

LENS CATALOG



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Panasonic

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Infinite Expressive Power... from a Small, Handy Lens

"Single-lens reflex cameras are too big, heavy and hard to use."

Not anymore. Panasonic disproves this old notion with the new LUMIX G Micro System, a superb new digital camera based on the Micro Four Thirds System standard.

The camera body and all interchangeable lenses have been downsized, resulting in a camera that is revolutionary in size and weight.

Yet image quality is remarkably high, thanks to a fusion of advanced optical technologies and industry-leading digital technologies.

The LUMIX G Micro System renders superb images across a broad range of shooting situations, from wide-angle to telephoto.

The LUMIX G Micro System also lets you enjoy the exciting new world of HD movie recording.

Its high-performance features let you shoot your own movies with levels of clarity and beauty simply unimaginable in digital SLR cameras even a few years ago.

Carry the small, lightweight LUMIX G Micro System everywhere you go.

Change lenses as the inspiration moves you.

Capture the beauty of both special places and everyday moments in stunning images you'll enjoy forever.

With the LUMIX G Micro System, Panasonic introduces the ideal tool for exploring today's new digital imaging culture.

It's a small camera with small lenses that put infinite expressive power in your hands.



Huge Performance from Ultra-Compact Lenses



A Breakthrough in Size and Weight: Mirrorless Configuration



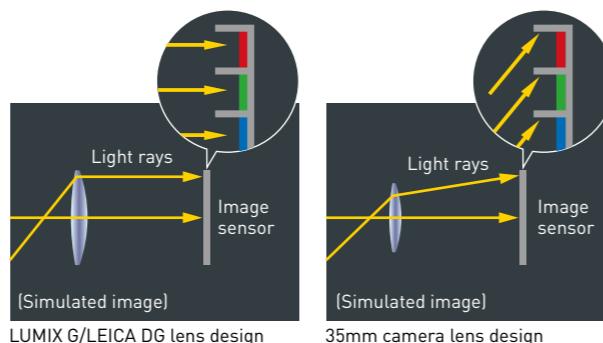
In developing the LUMIX G Micro System, Panasonic set out to create a digital SLR camera system with truly superior mobility. This meant that both the camera body and all lenses had to be extremely compact and lightweight. The LUMIX G Micro System's mirrorless configuration achieves exactly that, cutting the flange focal distance almost in half and reducing the body mount radius by 6 mm. With the LUMIX G Micro System, 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 Micro System

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.

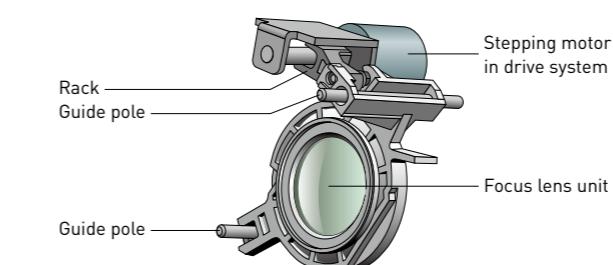


LUMIX G/LEICA DG lens design

35mm camera lens design

High-Precision, High-Speed Contrast Auto Focus

The LUMIX G Micro System uses a contrast auto focus (AF) system, which maximizes the use of Full-time Live View. Panasonic expanded the number of mount signal contacts from 9 (the number used in the Four Thirds System standard) to 11, to improve data transmission efficiency between lens and body. This helps achieve a contrast AF with levels of precision and speed never before seen in a digital SLR camera.

