approx. 99.9 mm/2.7 [dia.] x 3.9 in •Weight = Approx. 360 g/12.7 oz •Supplied accessories = Lens hood, Lens storage bag



ED UED



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

45-175mm F4.0-5.6 (35mm camera equivalent: 90-350mm) X



1/1600 sec, F11, ISO160



This ultra-compact lens covers the range from medium telephoto to telephoto, and features a smooth power zoom and Light Speed AF with super-fast auto focusing. The ultimate technology of the X lens ensures dynamic expression in photos and videos.

LUMIX G X VARIO PZ 45-175mm / F4.0-5.6 ASPH. / POWER O.I.S. **HD** Video Support **NANO SURFACE COATING** (IH-PS45175)

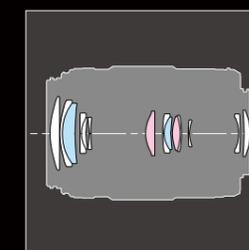


The World's First* Digital Interchangeable Power Zoom Lens. Unchanged in Length, This Lens Provides Highly Comfortable Zooming

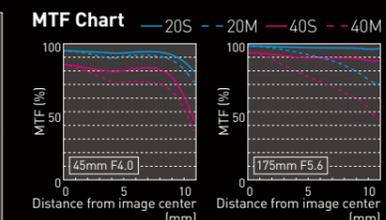
A Multi-Actuator Floating Inner Focus system gives this zoom lens its superb rendering performance while retaining its compact size. Two extra-low dispersion (ED) lenses and two aspherical lenses correct aberrations, and a Nano Surface Coating minimizes ghosts and flaring when shooting against a light source. The power zoom keeps the total lens length unchanged and POWER O.I.S. minimizes hand-shake. The silent-design, HD-compatible lens ensures comfortable shooting with whisper-quiet zooming.

* For a digital interchangeable lens as of August 26, 2011.

• Lens construction = 14 elements in 10 groups • Closest focusing distance = 0.9 m/3.0 ft • Maximum image magnification = Approx. 0.2x [35mm camera equivalent: 0.4x] • Filter size = 46 mm • Dimensions = 61.6 [dia.] x Approx. 90.0 mm/2.4 [dia.] x 3.5 in • Weight = Approx. 210 g/7.4 oz • Supplied accessories = Lens hood, Lens storage bag



ASPH ED



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.



LUMIX G Lens

The G Lens is the result of an uncompromising quest for the best-possible image quality.

In addition to being compact, very light and exceptionally mobile, its extremely precise and high-speed Contrast AF ensures outstanding image rendering performance.

The G Lens covers a versatile range of focal lengths, from wide-angle to telephoto, allowing these unique lenses to handle a wide spectrum of shooting needs.

8mm F3.5 (35mm camera equivalent: 16mm)



1/400 sec, F8.0, ISO100



With a fisheye lens, familiar everyday scenes become surreal, imaginative images. Even with the same subject, changing the lens angle creates a curving effect that gives the scene an entirely different look. Whether you're shooting photos or videos, the fisheye lens lets you create truly distinctive eye-catching images.

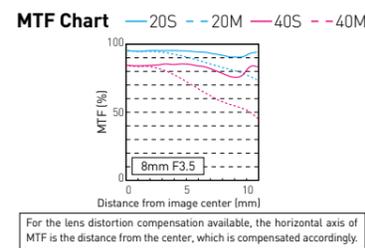
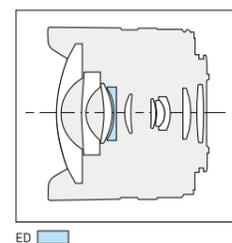


LUMIX G FISHEYE 8mm / F3.5
(H-F008) **HD**
Video Support

Fisheye Lens for Unique Images with Intriguing Deformation Effects

This fisheye lens with equisolid angle projection lets you create fascinating images with a 180° diagonal angle of view and intriguing deformation effects. Featuring 10 elements in 9 groups, including 1 ED lens, this lens system corrects chromatic aberration from magnification and other sources, to assure superb image rendering. The fisheye lens also features the Inner Focus system, as well as a virtually silent single-lens drive system that won't interfere with the sound you're recording when using the LUMIX G to shoot HD videos.

- Lens construction = 10 elements in 9 groups
- Closest focusing distance = 0.1 m/0.33 ft
- Maximum image magnification = Approx. 0.20x (35mm camera equivalent: 0.40x)
- Filter size = Front: Mounting not possible/Rear: 51.7 mm/2.39 [dia.] x 2.04 in
- Dimensions = 60.7 [dia.] x Approx. 51.7 mm/2.39 [dia.] x 2.04 in
- Weight = Approx. 165 g/5.82 oz
- Supplied accessories = Lens storage bag



14mm F2.5 II (35mm camera equivalent: 28mm)



1/5 sec, F8.0, ISO200



With its fully open aperture, this lens is ideal for nightscapes. It lets in a large amount of light, so you can raise the shutter speed without increasing the ISO sensitivity. This wide-angle lens also suppresses hand-shake and noise, so all your shots are crisp, clear and beautiful.

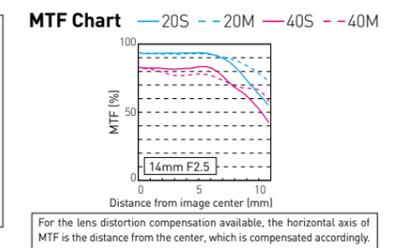
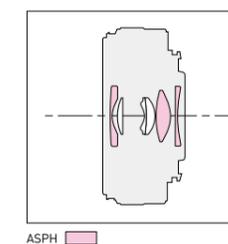


LUMIX G 14mm / F2.5 II ASPH.
(H-H014A) **HD**
Video Support

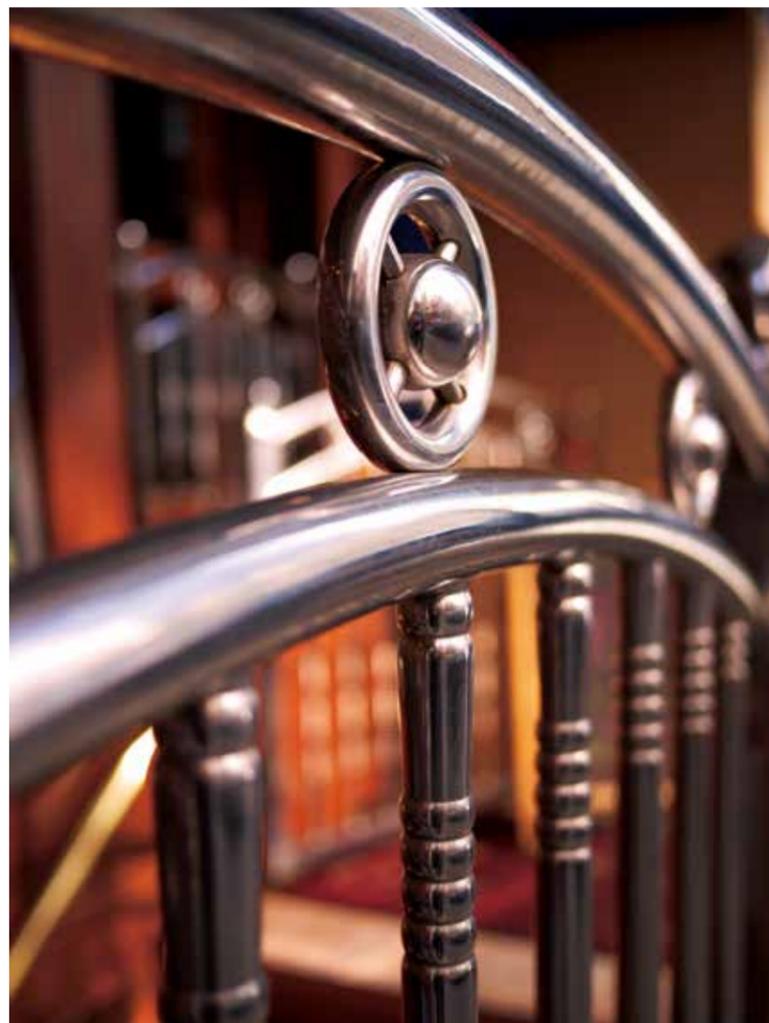
Single-Focal-Length Lens for Wide-Angle Shooting

A wide angle of view and outstanding depth of field make this pancake type wide-angle lens a good choice for both snapshots and landscapes. Rendering high-contrast images across the entire frame and correcting distortion, this super-thin lens is especially ideal for capturing subjects that are primarily linear, such as buildings with a number of straight lines. Its simple lens construction - 6 elements in 5 groups, including 3 glass aspherical lenses - allows both high performance and an astonishingly compact size.

- Lens construction = 6 elements in 5 groups
- Closest focusing distance = 0.18 m/0.59 ft
- Maximum image magnification = Approx. 0.10x (35mm camera equivalent: 0.20x)
- Filter size = 46 mm
- Dimensions = 55.5 [dia.] x Approx. 20.5 mm/2.19 [dia.] x 0.81 in
- Weight = Approx. 55 g/1.94 oz
- Supplied accessories = Lens storage bag



20mm F1.7 (35mm camera equivalent: 40mm)



1/250 sec, F1.7, ISO100



F1.7



F16

The smaller the F-number, the shallower the depth of field (the range in which things are in focus); the larger the F-number, the greater the depth of field. This lens, with its fully open F1.7 aperture, lets you capture the desired parts of an image in sharp focus, while giving other parts a soft focus. This makes the subject really stand out, adding a rich expressiveness to the photo.

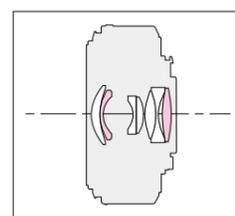


LUMIX G 20mm / F1.7 II ASPH. (H-H020A)

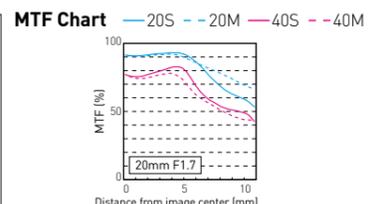
Compact Lens with High-Speed F1.7 Aperture – Perfect for Everyday Shooting

Featuring a high-speed F1.7, this single-focal-length lens lets you capture beautiful, expressive images with a delicate soft focus and high contrast. Two aspherical lenses are perfectly configured to deliver enhanced performance in a compact system. With this thin, pancake lens mounted, the LUMIX G is easy to carry anywhere. You're always ready for whatever inspires the photographer inside you – everyday scenes, passing landscapes, indoor shots in dim lighting, casual snapshots, or artistic shots with soft focusing.

•Lens construction = 7 elements in 5 groups •Closest focusing distance = 0.2 m/0.66 ft •Maximum image magnification = Approx. 0.13x (35mm camera equivalent: 0.25x) •Filter size = 46 mm •Dimensions = 63 [dia.] x Approx. 25.5 mm / 2.48 [dia.] x 1.00 in •Weight = Approx. 87 g/3.07 oz (H-H020A) / Approx. 100 g/3.53 oz (H-H020) •Supplied accessories = Lens storage bag



ASPH



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

30mm F2.8 (35mm camera equivalent: 60mm)



1/60 sec, F4.0, ISO500

The most prominent feature of this lens is its ability to give you true-to-life macro shots by bringing the lens as close as 0.105-m and enlarging your subject up to 100%. It allows you to get up close to your subject, capturing fine details in items such as flowers, food, and tiny accessories. Also, in addition to macro shooting, this single lens gives you a wide range of images, from portraits with attractive bokeh effects to landscapes.

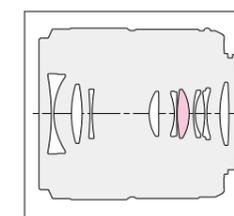


LUMIX G MACRO 30mm / F2.8 ASPH. / MEGA O.I.S. (H-HS030) **HD** Video Support

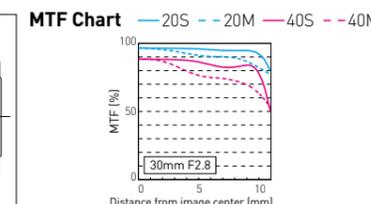
Multifunctional Lens - From Macros to Portraits

With 9 elements in 9 groups, including one aspherical lens, this lens delivers high performance in a compact size. Its Inner Focus system provides high resolution and contrast across the entire focusing range, from 1:1 macro to infinity. A stepping motor drives the lens for 240-fps AF. You get quick, smooth, and quiet focusing for both still and video images. When shooting portraits and other subjects with a shallow depth of field, the 7-blade circular aperture renders stunning bokeh effects. Multi-coating minimizes ghosts and flaring to produce rich expressiveness with crisp clarity and beautiful depth from corner to corner. This lens gives you the images that you envision.