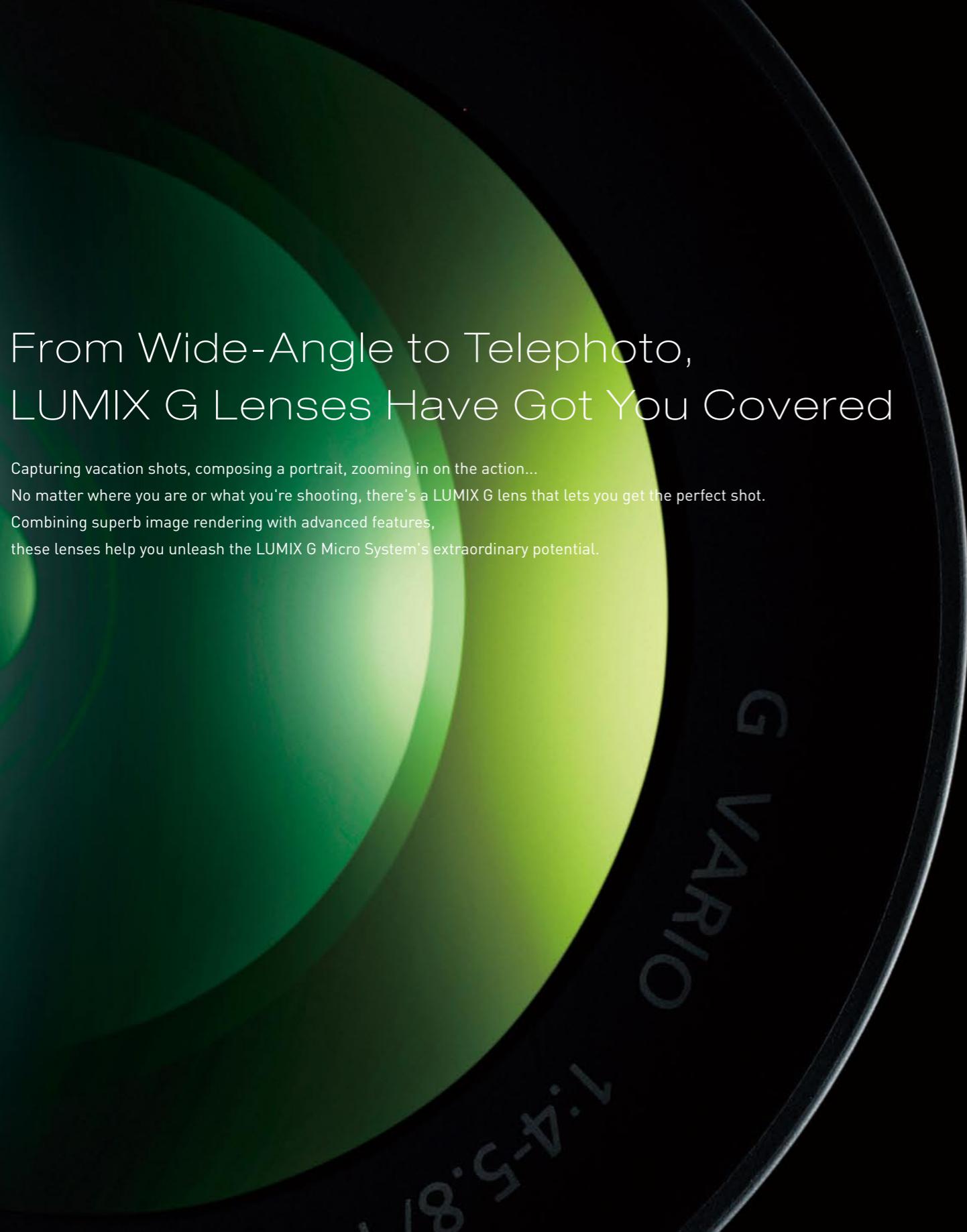


*Four Thirds™ and Micro Four Thirds™, and the Four Thirds and Micro Four Thirds logo marks are trademarks or registered trademarks of Olympus Imaging Corporation, in Japan, the United States, the European Union and other countries.

HD Movie Shooting – A New Way to Get Creative



The LUMIX G Micro System not only shoots stunning HD movies, it also features the industry's first auto focus lens that works when shooting movies. And to help you make even better movies, Panasonic has introduced "silent design" lenses. These lenses use a linear motor, so no drive sounds from the auto focus system are recorded as you shoot. With the LUMIX G Micro System, Panasonic opens the door to new kinds of image expression. Explore the art of photography and capture still shots of exquisite beauty. Or enjoy the fun of shooting your own HD movies with a mobile, easy-to-use digital SLR camera.



From Wide-Angle to Telephoto, LUMIX G Lenses Have Got You Covered

Capturing vacation shots, composing a portrait, zooming in on the action...

No matter where you are or what you're shooting, there's a LUMIX G lens that lets you get the perfect shot.

Combining superb image rendering with advanced features,

these lenses help you unleash the LUMIX G Micro System's extraordinary potential.

WIDE ZOOM



LUMIX G VARIO
7-14mm / F4.0 ASPH.

STANDARD ZOOM



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



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



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

TELEPHOTO ZOOM



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



LUMIX G VARIO
100-300mm / F4.0-5.6 /
MEGA O.I.S.

MACRO



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

SINGLE FOCAL LENGTH



LUMIX G
14mm / F2.5 ASPH.



LUMIX G
20mm / F1.7 ASPH.



LUMIX G FISHEYE
8mm / F3.5

How to Choose Lenses

Lens Knowledge

Lens Technology

Specifications

LUMIX Four Thirds Lenses / Optional Accessories

3D Lens

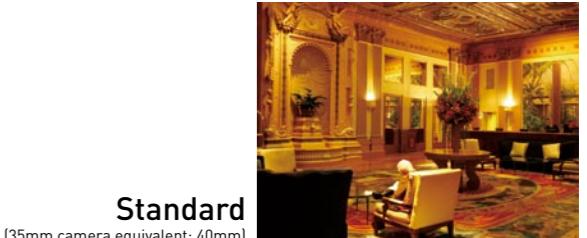
7-14 mm F4.0

(35mm camera equivalent: 14-28mm)



1/200 sec, F8.0

As I held the camera to my eye,
I viewed a suspension bridge gleaming in the morning sun,
with the background stretching to the horizon.
Capturing stunning images like this – with a dynamic perspective and fine details
that I can't even see with the naked eye – is what makes photography
such a captivating art.



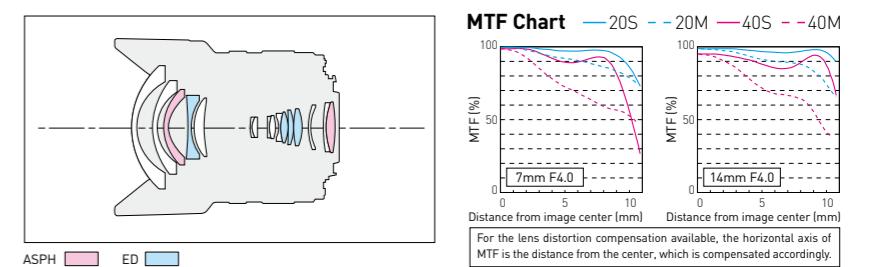
LUMIX G VARIO 7-14mm / F4.0 ASPH.

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 = 0.08x (35mm equivalent: 0.15x)
- Dimensions = 70 (dia.) x 83.1 mm / 2.76 (dia.) x 3.27 in.
- Weight = 300 g / 10.58 oz.
- Accessories = Hood (built-in), case



14-42mm F3.5-5.6 / 14-45mm F3.5-5.6

[35mm camera equivalent: 28-84mm]

[35mm camera equivalent: 28-90mm]



I just click the shutter to catch the look of joy in my child's face as she plays in the back yard.

This lens captures super-fine detail – even individual eyelashes – while giving the background a soft, delicate focus.

With this 40mm-class lens (35mm camera equivalent: 80mm),

I can easily snap off a shot anytime – and catch beautiful, natural-looking portraits without even pausing in my conversation.