•Lens construction = 9 elements in 9 groups •Closest focusing distance = 0.105 m/0.345 ft •Maximum image magnification = Approx. 1.0x (35mm camera equivalent: 2.0x) •Filter size = 46 mm •Dimensions = 58.8 [dia.] x Approx. 63.5 mm / 2.3 [dia.] x 2.5 in •Weight = Approx. 180 g/6.35 oz •Supplied accessories = Lens storage bag



ASPH



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

42.5mm F1.7 (35mm camera equivalent: 85mm)



1/800 sec, F1.7, ISO200



1/100 sec, F1.7, ISO200

F1.7 brightness and the background compression effect of this medium telephoto lens render highly attractive portraits with captivating bokeh effects and natural depth. You can also come as close as 31 cm* to your subject, to capture truly impressive shots.

*The distance between the sensor and the focal position.

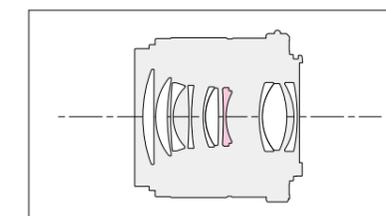


LUMIX G 42.5mm /
F1.7 ASPH./POWER O.I.S.
[H-HS043] **HD**
Video Support

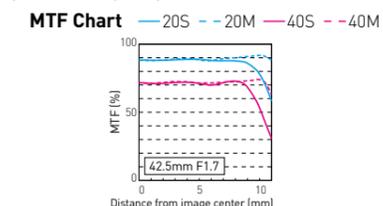
Stunning Bokeh Effects from a Bright F1.7 Medium Telephoto Lens

This new lens system features 10 elements in 8 groups, including one aspherical lens, to minimize aberration and distortion. Its 7-blade circular aperture produces stunning bokeh effects. Multi-coating reduces ghosts and flaring to render highly expressive images with crisp clarity and beautiful depth from corner to corner. Power O.I.S. suppresses hand-shake both from short, fast movement and large, slow movement. You get sharp, clear images even in low-light situations, such as nightscapes and indoor shots. The Inner Focus system provides high resolution across the entire focusing range. And a newly developed stepping motor drives the lens for 240-fps AF, giving you smooth, vibration-free focusing for both still and video images.

- Lens construction = 10 elements in 8 groups
- Closest focusing distance = 0.31 m/1.02 ft
- Maximum image magnification = Approx. 0.2x [35mm camera equivalent: 0.4x]
- Filter size = 37 mm
- Dimensions = 55 [dia.] x Approx. 50 mm / 2.2 [dia.] x 1.97 in
- Weight = Approx. 130 g/ 4.59 oz
- Supplied accessories = Lens hood, Decoration ring, Lens storage bag



ASPH



For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

7-14mm F4.0 (35mm camera equivalent: 14-28mm)



1/200 sec, F8.0, ISO100



7mm (35mm camera equivalent: 14mm) 14mm (35mm camera equivalent: 28mm)

The 14mm setting (35mm camera equivalent: 28mm) makes it easy to fit the whole subject in the image, even the parts a standard lens cuts off. The 7mm setting (35mm camera equivalent: 14mm) goes even further, providing a wide, sweeping view that gathers in more than the human eye can see at once. This is especially useful for shooting expansive landscapes on trips, or for fitting more into an indoor shot.



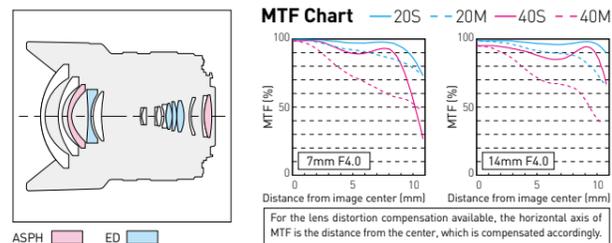
LUMIX G VARIO 7-14mm / F4.0 ASPH. (H-F007014) **HD Video Support**

A Super-Small, Lightweight Ultra-Wide-Angle Zoom Lens

This lens – the world's smallest of its kind* – gives you an extraordinary perspective with its 114° diagonal angle of view. Small and light enough to take anywhere you go, this ultra-wide-angle lens lets you capture the vastness and majesty of sweeping landscapes with true-to-life ambience and perspective while traveling. In addition to two aspherical lenses for correcting a variety of aberrations, the lens is generously equipped with four extra-low dispersion (ED) lenses to eliminate chromatic aberration from magnification. It renders sharp, crisp image across the entire zoom range.

*As of March 25, 2009, for wide-angle zoom lenses for digital SLR cameras

•Lens construction = 16 elements in 12 groups •Closest focusing distance = 0.25 m/0.8 ft •Maximum image magnification = Approx. 0.08x (35mm camera equivalent: 0.15x) •Dimensions = 70 [dia.] x Approx. 83.1 mm/2.76 [dia.] x 3.27 in •Weight = Approx. 300 g/10.58 oz •Supplied accessories = Lens hood (built-in), Lens storage bag



12-32mm F3.5-5.6 (35mm camera equivalent: 24-64mm)



1/80 sec, F5.6, ISO200



The lens barrel and mount are metallic, providing a chic but solid textural appearance with a sophisticated design that matches the LUMIX GM body. This high-quality standard zoom lens extends from a wide-angle 24mm (35mm camera equivalent), and offers both excellent mobility and a stylish design that makes you want to carry it with you always. It is ideal for everything from vast landscapes to indoor shots, and for everyday snapshots as well.

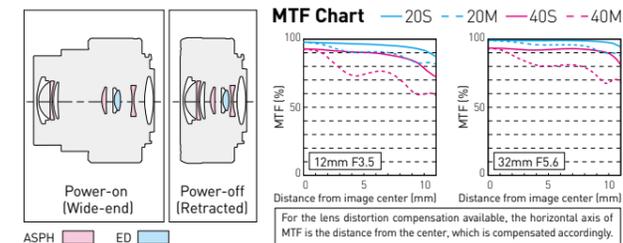


LUMIX G VARIO 12-32mm / F3.5-5.6 ASPH. / MEGA O.I.S. (H-FS12032) **HD Video Support**

This compact design utilizes a retractable mechanism. Easy to carry, this standard zoom lens meets a variety of uses.

It covers a wide range, from 24mm wide-angle (35mm camera equivalent) to standard 64mm (35mm camera equivalent), for everything from landscape photos to snapshots. Its 2-step retractable mechanism makes it as easy to carry as an ordinary pancake lens when walking around. The drive section uses a screw integrated stepping motor, enabling a quiet, high-speed, high-precision lens drive with 240-fps performance. Ideal for capturing everyday shooting opportunities.

•Lens construction = 8 elements in 7 groups •Closest focusing distance = 0.20 m/0.66 ft (at focal lengths 12-20mm) / 0.30 m/0.98 ft (at focal lengths 21-32mm) •Maximum image magnification = Approx. 0.12x (35mm camera equivalent: 0.26x) •Filter size = 37 mm •Dimensions = 55.5 [dia.] x Approx. 24 mm/2.18 [dia.] x 0.94 in •Weight = Approx. 70 g/2.46 oz



14-42mm F3.5-5.6 / 14-45mm F3.5-5.6
 (35mm camera equivalent: 28-84mm) (35mm camera equivalent: 28-90mm)



1/800 sec, F8.0, ISO200



With an angle of view and perspective close to those of the human eye, this lens captures natural-looking, true-to-life images. Use it for almost any kind of shot – from landscapes to snapshots, children, pets, still-life objects and more – and enjoy the kind of beautifully rendered, breathtaking images you simply can't get with a compact camera.

Versatile, High-Quality Standard Zoom Lens from Wide-Angle to Medium Telephoto

The standard zoom lens has a wide focal length range that extends from a wide-angle 28mm (35mm camera equivalent) to an approximate 3x zoom (approx. 3.2x for the 14-45mm), making it suitable for a variety of shooting situations, from travel snapshots to landscapes and portraits. The LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S. lens uses two aspherical lenses to achieve a compact, lightweight design, combining high-quality images with excellent mobility. The LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S. lens has a total of 12 lens elements in 9 groups, including a glass-molded aspherical lens, to provide well-balanced compensation for various types of aberration, and superior optical performance.

LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S.

- Lens construction = 9 elements in 8 groups
- Closest focusing distance = 0.2 m/0.66 ft (at focal lengths 14-20mm) / 0.3 m/0.98 ft (at focal lengths 21-42mm)
- Maximum image magnification = Approx. 0.17x (35mm camera equivalent: 0.34x)
- Filter size = 46 mm
- Dimensions = 56 [dia.] x Approx. 49 mm/2.2 [dia.] x 1.9 in
- Weight = Approx. 110 g/3.88 oz
- Supplied accessories = Lens hood, Lens cap, Lens rear cap

LUMIX G VARIO 14-42mm / F3.5-5.6 ASPH. / MEGA O.I.S.

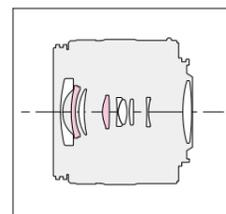
- Lens construction = 12 elements in 9 groups
- Closest focusing distance = 0.3 m/1 ft
- Maximum image magnification = Approx. 0.16x (35mm camera equivalent: 0.32x)
- Filter size = 52 mm
- Dimensions = 60.6 [dia.] x Approx. 63.6 mm/2.39 [dia.] x 2.50 in
- Weight = Approx. 165 g/5.82 oz
- Supplied accessories = Lens hood, Lens storage bag

LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S.

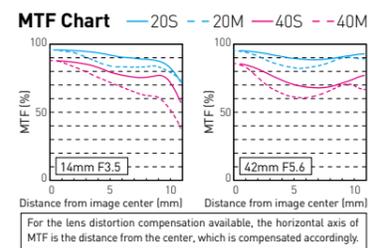
- Lens construction = 12 elements in 9 groups
- Closest focusing distance = 0.3 m/1 ft
- Maximum image magnification = Approx. 0.17x (35mm camera equivalent: 0.34x)
- Filter size = 52 mm
- Dimensions = 60 [dia.] x Approx. 60 mm/2.36 [dia.] x 2.36 in
- Weight = Approx. 195 g/6.88 oz
- Supplied accessories = Lens hood, Lens storage bag



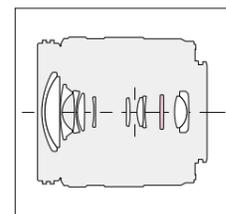
LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S.
 (H-FS1442A) **HD** Video Support



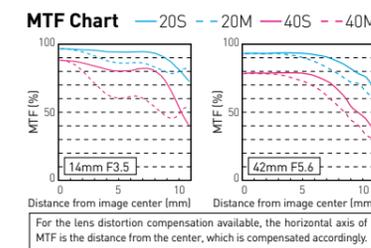
ASPH



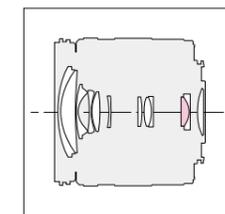
LUMIX G VARIO 14-42mm / F3.5-5.6 ASPH. / MEGA O.I.S.
 (H-FS014042) **HD** Video Support



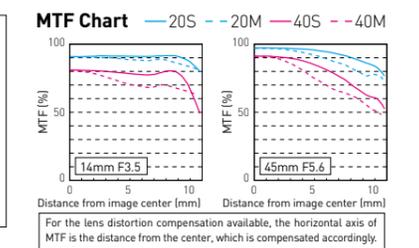
ASPH



LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S.
 (H-FS014045) **HD** Video Support



ASPH



35-100mm F4.0-5.6 (35mm camera equivalent: 70-200mm)



1/400 sec, F8.0, ISO200

This 3x optical zoom lens retracts to a length of about 50mm. Its compact design lets it go anywhere – on daily outings or extended trips – while bringing exquisite bokeh expression to both telephoto and portrait shots.



LUMIX G VARIO 35-100mm / F4.0-5.6 ASPH. / MEGA O.I.S.
(H-FS35100)

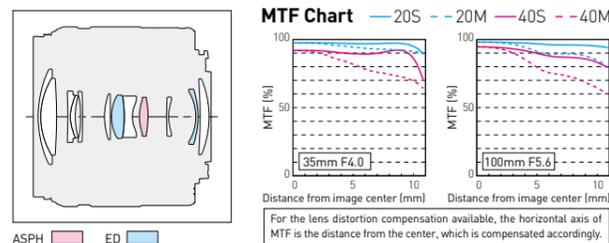


A retractable structure achieves compact size and light weight. A telephoto zoom lens with excellent portability.

The retractable structure reduces this 70-200mm (35mm camera equivalent) zoom lens to a compact size of about 50mm* when retracted. The auto focus system is driven by a stepping motor to achieve quiet, high-speed AF with a 240-fps capability. The built-in MEGA O.I.S. (Optical Image Stabilizer) compensates for camera shake even in hand-held telephoto shooting. What's more, the metal casing and mount maintain high optical performance and quality, while the sophisticated metal finish makes this lens a joy to own.

*From the tip of the lens to the base of the lens mount.

- Lens construction = 12 elements in 9 groups
- Closest focusing distance = 0.9 m/3.0 ft
- Maximum image magnification = Approx. 0.11x (35mm camera equivalent: 0.22x)
- Filter size = 46 mm
- Dimensions = 55.5 [dia.] x Approx. 50 mm/2.2 [dia.] x 1.97 in
- Weight = Approx. 135 g/4.76 oz
- Supplied accessories = Lens hood, Lens rear cap



ASPH ED

14-140mm F3.5-5.6 / 14-140mm F4.0-5.8 (35mm camera equivalent: 28-280mm)



1/60 sec, F7.1, ISO160



14mm (35mm camera equivalent: 28mm)



140mm (35mm camera equivalent: 280mm)

Ideal for HD video recording. 10x optical zoom lenses ranging from wide angle to telephoto.

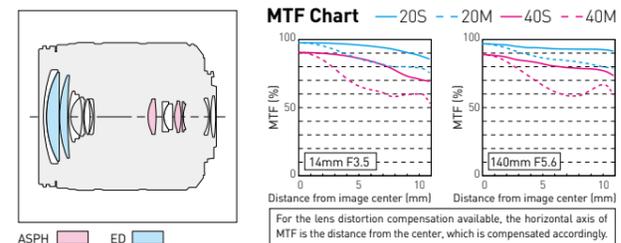
The focal length of these high-power zoom lenses covers the range from 28mm to 280mm (35mm camera equivalents). They are also ideal for recording HD videos. The LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S. employs two ED lenses and three aspherical lenses, and uses a stepping motor to deliver high-speed AF with 240-fps lens drive. The LUMIX G VARIO HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S. has two ED lenses and four aspherical lenses to compensate for various aberrations. They provide high-resolution, high-contrast images without false colors or distortion over the entire zoom range.



LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S.
(H-FS14140)



- Lens construction = 14 elements in 12 groups
- Closest focusing distance = 0.3 m/0.98 ft
- Maximum image magnification = Approx. 0.25x (35mm camera equivalent: 0.5x)
- Filter size = 58 mm
- Dimensions = 67 [dia.] x Approx. 75 mm/2.64 [dia.] x 2.95 in
- Weight = Approx. 265 g/9.35 oz
- Supplied accessories = Lens hood, Lens storage bag



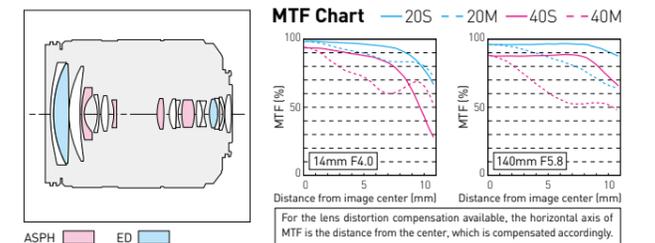
ASPH ED



LUMIX G VARIO HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S.
(H-VS014140)



- Lens construction = 17 elements in 13 groups
- Closest focusing distance = 0.5 m/1.64 ft
- Maximum image magnification = Approx. 0.2x (35mm camera equivalent: 0.4x)
- Filter size = 62 mm
- Dimensions = 70 [dia.] x Approx. 84 mm/2.76 [dia.] x 3.31 in
- Weight = Approx. 460 g/16.2 oz
- Supplied accessories = Lens hood, Lens storage bag



ASPH ED

45-150mm F4.0-5.6 / 45-200mm F4.0-5.6

(35mm camera equivalent: 90-300mm) (35mm camera equivalent: 90-400mm)



1/320 sec, F5.6, ISO800



45mm (35mm camera equivalent: 90mm) **150mm** (35mm camera equivalent: 300mm) **200mm** (35mm camera equivalent: 400mm)

Use the 45mm setting (35mm camera equivalent: 90mm) to take impressive landscape shots. With the 150mm setting (35mm camera equivalent: 300mm), the background appears as if it were right behind your subject. For even more powerful zooming, use the 200mm setting (35mm camera equivalent: 400mm). The telephoto zoom lets you adjust the way you capture your images, depending on the subject and your intent.

An Easy-to-Use Zoom that Goes All the Way

Capture natural-looking portraits in the medium telephoto range, or zoom all the way to move in and grab dynamic action shots at sports events. These zoom lenses cover a huge amount of ground. The 45-200mm model comprises 16 elements in 13 groups, including 3 ED lenses. The 45-150mm model comprises 12 elements in 9 groups, including 2 aspherical lenses and an Ultra High Refractive (UHR) lens. Both models provide well-balanced correction of various aberrations while producing high image quality. An innovative Inner Focus system enables high-speed Contrast AF to further boost the image rendering capability. A 7-blade circular aperture adds a beautiful soft focus.

LUMIX G VARIO 45-150mm / F4.0-5.6 ASPH. / MEGA O.I.S.

- Lens construction = 12 elements in 9 groups
- Closest focusing distance = 0.9 m/3.0 ft
- Maximum image magnification = Approx. 0.17x (35mm camera equivalent: 0.35x)
- Filter size = 52 mm
- Dimensions = 62 [dia.] x Approx. 73 mm/2.44 [dia.] x 2.9 in
- Weight = Approx. 200 g/7.1 oz
- Supplied accessories = Lens hood, Lens storage bag

LUMIX G VARIO 45-200mm / F4.0-5.6 / MEGA O.I.S.

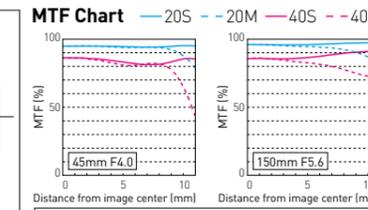
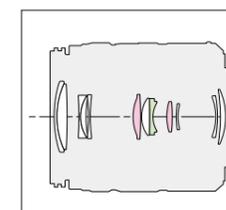
- Lens construction = 16 elements in 13 groups
- Closest focusing distance = 1.0 m/3.3 ft
- Maximum image magnification = Approx. 0.19x (35mm camera equivalent: 0.38x)
- Filter size = 52 mm
- Dimensions = 70 [dia.] x Approx. 100 mm/2.75 [dia.] x 3.93 in
- Weight = Approx. 380 g/13.4 oz
- Supplied accessories = Lens hood, Lens storage bag



LUMIX G VARIO 45-150mm / F4.0-5.6 ASPH. / MEGA O.I.S.
(H-FS45150) **HD Video Support**

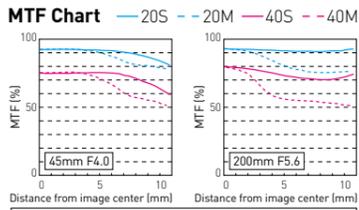
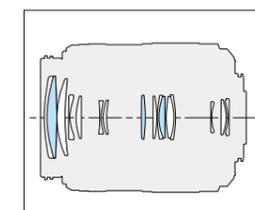


LUMIX G VARIO 45-200mm / F4.0-5.6 / MEGA O.I.S.
(H-FS045200) **HD Video Support**



ASPH (pink) UHR (green)

For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.



ED (blue)

For the lens distortion compensation available, the horizontal axis of MTF is the distance from the center, which is compensated accordingly.

100-300mm F4.0-5.6 (35mm camera equivalent: 200-600mm)



©Bence Máté

1/250 sec, F7.1, ISO200



1/2000 sec, F5.6, ISO200

Conventional 600mm-class (35mm camera equivalent) lenses are big, heavy and tiresome to haul around. LUMIX G lenses are small, lightweight and fit perfectly in the palm of the hand. Now, holding the camera in the hand, you can take dynamic, professional-looking ultra-telephoto shots of a swimmer – and capture even individual drops of water flying through the air.

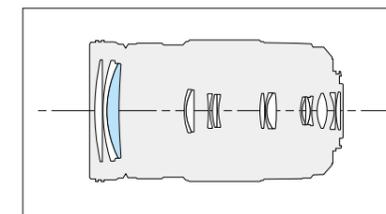


LUMIX G VARIO 100-300mm / F4.0-5.6 / MEGA O.I.S. **HD** Video Support
(H-FS100300)

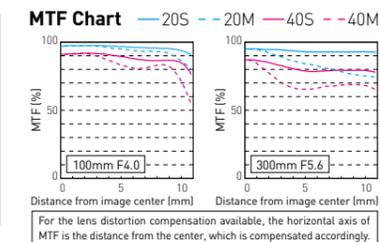
An Ultra-Zoom Lens that Fights Hand-Shake

Drawing subjects in from a distance, this ultra-telephoto zoom lens is ideal for capturing intense action sports or animals you can't normally approach. An ED lens in the first lens group corrects the color bleeding that can occur when zooming, helping achieve consistently superb performance over the entire zoom range. The Inner Focus system teams up with a system that shifts a pair of lenses to enhance focusing, making possible high-speed Contrast AF and excellent rendering at all zoom levels. This is in addition to MEGA O.I.S., an optical image stabilizing system that corrects for even slight hand-shake, making it easy to get clear, blur-free shots even at full zoom.

- Lens construction = 17 elements in 12 groups
- Closest focusing distance = 1.5 m/4.92 ft
- Maximum image magnification = Approx. 0.21x (35mm camera equivalent: 0.42x)
- Filter size = 67 mm
- Dimensions = 73.6 [dia.] x Approx. 126 mm/2.90 [dia.] x 4.96 in
- Weight = Approx. 520 g/18.3 oz
- Supplied accessories = Lens hood, Lens storage bag



ED



3D Lens

The 12.5mm (35mm camera equivalent: 65mm*) F12 lens is Panasonic's original interchangeable lens.** This compact, lightweight lens shoots 3D images. Simply mount it to your camera and shoot the same way you always do. It captures dynamic 3D still images without any complex operation. The lens is also thin, so you can take it with you anywhere you go.

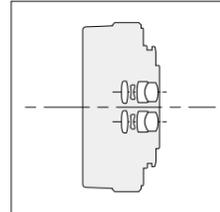


The World's First*** Interchangeable 3D Lens Once Again, LUMIX G Dramatically Changes Digital SLR Shooting Styles

Colorful flowers, stunning portraits and striking landscapes captured by the camera seem to be standing right in front of your eyes. They form an entirely new world of images with their highly dimensional effects and sense of depth. By changing lenses to match your intent and the shooting situation, you can add a new form of 3D expression to the joy of creating superb photos.****

•Lens construction = 4 elements in 3 groups x 2 •Closest focusing distance = 0.6 m/1.97 ft •Maximum image magnification = Approx. 0.02x (35mm camera equivalent: 0.1x*) •Dimensions = 57.0 [dia.] x Approx. 20.5 mm/2.24 [dia.] x 0.81 in •Weight = Approx. 45 g/1.59 oz •Supplied accessories = Lens storage bag

*When setting the aspect ratio at 16:9 with the DMC-GH2. **See the support site for models compatible with 3D lenses. <http://panasonic.jp/support/global/cs/dsc/> ***For a digital interchangeable lens as of September 21, 2010. ****Available with some Panasonic cameras only. Compatible Olympus cameras not yet determined, as of November 2011. A 3D media player that supports the MP (Multi-Picture) format is required to view 3D images.



Mount Adaptors

Enables the use of lenses other than those of the Micro Four Thirds System standard.

DMW-MA1 for the Four Thirds System standard

Allows Four Thirds standard lenses to be mounted onto a Micro Four Thirds camera.



DMW-MA2M for M mount lenses from Leica Camera AG

Allows Leica M mount lenses to be mounted onto a Micro Four Thirds camera.



DMW-MA3R for R mount lenses from Leica Camera AG

Allows Leica R mount lenses to be mounted onto a Micro Four Thirds camera.



LUMIX Four Thirds Lenses

The optional DMW-MA1 Mount Adaptor also lets you use LEICA D lenses, which are renowned for their clarity and stunning image beauty.



LEICA D VARIO-ELMARIT
14-50mm / F2.8-3.5 ASPH. / MEGA O.I.S.



LEICA D VARIO-ELMAR
14-50mm / F3.8-5.6 ASPH. / MEGA O.I.S.



LEICA D VARIO-ELMAR
14-150mm / F3.5-5.6 ASPH. / MEGA O.I.S.



LEICA D SUMMILUX
25mm / F1.4 ASPH.