1/320 sec, F5.6



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 covers a lot of ground, extending from 28mm (35mm camera equivalent) to a zoom ratio of around 3.2x. With a total of 12 lens elements in 9 groups, including aspherical lenses, this high-quality lens delivers an excellent optical performance, correcting various aberrations and providing superb balance. This lens has all the versatility you need for both everyday shooting and artistic photography. As your shooting skills evolve, you'll find it easy to create interesting, expressive photos by varying the angle of view and focal distance, choosing different perspectives, and experimenting with varying degrees of soft focusing.

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 = 0.16x [35mm equivalent: 0.32x]
- Filter size = 52 mm
- Dimensions = 60.6 (dia.) x 63.6 mm / 2.39 (dia.) x 2.50 in.
- Weight = 165 g / 5.82 oz.
- Accessories = Hood, case

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

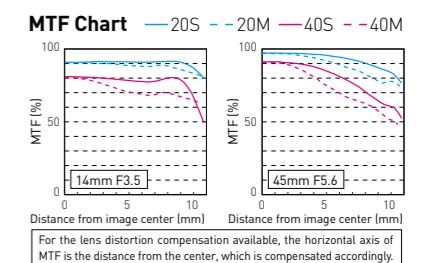
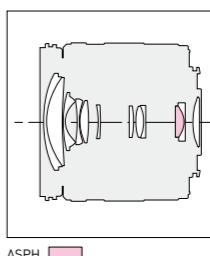
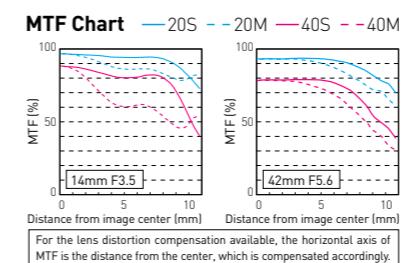
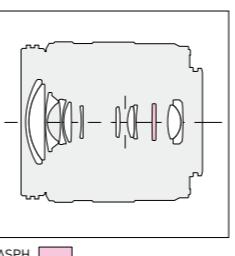
- Lens construction = 12 elements in 9 groups
- Closest focusing distance = 0.3 m / 1 ft.
- Maximum image magnification = 0.17x [35mm equivalent: 0.34x]
- Filter size = 52 mm
- Dimensions = 60 (dia.) x 60 mm / 2.36 (dia.) x 2.36 in.
- Weight = 195 g / 6.88 oz.
- Accessories = Hood, case



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



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



14-140mm F4.0-5.8

(35mm camera equivalent: 28-280mm)



Movie Support



With this system camera in HD movie recording mode, I'm the director.

I can shoot softly focused silhouette shots of a man in a back alley playing a sax, and record every note in clear, high-quality sound.

This lens, designed especially for shooting HD movies, works silently, so it won't interfere with the audio.

My movies sound as great as they look.



A pasture behind a barn, lit up by the late afternoon sun. Use the optical 10x zoom to move in for a close-up of a chestnut mare nibbling clover. With this lens, you can zoom in and out while shooting either a photo or a movie – so you can capture high-resolution shots of all kinds of scenes.

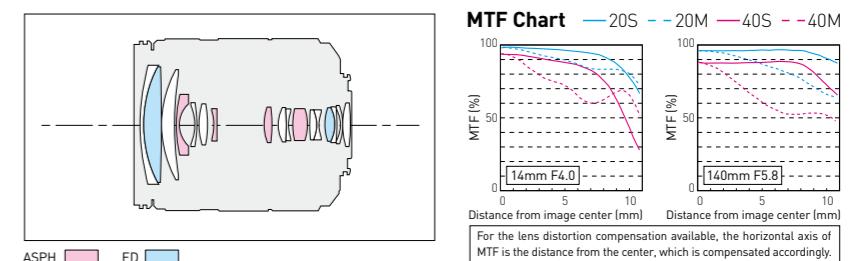


LUMIX G VARIO HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S.