*Four Thirds™ and the Four Thirds logo mark are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries. •Leica is a registered trademark of Leica Microsystems IR GmbH. Leica D lenses are manufactured using measurement instruments and quality assurance systems certified by Leica Camera AG to meet the company's quality standards.

Conversion Lenses

Wide Conversion Lens

DMW-GWC1

Create more dynamic expressions with a wider perspective.



Without Conversion Lens



With Conversion Lens (0.79x)

Attachable Lenses*

- LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-PS14042)
- LUMIX G 14mm / F2.5 ASPH. (H-H014)

* As of Jan 9, 2012.

Tele Conversion Lens

DMW-GTC1

Pull in faraway subjects so they appear to be almost within reach.



Without Conversion Lens



With Conversion Lens (2.0x)

Attachable Lenses*

- LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-PS14042)

* As of Jan 9, 2012.

Macro Conversion Lens

DMW-GMC1

The macro lens lets you get right up close, and softly blurs the background.



Without Conversion Lens



With Conversion Lens

Attachable Lenses*

- LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-PS14042)
- LUMIX G 14mm / F2.5 ASPH. (H-H014)

* As of Jan 9, 2012.

Fisheye Conversion Lens

DMW-GFC1

The fisheye lens gives a unique expression to everyday scenes.



Without Conversion Lens



With Conversion Lens

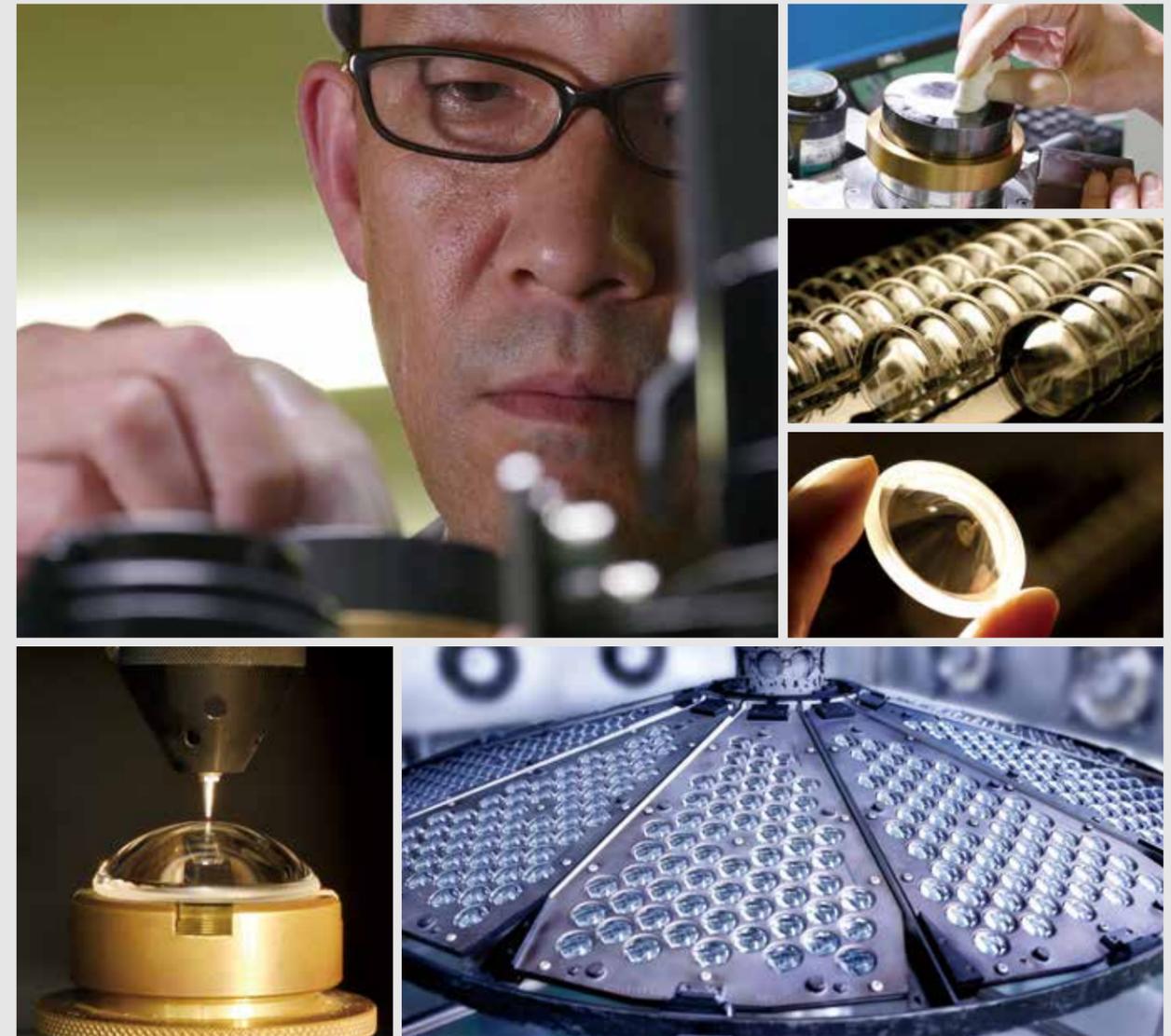
Attachable Lenses*

- LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. (H-PS14042)
- LUMIX G 14mm / F2.5 ASPH. (H-H014)

* As of Jan 9, 2012.

Lens Technology

These cutting-edge technologies support the compact size, light weight, and high-quality images of LUMIX G.



Lenses Manufactured with Uncompromising Devotion to High Image Quality

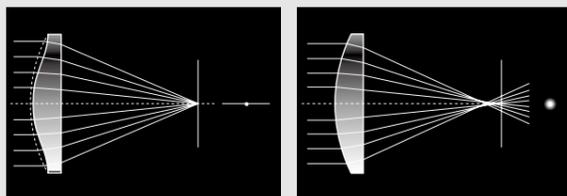
At the Yamagata Plant, lenses are processed, assembled, inspected, and individually packaged, all in a Clean Room environment. This stringent level of quality control is unique to LUMIX lenses. For example, to inspect aspherical lenses, we use an instrument called the UA3P Ultra-Accurate 3D Profilometer, which was originally developed by Panasonic and now plays an essential role in the development and manufacturing activities of many optical device manufacturers. Using this instrument, with its

measurement accuracy of 1/10,000 mm, we conduct objective, numerical evaluations. These criteria are then used to determine the presence of ghosts and flaring, the color of coatings, and the degree of soft focus, in addition to checking the operating feel of the focus ring and aperture ring, and the sound quality of various motors, in order to ensure high-quality production control. As a result, the quality of Panasonic lenses has gained high worldwide acclaim for accuracy and image quality.

Aspherical Lenses

To assure superior image quality while reducing size and weight, LUMIX G Series lenses feature a number of aspherical lenses that effectively prevent lens aberration, such as spherical and 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. Today, in addition to ordinary glass materials, the plant produces technically challenging ED materials. In order to further enhance soft focusing, which is one of the features of interchangeable lenses, the Yamagata Plant has developed a new technology to dramatically reduce circular lines that are used in molding. This results in a beautiful defocusing effect with minimal circular line blurring, and is finding increased use in the development and widespread use of aspherical lenses with outstanding image rendering capabilities.

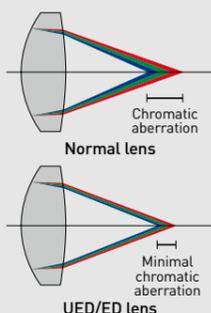
* Aspherical lenses are not used in some lens units.



Aspherical lens Spherical lens

Ultra Extra-Low Dispersion (UED) Lenses

In a conventional lens made only of optical glass, it becomes difficult to correct chromatic aberration when the focal length is long or the angle of view is wide, thus resulting in contrast degradation or color bleeding. This problem has been solved by Panasonic's Ultra Extra-Low Dispersion (UED/ED) lens. It suppresses the prism's color separation effect to correct longitudinal chromatic aberration at the telephoto zoom setting and chromatic difference of magnification at the wide-angle setting. The UED/ED lens is used mainly in LUMIX G Series telephoto lenses and wide-angle zoom lenses to render sharp, high-contrast images with clear colors from corner to corner.



Ultra-High Refractive Index (UHR) Lens

The use of the newly developed ultra-high refractive index (UHR) lens has improved optical performance, reduced size and weight, and achieved uniform image quality from the center to the edges of the image.

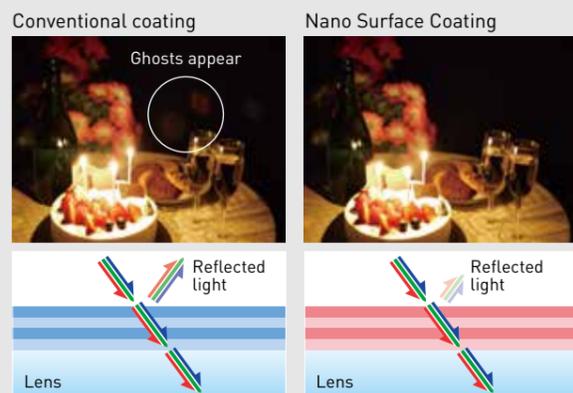
Multicoating Process

Utmost caution is exercised in coating the LUMIX Series lenses to suppress ghosts and flaring, increase durability, and enhance image beauty while ensuring optimum color balance. In addition to finely regulating the reflectance for the main wavelengths, LUMIX G Series lenses feature a coating that reduces the reflectance of light that enters at an angle. This multicoating process is widely used on lenses with a small radius of curvature, such as those in ultra-wide-angle lenses and fisheye lenses. It greatly improves the image rendering performance when shooting against a light source. Moreover, the bonded surfaces of cemented lenses are also given an original multicoating process to further reduce reflection. This results in high-quality images with superb clarity. * Aspherical lenses are not used in some lens units.



Nano Surface Coating

The Nano Surface Coating that is used in LUMIX G X lenses and some Leica DG lenses was developed originally by Panasonic. By forming a thin film with an ultra-fine nano-level structure and a super-low refractive index on the lens surface, Panasonic has achieved a dramatic reduction in the amounts of light reflection over the entire visible light range (from 380 to 780 nm). This significantly decreases ghosts and flaring and renders pure and clear images. This advanced coating technology is highly acclaimed by the camera and lens industry.



POWER O.I.S. / MEGA O.I.S. (Optical Image Stabilizer)

The smaller and lighter the camera body, the greater the hand-shake effect during shooting. LUMIX G Series lenses feature two image stabilizing functions: MEGA O.I.S. and POWER O.I.S. MEGA O.I.S. has been highly evaluated by compact camera users. An internal LSI processes the output of the system's gyro sensors approximately 4,000 times a second to provide accurate compensation for even tiny amounts of hand-shake. Unlike image stabilizing functions that are built into the camera body, this highly accurate function also lets you check the compensation effect directly through the Live View Finder or on the LCD. The images that you capture have the same shake-free beauty as what you see on the Live View Finder or the LCD. The compensation effect is also carefully matched to each lens. MEGA O.I.S. is especially effective for hand-held shooting with a zoom lens. POWER O.I.S. offers a more advanced hand-shake compensation effect than MEGA O.I.S. It not only compensates tiny amounts of fine, fast hand-shake but also suppresses large, slow movement with twice the effectiveness. (According to a Panasonic measurement method.)



Power Zoom

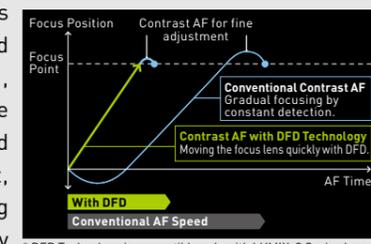
This is the world's first* zoom mechanism that uses a motor, unlike the conventional system that requires manual turning of the zoom ring. It makes zooming as easy as pressing the zoom lever located on the side of the lens barrel. It dramatically improves the ease of zooming operation. The user can select the zooming speed,** so images can be precisely composed at low zooming speeds. In addition, the step-zoom function** lets you zoom smoothly to a desired zoom position. This lets you move the focus to a desired focal length with a one-push operation while checking the focal length on the LCD monitor. It eliminates the need to manually operate the zoom lens, thus significantly reducing the hand-shake that tends to occur when zooming while video shooting. You can now record blur-free motion pictures easily.