Perfect for HD Movies: A 10x Optical Zoom that Takes You from Wide-Angle to Telephoto

This high-powered zoom lens extends from 28mm to 280mm (35mm camera equivalent). Two ED lenses and 4 aspherical lenses correct a variety of aberrations, helping render high-contrast, high-resolution images without false colors or distortion, from corner to corner across the entire zoom range. Featuring a linear motor and Inner Focus system, the auto focus system is extremely fast, accurate and nearly silent – ideal for shooting HD movies. Using a microstep system for the aperture drive further suppresses noise, and makes HD movies easier and more comfortable to shoot.

- Lens construction = 17 elements in 13 groups
- Closest focusing distance = 0.5 m / 1.64 ft.
- Maximum image magnification = 0.2x (35mm equivalent: 0.4x)
- Filter size = 62 mm
- Dimensions = 70 (dia.) x 84 mm / 2.76 (dia.) x 3.31 in.
- Weight = 460 g / 16.2 oz.
- Accessories = Hood, case



45-200mm F4.0-5.6

{35mm camera equivalent: 90-400mm}



1/320 sec, F5.6

Only 100mm long, this compact lens fits right in the palm of my hand – yet packs the power of a 400mm lens (35mm camera equivalent) to let me capture dynamic, professional-looking telephoto shots. I get the mobility I need to follow my child as he kicks a ball around a soccer field, and the power to zoom in for dramatic close-ups of his expressions.

45mm {35mm camera equivalent: 90mm}200mm {35mm camera equivalent: 400mm}

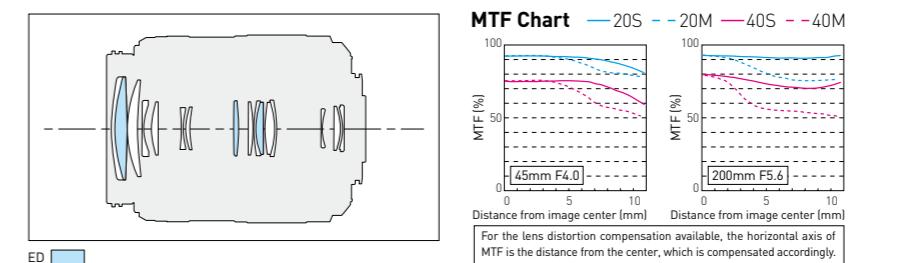
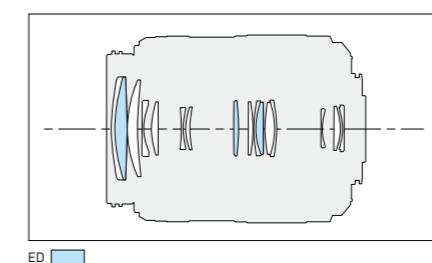
Use the 45mm setting (35mm camera equivalent: 90mm) to take impressive landscape shots. With the 200mm setting (35mm camera equivalent: 400mm), the background appears as if it were right behind your subject. The telephoto zoom lets you adjust the way you capture your images, depending on the subject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

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

An Easy-to-Use Zoom that Goes All the Way to 400mm

Capture natural-looking portraits in the medium telephoto range, or zoom all the way to 200mm (35mm camera equivalent: 400mm) to move in and grab dynamic action shots at sports events. This zoom lens covers a huge amount of ground. And with 16 elements in 13 groups, including 3 ED lenses, it corrects various aberrations with excellent balance to deliver images of stunning power and beauty. The unique Inner Focusing system allows high-speed contrast AF, and the 7-blade circular aperture renders images with a beautiful soft focus.

- Lens construction = 16 elements in 13 groups
- Closest focusing distance = 1.0 m / 3.3 ft.
- Maximum image magnification = 0.19x (35mm equivalent: 0.38x)
- Filter size = 52 mm
- Dimensions = 70 (dia.) x 100 mm / 2.76 (dia.) x 3.94 in.
- Weight = 380 g / 13.4 oz.
- Accessories = Hood, case



100-300mm F4.0-5.6

(35mm camera equivalent: 200 - 600mm)



As I zoom into a shadow moving up a tree, suddenly a squirrel comes into view.
I get incredibly clear, sharp zoom shots even with handheld shooting.
I can see everything – whiskers, fur, the gleam in its eyes – with a level of detail and clarity
that far exceed what I can see with the naked eye.

1/80 sec, F5.6



1/2000 sec, F5.6

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.

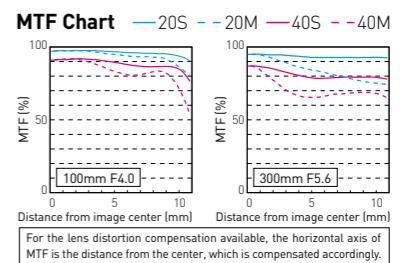
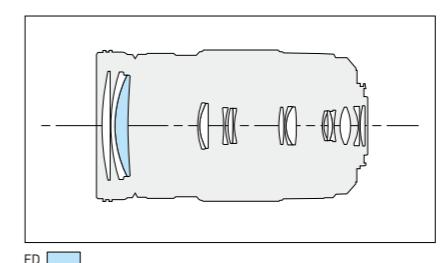


LUMIX G VARIO 100-300mm /
F4.0-5.6 / MEGA O.I.S.

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 = 0.21x (35mm equivalent: 0.42x)
- Filter size = 67 mm
- Dimensions = 73.6 (dia.) x 126 mm / 2.90 (dia.) x 4.96 in.
- Weight = 520 g / 18.3 oz.
- Accessories = Hood, case

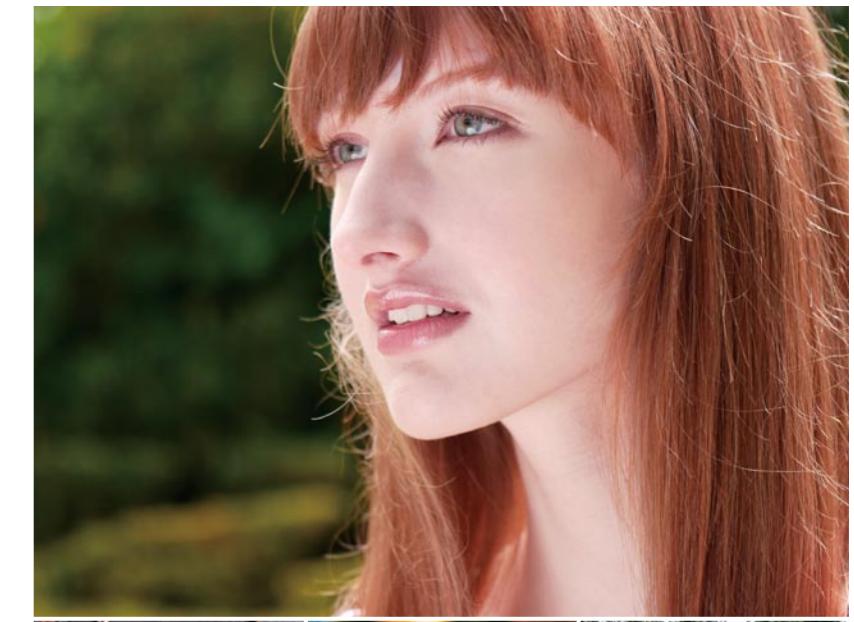


45mm F2.8

(35mm camera equivalent: 90mm)



As I stand captivated by this single flower glistening with morning dew, the macro lens turns it into a striking, dramatic image. Its superb rendering performance is seen here in the light transparency that has the look of a watercolor painting, the soft, delicate background focus, and the true-to-life droplets. Images like these reflect the breathtakingly beautiful imaging that distinguishes Leica.



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.