*In digital cameras with interchangeable lenses, as of October 13, 2011
**See the support site for models with power zoom compatibility.
<http://panasonic.jp/support/global/cs/dsc/>



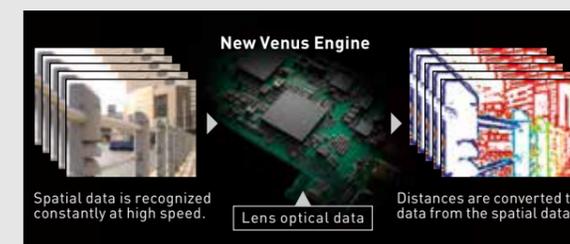
Contrast AF with DFD (Depth From Defocus) Technology

Panasonic's originally developed DFD technology enables ultra-high-speed distance measurement. A simple focusing operation immediately shows the distance information of all of the subjects displayed on the monitor, so you can instantly focus on the desired subject. Combining this with Panasonic's accumulation of Contrast AF technology has made it possible to achieve faster, more precise auto-focusing to avoid missing those fleeting shutter opportunities. Also, because the distance information is constantly acquired and refreshed, subjects that have been measured once are not lost, even when shooting videos, so you enjoy



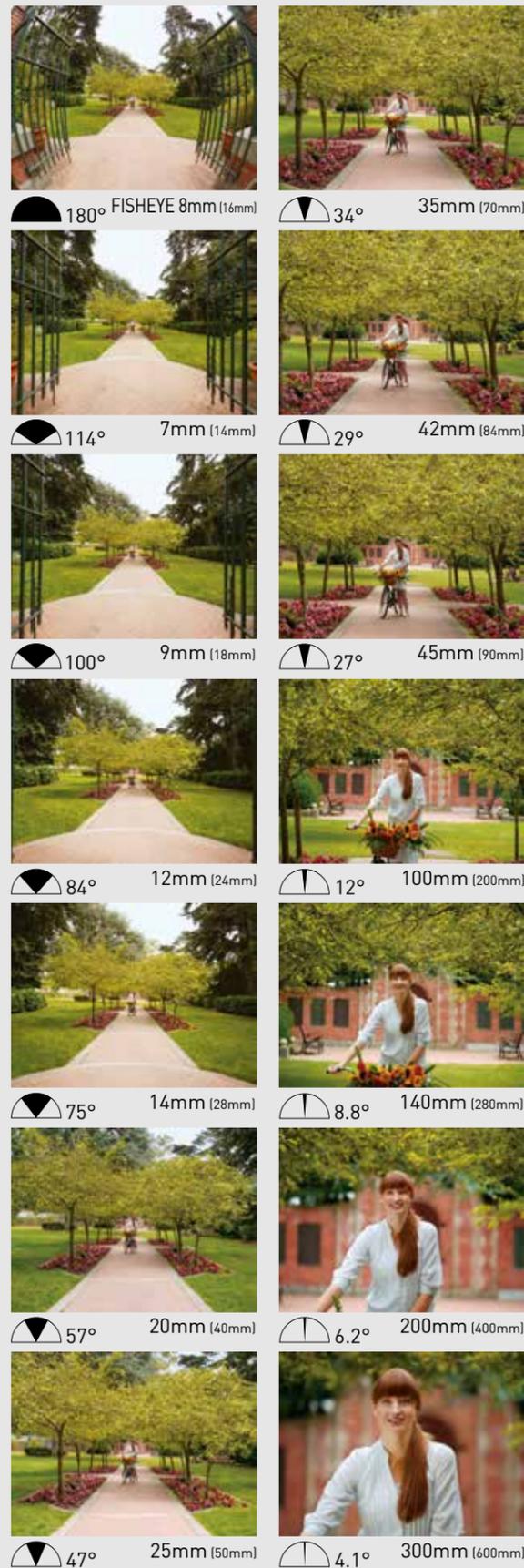
* DFD Technology is compatible only with LUMIX G Series lenses.

smooth AF tracking without background or foreground defocusing. Achieving this technology requires high-speed, high-precision lens drive control, and the ability to accurately grasp the focusing data of each lens. By storing this data in the camera's image processing LSI, Panasonic has attained the world's first application of this technology to a digital camera AF system. By combining ultra-high-speed DFD technology with conventional, high-precision Contrast AF, we have optimized Contrast AF performance.



Lens Knowledge

Things you should know about lenses to maximize your photographic enjoyment.



*Figures in parentheses are 35mm camera equivalent values.

What are angle of view and focal length?

The angle of view is the area of the image captured by the image sensor, expressed as an angle. The larger the angle of view, the shorter the focal length. The smaller the angle of view, the longer the focal length. A lens with a short focal length and a large angle of view is called a wide-angle lens. A lens with a long focal length and a small angle of view is called a telephoto lens. In the LUMIX G, the diagonal dimension of the image sensor has been downsized to half that of a 35mm film frame, so the focal length is twice as long when converted to that of a 35mm camera. For example, the angle of view for a LUMIX G 25mm lens is 47°, which is the same as the angle of view for a 50mm lens on a 35mm camera.

What's the F-number?

Lens brightness is determined by the focal length and effective lens diameter. If you divide the focal length by the effective lens diameter, you get a value called the F-number. The lower the F-number, the larger the aperture and the more light that passes through the lens. A lens with a lower F-number has several key advantages. For example, lenses with a lower F-number let you use a faster shutter speed, so you can get clear, blur-free shots even in dim lighting. They also let you give the background a soft focus.

What's depth of field?

Depth of field is the range of object distances (in the depth direction) within which objects have acceptable sharpness. A long focal length (telephoto lens) or small F-number makes the depth of field shallower. A short focal length (wide-angle lens) or large F-number makes the depth of field greater. With a shallow depth of field, it's easier to take pictures in which the background is intentionally given a soft focus, thus emphasizing the sharp subject focus. With a large depth of field, you can keep objects in the foreground and objects in the background all in focus (for a pan-focus effect).

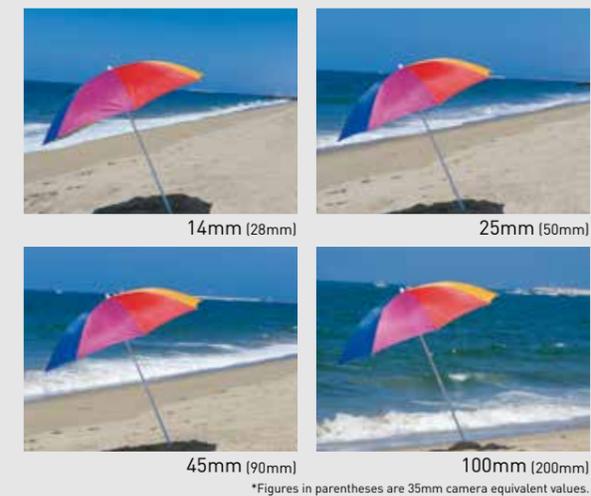


F2.8

F22

What's perspective?

Perspective refers to the relationship between nearby and distant objects. A wide-angle lens makes objects close to the lens appear larger and faraway objects smaller. This emphasizes the distance (depth) between nearby and distant objects, making the background appear farther away and expansive. A telephoto lens, on the other hand, compresses the perspective, thus deemphasizing the distance between objects in the foreground and objects in the background.



*Figures in parentheses are 35mm camera equivalent values.

What's the magnification ratio?

The magnification ratio is a numerical value that indicates the size difference between the actual size of an object and the size of that object captured on the image sensor. For example, if a 10-mm object is captured in a 5-mm size on the image sensor through a lens, that lens has a magnification ratio of 0.5x. If the object is captured in a 10-mm size, the lens has a magnification ratio of 1.0x, which is also referred to as "1:1."

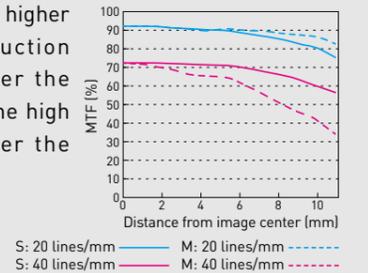
*The maximum image magnification of a Micro Four Thirds System lens can be converted into the maximum image magnification of a 35mm camera lens by multiplying "the indicated maximum image magnification x 2".



What's MTF?

MTF stands for Modulation Transfer Function. It's one of the indexes used to describe lens performance. The MTF is a numerical value that indicates how accurately a lens can reproduce the contrast of an object. The vertical axis of the graph shows contrast reproducibility (%), while the horizontal axis indicates the distance (mm)

from the image center. The image quality is evaluated in the sagittal direction "S" (parallel to the radius of the image circle) and in the meridional direction "M" (radial direction) using two frequencies (high frequency: 40 lines/mm, low frequency: 20 lines/mm). The solid lines represent sagittal measurements, and the dotted lines indicate meridional measurements. The higher up (100%) the graph, the better the image rendering capability of the lens. The higher the measurements with the low frequency, the higher the contrast reproduction capability. The higher the measurements with the high frequency, the higher the resolving power.



Lens Designation

LUMIX G X VARIO

PZ 45-175mm / F4.0-5.6 ASPH./



1 Power Zoom

This indicates that the lens is equipped with the electric-power zoom function for easy zooming operation.

2 Focal length

The smaller the focal length, the wider the angle of view (wide angle). The larger the focal length, the smaller the angle of view (telephoto). The number on the left is the focal length at the wide-angle setting, and the number on the right is the focal length at the telephoto setting.

3 F-number

The smaller the F-number, the brighter the lens. The number on the left is the F-number for the fully opened aperture at the wide-angle setting, and the number on the right is the F-number for the fully opened aperture at the telephoto setting. (The F-number takes an intermediate value while zooming.)

4 Aspherical lens

"ASPH." means that the lens includes one or more aspherical lenses.

5 Hand-shake compensation

"POWER O.I.S." (or "MEGA O.I.S.") indicates that the lens is equipped with an optical image stabilizer for hand-shake compensation.

6 HD Video Support

This indicates that the lens features the "silent design" for improved video recording and offers excellent focus tracking performance.