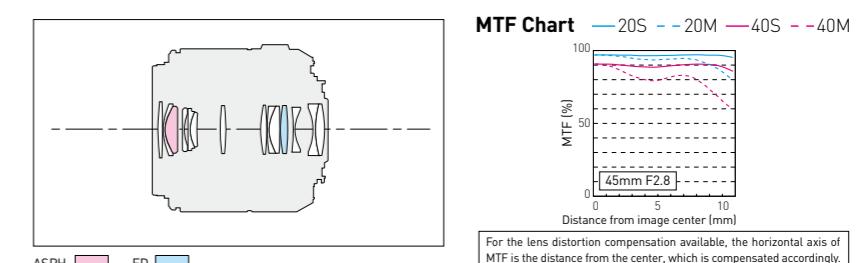
**LEICA
DG LENS**

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

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 = 1.0x (35mm equivalent: 2.0x) •Filter size = 46 mm •Dimensions = 63 [dia.] x 62.5 mm / 2.48 [dia.] x 2.46 in. •Weight = 225 g / 7.94 oz. •Accessories = Hood, case



•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.

14mm F2.5

(35mm camera equivalent: 28mm)



1/13 sec, F8.0

Today, I'm visiting an old-time country stable. Thankfully this small lens sees everything, from the horse carriage in the corner to the thick wooden beams in the ceiling, all in a single frame. I'm able to capture the nostalgic air of a place time forgot with this slim, wide-angle 14mm pancake lens (35mm camera equivalent: 28mm).



1/8 sec, F2.5

With its fully open brightness, 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.

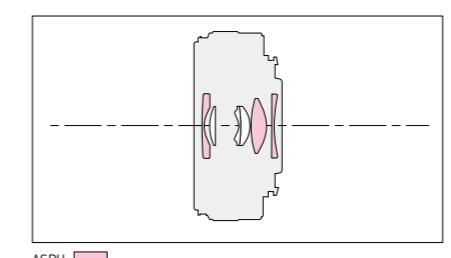


LUMIX G 14mm / F2.5 ASPH.

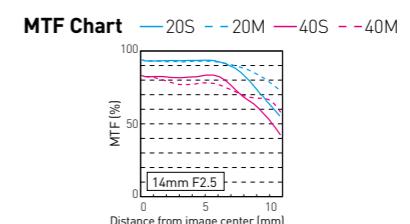
Single-Focal-Length Lens for Wide-Angle Shooting

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 = 0.10x (35mm equivalent: 0.20x) •Filter size = 46 mm •Dimensions = 55.5 (dia.) x 20.5 mm / 2.19 (dia.) x 0.81 in. •Weight = 55 g / 1.9 oz. •Accessories = Case



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



20mm F1.7

(35mm camera equivalent: 40mm)



1/250 sec, F1.7

As I casually snap shots of an unusual gate at a street corner, I use the F1.7's delicate soft focus to emphasize the texture of the rusty metal, and transform an everyday scene into a work of art.

This lens has the power to give form to all of my artistic visions.



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 bright, 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.

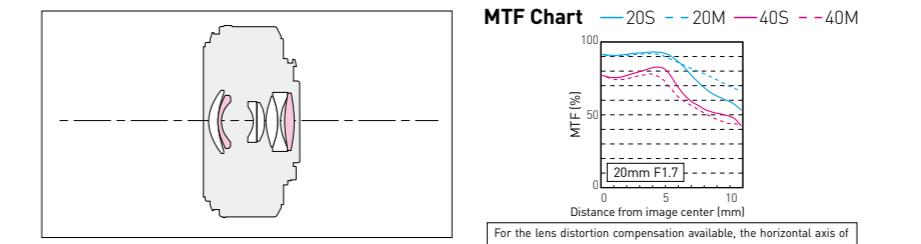
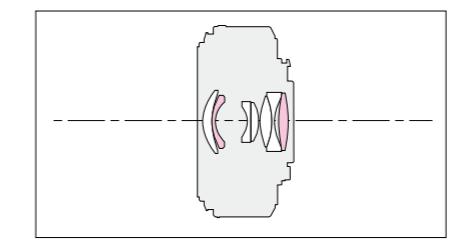


LUMIX G 20mm / F1.7 ASPH.