Specifications

Micro Four Thirds System Standard



Lens	35mm Camera Equivalent Focal Length	AF Actuator	O.I.S.	HD Video Support	Lens Construction Elements-Groups	Angle of View	Number of Blades	Minimum Aperture	Closest Focusing Distance (m/ft)	Maximum Image Magnification (35mm camera equivalent)	Filter Size (mm)	Diameter (φ) x Length (mm/in)	Weight (g/oz)	Standard Accessories
LEICA DG SUMMILUX 15mm / F1.7 ASPH.	30mm	Stepping Motor	-	●	9-7	72°	7 (Circular aperture diaphragm)	16	0.2 / 0.66	0.1x (0.2x)	46	φ 57.5 x 36 / φ 2.26 x 1.42	115 / 4.06	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA DG SUMMILUX 25mm / F1.4 ASPH.	50mm	Stepping Motor	-	-	9-7	47°	7 (Circular aperture diaphragm)	16	0.3 / 0.98	0.11x (0.22x)	46	φ 63 x 54.5 / φ 2.48 x 2.14	200 / 7.05	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA DG NOCTICRON 42.5mm / F1.2 ASPH. / POWER O.I.S.	85mm	Stepping Motor	POWER O.I.S.	●	14-11	29°	9 (Circular aperture diaphragm)	16	0.5 / 1.64	0.1x (0.2x)	67	φ 74 x 76.8 / φ 2.91 x 3.02	425 / 15.04	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA DG MACRO-ELMARIT 45mm / F2.8 ASPH. / MEGA O.I.S.	90mm	Stepping Motor	MEGA O.I.S.	-	14-10	27°	7 (Circular aperture diaphragm)	22	0.15 / 0.50 (FULL), 0.5 / 1.64 (LIMIT)	1.0x (2.0x)	46	φ 63 x 62.5 / φ 2.48 x 2.46	225 / 7.94	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G X VARIO 12-35mm / F2.8 ASPH. / POWER O.I.S.	24-70mm	Stepping Motor	POWER O.I.S.	●	14-9	84 - 34°	7 (Circular aperture diaphragm)	22	0.25 / 0.82	0.17x (0.34x)	58	φ 67.6 x 73.8 / φ 2.7 x 2.9	305 / 10.8	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S.	28-84mm	Stepping Motor	POWER O.I.S.	●	9-8	75 - 29°	7 (Circular aperture diaphragm)	22	0.2 / 0.66, 0.3 / 0.98*3	0.17x (0.34x)	37	φ 61 x 26.8*6 / φ 2.4 x 1.1*6	95 / 3.4	Lens cap, Lens rear cap, Lens storage bag
LUMIX G X VARIO 35-100mm / F2.8 / POWER O.I.S.	70-200mm	Stepping Motor	POWER O.I.S.	●	18-13	34 - 12°	7 (Circular aperture diaphragm)	22	0.85 / 2.8	0.1x (0.2x)	58	φ 67.4 x 99.9 / φ 2.7 x 3.9	360 / 12.7	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G X VARIO PZ 45-175mm / F4.0-5.6 ASPH. / POWER O.I.S.	90-350mm	Stepping Motor	POWER O.I.S.	●	14-10	27 - 7.1°	7 (Circular aperture diaphragm)	22	0.9 / 3.0	0.2x (0.4x)	46	φ 61.6 x 90.0 / φ 2.4 x 3.5	210 / 7.4	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G FISHEYE 8mm / F3.5	16mm	Stepping Motor	-	●	10-9	180°	7 (Circular aperture diaphragm)	22	0.1 / 0.33	0.20x (0.40x)	*1	φ 60.7 x 51.7 / φ 2.39 x 2.04	165 / 5.82	Lens cap, Lens rear cap, Lens storage bag
LUMIX G 14mm / F2.5 II ASPH.	28mm	Stepping Motor	-	●	6-5	75°	7 (Circular aperture diaphragm)	22	0.18 / 0.59	0.10x (0.20x)	46	φ 55.5 x 20.5 / φ 2.19 x 0.81	55 / 1.94	Lens cap, Lens rear cap, Lens storage bag
LUMIX G 20mm / F1.7 II ASPH.	40mm	Stepping Motor	-	-	7-5	57°	7 (Circular aperture diaphragm)	16	0.2 / 0.66	0.13x (0.25x)	46	φ 63 x 25.5 / φ 2.48 x 1.00	87 / 3.07	Lens cap, Lens rear cap, Lens storage bag
LUMIX G MACRO 30mm / F2.8 ASPH. / MEGA O.I.S.	60mm	Stepping Motor	MEGA O.I.S.	●	9-9	40°	7 (Circular aperture diaphragm)	22	0.105 / 0.345	1.0x (2.0x)	46	φ 58.8 x 63.5 / φ 2.3 x 2.5	180 / 6.35	Lens cap, Lens rear cap, Lens storage bag
LUMIX G 42.5mm / F1.7 ASPH. / POWER O.I.S.	85mm	Stepping Motor	POWER O.I.S.	●	10-8	29°	7 (Circular aperture diaphragm)	22	0.31 / 1.02	0.2x (0.4x)	37	φ 55 x 50 / φ 2.2 x 1.97	130 / 4.59	Lens cap, Lens hood, Lens rear cap, Decoration ring, Lens storage bag
LUMIX G VARIO 7-14mm / F4.0 ASPH.	14-28mm	Stepping Motor	-	●	16-12	114 - 75°	7 (Circular aperture diaphragm)	22	0.25 / 0.8	0.08x (0.15x)	-	φ 70 x 83.1 / φ 2.76 x 3.27	300 / 10.58	Lens cap, Lens rear cap, Lens storage bag
LUMIX G VARIO 12-32mm / F3.5-5.6 ASPH. / MEGA O.I.S.	24-64mm	Stepping Motor	MEGA O.I.S.	●	8-7	84 - 37°	7 (Circular aperture diaphragm)	22	0.2 / 0.66, 0.3 / 0.98*3	0.13x (0.26x)	37	φ 55.5 x 24 / φ 2.2 x 0.94	70 / 2.47	Lens cap, Lens rear cap
LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S.	28-84mm	Stepping Motor	MEGA O.I.S.	●	9-8	75 - 29°	7 (Circular aperture diaphragm)	22	0.2 / 0.66, 0.3 / 0.98*4	0.17x (0.34x)	46	φ 56 x 49 / φ 2.2 x 1.9	110 / 3.88	Lens cap, Lens hood, Lens rear cap
LUMIX G VARIO 14-42mm / F3.5-5.6 ASPH. / MEGA O.I.S.	28-84mm	Stepping Motor	MEGA O.I.S.	●	12-9	75 - 29°	7 (Circular aperture diaphragm)	22	0.3 / 1	0.16x (0.32x)	52	φ 60.6 x 63.6 / φ 2.39 x 2.50	165 / 5.82	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S.	28-90mm	Stepping Motor	MEGA O.I.S.	●	12-9	75 - 27°	7 (Circular aperture diaphragm)	22	0.3 / 1	0.17x (0.34x)	52	φ 60 x 60 / φ 2.36 x 2.36	195 / 6.88	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G VARIO 35-100mm / F4.0-5.6 ASPH. / MEGA O.I.S.	70-200mm	Stepping Motor	MEGA O.I.S.	●	12-9	34 - 12°	7 (Circular aperture diaphragm)	22	0.9 / 3.0	0.11x (0.22x)	46	φ 55.5 x 50 / φ 2.2 x 1.97	135 / 4.76	Lens cap, Lens hood, Lens rear cap
LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S.	28-280mm	Stepping Motor	POWER O.I.S.	●	14-12	75 - 8.8°	7 (Circular aperture diaphragm)	22	0.3 / 0.98, 0.5 / 1.64*5	0.25x (0.5x)	58	φ 67 x 75 / φ 2.64 x 2.95	265 / 9.35	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G VARIO HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S.	28-280mm	Linear Motor	MEGA O.I.S.	●	17-13	75 - 8.8°	7 (Circular aperture diaphragm)	22	0.5 / 1.64	0.2x (0.4x)	62	φ 70 x 84 / φ 2.76 x 3.31	460 / 16.2	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G VARIO 45-150mm / F4.0-5.6 ASPH. / MEGA O.I.S.	90-300mm	Stepping Motor	MEGA O.I.S.	●	12-9	27 - 8.2°	7 (Circular aperture diaphragm)	22	0.9 / 3.0	0.17x (0.35x)	52	φ 62 x 73 / φ 2.44 x 2.9	200 / 7.1	Lens cap, Lens hood, Lens rear cap
LUMIX G VARIO 45-200mm / F4.0-5.6 / MEGA O.I.S.	90-400mm	Stepping Motor	MEGA O.I.S.	●	16-13	27 - 6.2°	7 (Circular aperture diaphragm)	22	1.0 / 3.3	0.19x (0.38x)	52	φ 70 x 100 / φ 2.76 x 3.94	380 / 13.4	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G VARIO 100-300mm / F4.0-5.6 / MEGA O.I.S.	200-600mm	Stepping Motor	MEGA O.I.S.	●	17-12	12 - 4.1°	7 (Circular aperture diaphragm)	22	1.5 / 4.92	0.21x (0.42x)	67	φ 73.6 x 126 / φ 2.90 x 4.96	520 / 18.3	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LUMIX G 12.5mm / F12	65mm*2	-	-	-	4-3 x2	37°*2	-	-	0.6 / 1.97	0.02x (0.1x*2)	-	φ 57.0 x 20.5 / φ 2.24 x 0.81	45 / 1.59	Lens cap, Lens rear cap, Lens storage bag
Mount Adaptor DMW-MA1	-	-	-	-	-	-	-	-	-	-	-	φ 71 x 24 / [φ 2.80 x 0.94]	87 / 3.07	-
M Mount Adaptor DMW-MA2M	-	-	-	-	-	-	-	-	-	-	-	φ 61 x 13 / [φ 2.40 x 0.51]	60 / 2.12	-
R Mount Adaptor DMW-MA3R	-	-	-	-	-	-	-	-	-	-	-	φ 67 x 33 / [φ 2.64 x 1.30]	90 / 3.17	-

Four Thirds System Standard



Lens	35mm Camera Equivalent Focal Length	AF Actuator	O.I.S.	HD Video Support	Lens Construction Elements-Groups	Angle of View	Number of Blades	Minimum Aperture	Closest Focusing Distance (m/ft)	Maximum Image Magnification (35mm camera equivalent)	Filter Size (mm)	Diameter (φ) x Length (mm/in)	Weight (g/oz)	Standard Accessories
LEICA D VARIO-ELMARIT 14-50mm / F2.8-3.5 ASPH. / MEGA O.I.S.	28-100mm	DC Motor	MEGA O.I.S.	-	16-12	75 - 24°	7 (Iris diaphragm)	22	0.29 / 0.95	0.16x (0.32x)	72	φ 78.1 x 97.4 / φ 3.07 x 3.83	490 / 17.3	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA D VARIO-ELMAR 14-50mm / F3.8-5.6 ASPH. / MEGA O.I.S.	28-100mm	DC Motor	MEGA O.I.S.	-	15-11	75 - 24°	7 (Circular aperture diaphragm)	22	0.29 / 0.95	0.21x (0.42x)	67	φ 74 x 93 / φ 2.91 x 3.66	434 / 15.3	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA D VARIO-ELMAR 14-150mm / F3.5-5.6 ASPH. / MEGA O.I.S.	28-300mm	Supersonic Wave Motor	MEGA O.I.S.	-	15-11	75 - 8.2°	7 (Circular aperture diaphragm)	22	0.5 / 1.64	0.18x (0.36x)	72	φ 78.5 x 90.4 / φ 3.09 x 3.56	535 / 18.9	Lens cap, Lens hood, Lens rear cap, Lens storage bag
LEICA D SUMMILUX 25mm / F1.4 ASPH.	50mm	DC Motor	-	-	10-9	47°	7 (Circular aperture diaphragm)	16	0.38 / 1.25	0.09x (0.17x)	62	φ 77.7 x 75 / φ 3.06 x 2.95	510 / 18	Lens cap, Lens hood, Lens rear cap, Lens storage bag

*We recommend that you update the firmware to enjoy a more comfortable shooting experience. For further details, visit <http://panasonic.jp/support/global/cs/dsc/index.html>.

*The compression level of product photographs shown in this catalog varies. Check the above table for actual sizes.

*1 Front: Mounting not possible, Rear: Sheet filter holder 22 mm/0.86 in x 22 mm/0.86 in

*2 When setting the aspect ratio at 16:9 with the DMC-GH2

*3 Condition: 0.2 m/0.66 ft in 12mm-20mm, 0.3 m/0.98 ft in 21mm-32mm

*4 Condition: 0.2 m/0.66 ft in 14mm-20mm, 0.3 m/0.98 ft in 21mm-42mm

*5 Condition: 0.3 m/0.98 ft in 14mm-21mm, 0.5 m/1.64 ft in 22mm-140mm

*6 When the lens is retracted.

*Four Thirds™, Micro Four Thirds™ and the Four Thirds and Micro Four Thirds logo mark are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.

How to Choose Lenses

Tips on selecting the most suitable lens for your subject and shooting situation.

	for Landscapes	for Snapshots	for Events	for Portraits	for Close-up Shots	for Sports and Animals	for Unique Shots	Page

Lens Features		for Landscapes	for Snapshots	for Events	for Portraits	for Close-up Shots	for Sports and Animals	for Unique Shots	Page
	LUMIX G VARIO 7-14mm / F4.0 ASPH. <ul style="list-style-type: none">•Captures dynamic landscapes exactly as you see them.•Lets you shoot landscapes with lifelike depth and emphasized perspective.	◎	○					○	p32
	LUMIX G FISHEYE 8mm / F3.5 <ul style="list-style-type: none">•Deforms images with the impact of a fisheye lens.•Lets you apply extraordinary fisheye effects even to video images.	○						◎	p26
	LUMIX G VARIO 12-32mm / F3.5-5.6 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•A compact design for easy carrying.•High image quality for both indoor shots and snapshots.	○	◎	○					p33
	LUMIX G X VARIO 12-35mm / F2.8 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•F2.8 brightness across the zoom range produces stunning nightscapes and illuminated scenes.•Dust/splashproof design enables outdoor use.	◎	○	○					p16
	LUMIX G 14mm / F2.5 II ASPH. <ul style="list-style-type: none">•Wide versatility, from landscapes to snapshots.•Bright lens for great performance in both indoor shots and nightscapes.	◎	○						p27
	LUMIX G X VARIO PZ 14-42mm / F3.5-5.6 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•Extends from wide-angle to mid-telephoto with an ultra-compact design.•A quiet power zoom, ideal for shooting videos.	○	◎						p34
	LUMIX G VARIO 14-42mm / F3.5-5.6 II ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•A handy 3x zoom traveler for landscapes and portraits.	○	◎						p34
	LUMIX G VARIO 14-45mm / F3.5-5.6 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•Versatile 3x zooming for everything from landscapes to snapshots.•Telephoto shots with a beautifully soft-focused background to emphasize the subject.	○	◎						p34
	LUMIX G VARIO HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•Captures everything from vast landscapes to distant facial expressions with a 10x zoom.•Quiet operation for comfortable shooting of HD video.			◎		○			p37
	LUMIX G VARIO 14-140mm / F3.5-5.6 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•Easy carrying, even with a 10x zoom.•Covers everything, from wide-angle to telephoto.			◎		○			p37
	LEICA DG SUMMILUX 15mm / F1.7 ASPH. <ul style="list-style-type: none">•Ideal for snapshots and landscapes using natural lighting.•A Leica-certified lens with high performance all the way to the edges of the frame.	○	◎						p08
	LUMIX G 20mm / F1.7 II ASPH. <ul style="list-style-type: none">•A compact, lightweight, pancake style for active shooting.•A bright lens for beautiful everyday snapshots.		◎		○				p28

How to Choose Lenses

		for Landscapes	for Snapshots	for Events	for Portraits	for Close-up Shots	for Sports and Animals	for Unique Shots	Page
Lens Features									
	LEICA DG SUMMILUX 25mm / F1.4 ASPH. <ul style="list-style-type: none">•A Leica-certified lens with excellent image rendering, even in dim lighting.•F1.4 brightness for beautiful everyday snapshots.		○		◎				p10
	LUMIX G MACRO 30mm / F2.8 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•From full life-size macro shots to landscapes.•Fast, accurate focusing and stable framing.	○	○			◎		◎	p29
	LUMIX G 42.5mm / F1.7 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•Beautiful bokeh expression.•Impressive close-up shots for 0.31-m closest focusing distance.		○		◎				p30
	LUMIX G X VARIO 35-100mm / F2.8 / POWER O.I.S. <ul style="list-style-type: none">•F2.8 brightness across the zoom range produces stunning nightscapes and illuminated scenes. •Dust/splashproof design, ideal for sports scenes.	○			◎				p20
	LUMIX G VARIO 35-100mm / F4.0-5.6 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•Captures images with a natural perspective, all the way from medium to full telephoto. •A compact, lightweight telephoto zoom lens for convenient carrying.	○			◎				p36
	LEICA DG NOCTICRON 42.5mm / F1.2 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•Excellent depth and soft-focused backgrounds with outstanding F1.2 performance.•A Leica-certified lens that makes even casual portraits look impressive.				◎				p06
	LEICA DG MACRO-ELMARIT 45mm / F2.8 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•A Leica-certified lens for large, clear shots of the tiny world of nature.•A sharply focused foreground and beautifully soft focused background.	○			○	◎		○	p12
	LUMIX G X VARIO PZ 45-175mm / F4.0-5.6 ASPH. / POWER O.I.S. <ul style="list-style-type: none">•High-speed AF captures decisive moments even in the telephoto range.•Video shooting with a smooth power zoom.				◎	○	○		p22
	LUMIX G VARIO 45-150mm / F4.0-5.6 ASPH. / MEGA O.I.S. <ul style="list-style-type: none">•Compact, lightweight, easy-to-carry zoom.•Clearly captures sport scenes and children's expressions.				◎		○		p38
	LUMIX G VARIO 45-200mm / F4.0-5.6 / MEGA O.I.S. <ul style="list-style-type: none">•Beautiful soft focus from a 7-blade iris diaphragm.•Sharp, stabilized images across the wide zoom range.				○	○	◎		p38
	LUMIX G VARIO 100-300mm / F4.0-5.6 / MEGA O.I.S. <ul style="list-style-type: none">•Clear, high-contrast, high-resolution images across the entire zoom range.•Handheld 600mm (35mm equivalent) ultra-telephoto shooting.					○	◎		p40

Accessories

Expanding the LUMIX shooting experience. A wide range of accessories, such as flashes, with features that have advanced along with the camera.



External Flashes: Wireless Compatible

DMW-FL580L
(GN58)



A wireless compatible large-sized flash with LED lighting for both photo and video recording

Large, maximum lighting capacity of GN58. The wide panel covers a wide-angle 14mm (35mm camera equivalent) lens. The light-emitting section can be rotated 97 degrees vertically and 360 degrees horizontally for bounce shooting. Also takes quickly paced portrait shots, and features the industry's fastest battery charging time. Capable of modeling flash and multi flash use, for a variety of shooting applications. A filter (visible light blocking filter, for electric lamp use) and diffuser come as accessories.

Applicable models: DMC-GH4 / GH3 / GX7 / GX1*1 / G6 / G5*1 / GF6*2 / GM5

DMW-FL360L
(GN36)



A wireless compatible mid-sized flash with LED lighting for both photo and video recording

Maximum lighting of GN36. Featuring LED lighting for greater convenience in video shooting. The wide panel covers a wide-angle 16mm (35mm camera equivalent) lens. The light-emitting section can be rotated 97 degrees vertically and 360 degrees horizontally for bounce shooting.

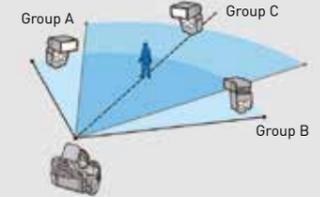
Applicable models: DMC-GH4 / GH3 / GX7 / GX1*1 / G6 / G5*1 / GF6*2 / GM5

*1. Not wireless compatible.
*2. Compatible with wireless shooting only.

Wireless Control

The DMW-FL580L and FL360L incorporate wireless control functions that enable powerful multiple flash lighting with up to three flash groups. Flash settings such as firing, dimming and exposure compensation can be configured via the camera menu. It may also be used as a slave flash.

* While the DMC-GF6 is not equipped with a hot shoe, it is capable of wireless control.



LED Lighting in Video Recording

The DMW-FL580L and FL360L feature LED lights that are especially useful for shooting videos under backlit or low-light conditions.

• For the FL580L, this function is also available with the GH4 / GH3 / GX7 / GX1*1 / G6 / G5*1 / GF6*2 and GM5.

For the FL360L, this function is also available with the GH4 / GH3 / GX7 / GX1 / G6 / G5 and GM5.



External Flashes

DMW-FL500
(GN50)



A high-capacity flash with automatic light control

Large, maximum lighting capacity of GN50. The wide panel covers a wide-angle 16mm (35mm camera equivalent) lens. The light-emitting section can be rotated 97 degrees vertically and 270 degrees horizontally for bounce shooting. Also equipped with an FP TTL AUTO mode that allows a high-speed flash with repeated FP light emission. This enables flash shooting at high shutter speeds. A variety of flash shooting functions can also be set at the camera, such as red-eye reduction, slow synchro, and trailing-curtain synchronization.

Applicable models: DMC-GH4 / GH3 / GX7 / GX1 / G6 / G5 / GM5

DMW-FL360
(GN36)



A mid-sized flash with automatic light control

A compact external flash with automatic light control. The wide panel covers a wide-angle 16mm (35mm camera equivalent) lens. The light-emitting section can be rotated 97 degrees vertically and 270 degrees horizontally for bounce shooting. Also equipped with an FP TTL AUTO mode that allows a high-speed flash with repeated FP light emission. This enables flash shooting at high shutter speeds. A variety of flash shooting functions can be set at the camera, such as red-eye reduction, slow synchro, and trailing-curtain synchronization.

Applicable models: DMC-GH4 / GH3 / GX7 / GX1 / G6 / G5 / GM5

DMW-FL220
(GN22)



A compact flash with automatic light control

A compact, lightweight, external flash with TTL automatic light control that covers a wide-angle 24mm (35mm equivalent) lens. Maximum lighting of GN22. It lets you shoot scenes that are not sufficiently brightened by the built-in flash, and expands the possibilities for photographic expression. A variety of flash shooting functions can also be set at the camera, such as red-eye reduction, slow synchro, and trailing-curtain synchronization.

*Varies depending on the shooting distance.
Applicable models: DMC-GH4 / GH3 / GX7 / GX1 / G6 / G5 / GM5

Specifications: External Flashes

	DMW-FL580L	DMW-FL360L
Power Requirement	DC 6.0 V	DC 6.0 V
Battery Recommended	AA Alkaline dry batteries (LR6) x 4 / AA Rechargeable nickel metal hydride batteries (Ni-MH) x 4	LR6/AA Alkaline dry batteries x 4 / HR6/AA Rechargeable nickel metal hydride batteries (Ni-MH) x 4
Charging Time (from full flash until the [TEST/CHARGE] lamp lights)	Approx. 2.7 sec: AA Alkaline dry batteries Approx. 1.7 sec: AA Rechargeable nickel metal hydride batteries	Approx. 2.0 sec.: LR6 / AA Alkaline dry batteries Approx. 1.5 sec.: HR6 / AA Rechargeable nickel metal hydride batteries
Firing Period	Approx. 1/20,000 - 1/250 sec (varies depending on the flash intensity; FP firing excluded)	Approx. 1/20,000 - 1/500 sec (varies depending on the flash intensity; FP firing excluded.)
Number of Flashes (with full flash)	125 flashes or more: AA Alkaline dry batteries 175 flashes or more: AA Rechargeable nickel metal hydride batteries (min. 1,900 mAh type) (differs depending on the photo taking conditions)	250 flashes or more: LR6/AA Alkaline dry batteries 350 flashes or more: HR6/AA Rechargeable nickel metal hydride batteries (min. 1,900 mAh type) (differs depending on the photo taking conditions)
AF Assist Lamp	Effective distance: Approx. 1 - 5 m/3.28 - 16.4 ft (differs depending on the digital camera and type of lens used)	Effective distance: Approx. 1 - 5 m/3.28 - 16.4 ft (differs depending on the digital camera and type of lens used)
Flash Mode	TTL AUTO / AUTO / MANUAL / FP TTL AUTO / FP MANUAL	TTL AUTO / AUTO / MANUAL / FP TTL AUTO / FP MANUAL / SL AUTO / SL MANUAL / RC
Guide Number	58 (ISO 100-m), 26 (ISO 100-m, when the wide panel is used)	36 (ISO 100-m), 12 (ISO 100-m when the wide panel is used)
Lighting Angle	Covers the angle of view of 12 - 100mm lenses (35mm camera equivalent: 24 - 200mm) (with wide panel: 7mm lens, 35mm camera equivalent: 14mm)	Covers the angle of view of 12 - 42mm lenses (35mm camera equivalent: 24 - 85mm) (With wide panel: 8mm lens, 35mm camera equivalent: 16mm)
LED	Illuminance	100 lux at 1 m
	Lighting Angle	Compatible with lenses having a focal length of more than 12mm (35mm camera equivalent: more 24mm)
	Control Mode	AUTO / MANUAL
Wireless (RC) Function	Flash Mode	SL AUTO / SL MANUAL / RC / MULTI
	Channel	4 channels
Bounce Angle	Up / Down	Upward: 0 - 90 degrees / Downward: 0 - 7 degrees
	Right / Left	Toward the right: 0 - 180 degrees / Toward the left: 0 - 180 degrees
Dimensions	Approx. 72.0 (W) x 112.5 (H) x 112.5(D) mm (excluding the projecting parts)	Approx. 62.0 (W) x 104.0 (H) x 98.0 (D) mm (excluding the projecting parts)
Weight	Approx. 435 g/15.34 oz (including alkaline dry batteries) Approx. 340 g/11.99 oz (main unit)	Approx. 376 g/13.3 oz (including batteries) Approx. 257 g/9.07 oz (main unit)
Operating Temperature	0 - 40 °C/32 - 104 °F	0 - 40 °C/32 - 104 °F
Operating Humidity	10 - 80 %RH (no condensation)	10 - 80 %RH (no condensation)

	DMW-FL500	DMW-FL360	DMW-FL220
Power Requirement	DC 6.0 V	DC 3.0 V	DC 3.0 V
Battery Recommended	AA Alkaline dry batteries (LR6) x 4 / AA Rechargeable nickel metal hydride batteries (Ni-MH) x 4	AA Alkaline dry batteries (LR6) x 2 / AA Rechargeable nickel metal hydride batteries (Ni-MH) x 2	AA Alkaline dry batteries (LR6) x 2 / AA Rechargeable nickel metal hydride batteries (Ni-MH) x 2
Charging Time (from full flash until the [TEST/CHARGE] lamp lights)	Max. 7 sec: AA Alkaline dry batteries Max. 5 sec: AA Rechargeable nickel metal hydride batteries	Approx. 8 sec: AA Alkaline dry batteries Approx. 7.5 sec: AA Rechargeable nickel metal hydride batteries	Approx. 5.5 sec: AA Alkaline dry batteries Approx. 5.0 sec: AA Rechargeable nickel metal hydride batteries
Firing Period	Approx. 1/20,000 - 1/500 sec (varies depending on the flash intensity; FP firing excluded.)	Approx. 1/20,000 - 1/500 sec (varies depending on the flash intensity; FP firing excluded.)	Approx. 1/20,000 to 1/500 sec (varies depending on the flash intensity)
Number of Flashes (with full flash)	120 flashes or more: AA Alkaline dry batteries 140 flashes or more: AA Rechargeable nickel metal hydride batteries (Differs depending on the photo taking conditions)	120 flashes or more: AA Alkaline dry batteries 200 flashes or more: AA Rechargeable nickel metal hydride batteries (2,700 mAh type) (Differs depending on the photo taking conditions)	140 flashes or more: AA alkaline dry batteries 230 flashes or more: AA rechargeable nickel metal hydride batteries (min. 2,400 mAh type) (Differs depending on the photo taking conditions)
AF Assist Lamp	Only for combinations with digital camera having communication capability; approximate distance enabling automatic lighting at low-brightness levels: 0.7 - 7 m (differs depending on the digital camera and type of lens used)	Only for combinations with digital camera having communication capability; approximate distance enabling automatic lighting at low-brightness levels: 1 - 5 m (differs depending on the digital camera and type of lens used)	-
Flash Mode	TTL AUTO / AUTO / MANUAL / FP TTL AUTO / FP MANUAL	TTL AUTO / AUTO / MANUAL / FP TTL AUTO / FP MANUAL	TTL AUTO / MANUAL
Guide Number	Automatically selected 50: At 42 mm setting (85 mm when a 135 camera is used) 28: At 12 mm setting (24 mm when a 135 camera is used) 18 / 20 selected: When the wide panel is used	Automatically selected 36: At 42 mm setting (85 mm when a 135 camera is used) 20: At 12 mm setting (24 mm when a 135 camera is used) 8 / 10 selected: When the wide panel is used	Automatically selected: When [TTL AUTO] mode is set 22 (ISO 100-m): When [MANUAL] mode is set
Lighting Angle	Automatically selected At 12 mm setting: 61 degrees up/down, 78 degrees left/right (view angle of 12mm lens covered)* At 42 mm setting: 21 degrees up/down, 28 degrees left/right (view angle of 42mm lens covered)* Using wide panel: 83 degrees up/down, 101 degrees left/right (view angle of 8mm lens covered) * When "FOUR THIRDS" applies as the ZOOM display	Automatically selected At 12 mm setting: 61 degrees up/down, 78 degrees left/right (view angle of 12mm lens covered)* At 42 mm setting: 21 degrees up/down, 28 degrees left/right (view angle of 42mm lens covered)* Using wide panel: 83 degrees up/down, 101 degrees left/right (view angle of 8mm lens covered)* * When "FOUR THIRDS" applies as the ZOOM display	60 degrees up / down, 78 degrees left / right View angle of 24mm lens covered (35mm camera equivalent)
Bounce Angle	Up / Down	Upward: 0 - 90 degrees / Downward: 0 - 7 degrees,	-
	Right / Left	Toward the right: 0 - 90 degrees / Toward the left: 0 - 180 degrees	-
Dimensions	Approx. 79.4 (W) x 141.1 (H) x 107.1 (D) mm (excluding the projecting parts)	Approx. 67 (W) x 108 (H) x 95 (D) mm (excluding the projecting parts)	Approx. 61.0 (W) x 97.7 (H) x 46.1 (D) mm (excluding the projecting parts)
Weight	Approx. 375 g (main unit) Approx. 455 g (including batteries)	Approx. 270 g (main unit) Approx. 320 g (including batteries)	Approx. 111 g/3.92 oz (main unit) Approx. 157 g/5.54 oz (including batteries)
Operating Temperature	0 - 40 °C	0 - 40 °C	0 - 40 °C/32 - 104 °F
Operating Humidity	10 - 80% (no condensation)	10 - 80% (no condensation)	10 - 80 %RH (no condensation)

Flash Knowledge

LUMIX's external flash adds to the expressive capabilities made possible by light control. Shots that cannot be taken with the camera's internal flash alone, such as those in dark places or when directly facing the light source, come out clear and sharp with the external flash. It is ideal for a number of advanced lighting techniques, such as smoothening shadows with bounce lighting for a more natural effect, wireless shooting from a place some distance from the camera, and defocusing the background or using a high shutter speed.

GN (Guide Number) and Shooting Distance

How far can the light from a flash reach?

To find this out, you need to look at the GN (Guide Number)* and its value. The larger the value, the further away your subject can be captured with the proper exposure.

Based on the GN, you can calculate how far the flash's light will reach.

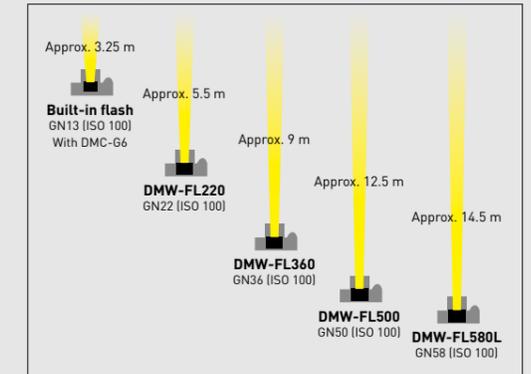
$$\text{Shooting Distance with Proper Exposure (m)} = \text{GN} / \text{F Value}$$

*The flash GN indicates the aperture value that provides proper exposure for a subject that is 1m from the camera when using ISO100.

Also, when you divide the GN by the distance between the camera and the subject, you get the aperture value that is necessary during maximum light emission.

When the light from the internal flash isn't able to reach parts of a large room, or when you're shooting with a telephoto lens, a powerful external flash gives you bright, clear shots. The distance over which subjects can be brightened with the flash varies depending on the light intensity (Guide Number) of the flash. The higher the Guide Number, the greater the exposure distance.

Image showing flash throw distance (when shooting at ISO 100, F4)



Built-in Flash



External Flash

When the ISO sensitivity is increased, subjects at a farther distance can be captured with the proper exposure. For example, when shooting at ISO 400, the distance is approximately twice as great as when shooting with ISO 100. This lets you extend the shooting distance.

Shooting Distances with the ISO 100 Set to 1

Sensitivity	ISO 100	ISO 200	ISO 400	ISO 800	ISO 1600
Shooting Distances	1x	Approx. 1.4x	Approx. 2x	Approx. 2.8x	Approx. 4x



ISO 100*



ISO 400*



ISO 1600*

* When shooting with F2.8, 24mm wide-angle (35mm camera equivalent) settings.



Bounce Lighting

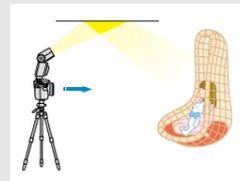
This is a shooting method in which the light source is rotated to bounce the light off of the ceiling or a wall to attain a diffused light source. It softens shadows that are generated by the flash, and produces a natural lighting that enhances facial expressions and the mood of the room. It also prevents the light from shining directly onto a sleeping child's face.



Direct lighting



Bounce Lighting



Using a Board Reflector

A board reflector lets you brighten your subject by reflecting light onto it from a white or silver reflector. You can also use it as indirect lighting by reflecting the flash or sunlight onto parts with shadows. It gives you control over the shading of your subject.



Direct lighting



With Board Reflector

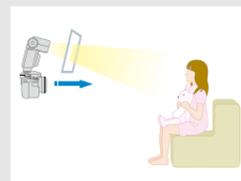


Using a Diffuser

In contrast to a board reflector, which reflects light, a diffuser is used to diffuse light. It provides soft lighting with suppressed shading. Thin white cloth or tracing paper can be effectively used as a diffuser.



With Diffuser



Check These Too!

- Use a white, non-colored surface to bounce the light. If the ceiling or wall is colored, the reflected light will take on the same coloring.
- When there is too much distance between the bouncing surface and the subject, it becomes harder for the reflected light to reach the subject. Be careful because the effect weakens in large rooms.



FP Emission

A flash is convenient for shooting against the light source. FP emission lets you shoot at faster shutter speeds. You can also use a fully open aperture even for bright scenes.



Flash OFF
Blocked shadows result from shooting against the lighting source.



TTL AUTO
Brightly corrects the image. Shows the water flow.



FP Emission
The fast shutter speed freezes the water spray.

Using Flash Models

Slow Sync. Flash

With an ordinary auto flash, even if the subject is properly exposed, the background may be underexposed. Using the Slow Sync. flash function slows down the shutter speed and continues to capture background light even after the flash is finished.



Normal Auto Flash, 1/60 sec



Slow Sync. Flash, 1/1.6 sec

2nd Curtain Sync

With 1st Curtain Sync., the flash is emitted as the shutter opens. However, with 2nd Curtain Sync., the flash is emitted just before the shutter closes. This lets you naturally display attractive light traces.



1st Curtain Sync.



2nd Curtain Sync.

For Video Shooting

Stereo Shotgun Microphone

DMW-MS2

Applicable models:
DMC-GH4 / GH3 / G6



Stereo Microphone

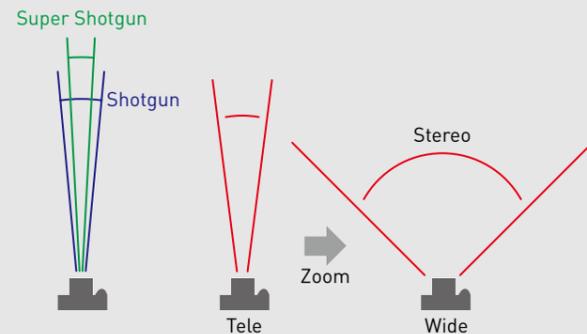
DMW-MS1

Ambient sounds can be clearly recorded in higher quality and from greater distances.

Applicable models: DMC-G2 / GH1 / GH2



The Stereo Shotgun Microphone collects the sound from around your subject. The Super Shotgun function further concentrates the range of collected sounds compared with previous gun microphones. The Zoom Mic function has added a Manual mode, with which you can manually set the collection range, to the Lens Link function that links the sound collection to the zoom range. This lets you adjust the sound collection as you shoot.



Expansion Interface Unit

DMW-YAGH*/AG-YAGHG**



The new Expansion Interface Unit features SDI video output and XLR audio input. It lets you connect to a 4K-compatible recorder or monitor for editing, or record high-quality sound from an external mic. The 12V DC IN terminal complies with many large-capacity industrial batteries to continuously supply the DMC-GH4 with power. These and other system-expanding features let you draw the full potential of the DMC-GH4 for a wide range of professional applications.

*For US and Europe. **For other regions.

LED Video Light

VW-LED1



The LED Video Light comprises 36 high-intensity white LEDs. It attains a brightness of about 1,500 lux at a distance of 50 cm from the subject. Natural lighting is cast not only in the center of the frame, but all the way to the corners. The brightness is also adjustable, so you can select the level that matches your shooting intent. The light is powered by four AA batteries, and the low power consumption of LEDs enables approximately 240 minutes of continuous lighting (using Nickel-Metal Hydride batteries).

Applicable models: DMC-GH4 / GH3 / GX7 / G6 / GM5

Filters

PL Filter (Circular Type)

Helps eliminate reflections while preserving the naturally vivid colors of the subject.

- 67mm DMW-LPL67
- 62mm DMW-LPL62
- 58mm DMW-LPL58
- 52mm DMW-LPL52
- 46mm DMW-LPL46
- 37mm DMW-LPL37
- 37mm DMW-LPLA37



Without PL Filter



With PL Filter

ND (Neutral Density) Filter (ND8)

Lets you use slower shutter speeds even in the bright outdoors, and reduces light intensity by three aperture stops.

- 62mm DMW-LND62
- 58mm DMW-LND58
- 52mm DMW-LND52
- 46mm DMW-LND46
- 37mm DMW-LND37



Without ND Filter



With ND Filter

Others

MC Protector

Protects the camera lens from scratches and other damage.

- 67mm DMW-LMCH67
- 62mm DMW-LMCH62
- 58mm DMW-LMCH58
- 52mm DMW-LMC52
- 46mm DMW-LMC46
- 37mm DMW-LMCH37



Tripod Adaptor

When a large-diameter lens is mounted, this adaptor prevents the lens from contacting the tripod base.

DMW-TA1



Battery Grip

For extended shooting enjoyment.

The design makes vertically held shooting as easy as ordinary, horizontally held shooting, and has a dustproof construction.

DMW-BGGH3
Applicable models:
DMC-GH4 / GH3



Live View Finder

The Live View Finder attaches to the hot shoe. It is also handy for low-angle shots because it can be tilted vertically from 0 to 90 degrees.

DMW-LVF1
(202,000-dot equivalent)
Applicable models:
DMC-GF1 / GF2



DMW-LVF2
(1,440,000-dot equivalent)
Applicable models: DMC-GX1



Grip (for LUMIX GM)

The GM Grip gives your fingers a firm, stable hold. Its design attractively matches the GM styling.

DMW-HGR1



Zoom Lever

Lets you zoom in and out at a steady speed for video recording.

DMW-ZL1



Remote Shutter

Allows remote operation of the shutter button when, for example, you are using a tripod. With shutter lock for bulb exposures.

DMW-RSL1



*LUMIX G system cameras come with a function to check whether the battery and unit can be safely used together. •Batteries made by other companies which have been certified by Panasonic may be used with these units, but we offer no guarantee as to the quality, performance or safety of such batteries. •Exercise care when purchasing batteries. Many fake or imitation batteries have been found among those sold at unusually low prices and those which customers cannot check for themselves before purchasing.