Compact Lens with Large F1.7 Aperture – Perfect for Everyday Shooting

Featuring the brightness of an F1.7 aperture, 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 Micro System 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 = 0.13x (35mm equivalent: 0.25x)
- Filter size = 46 mm
- Dimensions = 63 [dia.] x 25.5 mm / 2.48 [dia.] x 1.00 in.
- Weight = 100 g / 3.53 oz.
- Accessories = Case



FISHEYE 8mm F3.5

(35mm camera equivalent: 16mm)

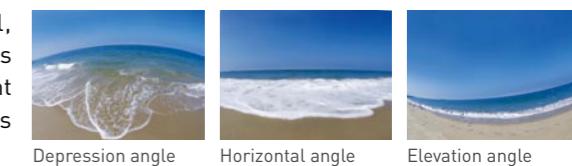


3.2 sec, F10

At 180°, the angle of view is far beyond what I can take in with normal eyesight. That's the appeal of a fisheye lens. This unique lens lets me capture surreal-looking images with a powerful perspective and deformation effect, yet portray even the lights of a building at night in clear detail.



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 movies, the fisheye lens lets you create truly distinctive eye-catching images.



Depression angle Horizontal angle Elevation angle

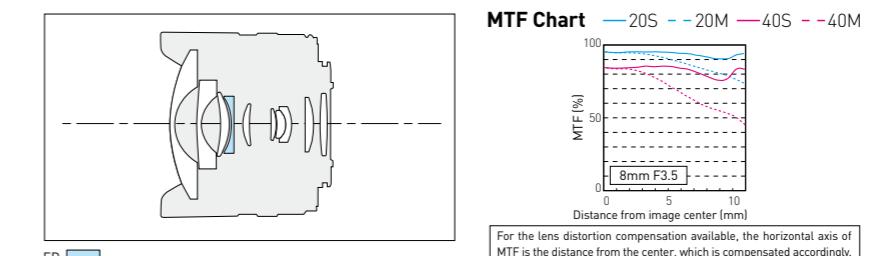
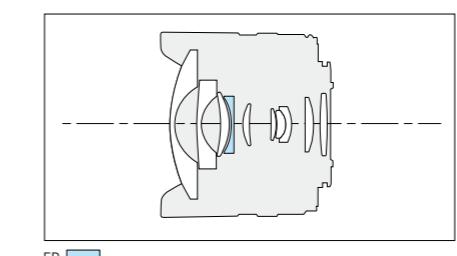


LUMIX G FISHEYE 8mm / F3.5

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 Micro System to shoot HD movies.

- Lens construction = 10 elements in 9 groups
- Closest focusing distance = 0.1 m / 0.33 ft.
- Maximum image magnification = 0.20x (35mm equivalent: 0.40x)
- Filter size = Front: Mounting not possible / Rear: Sheet filter holder 22 mm / 0.86 in x 22 mm / 0.86 in.
- Dimensions = 60.7 (dia.) x 51.7 mm / 2.39 (dia.) x 2.04 in.
- Weight = 165 g / 5.82 oz.
- Accessories = Case



How to Choose Lenses

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

for Landscapes



The 7-14mm or 14mm pancake lens lets you emphasize the perspective and express how vast a particular landscape is.

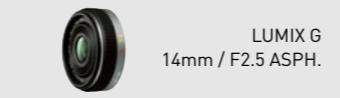


The 14-42mm or 14-45mm lens lets you capture medium telephoto shots that draw in distant landscapes.

The 45mm macro lens maintains image sharpness all the way to the edges, even when shooting at infinity.



LUMIX G VARIO
7-14mm / F4.0 ASPH.



LUMIX G
14mm / F2.5 ASPH.



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



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



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

for Traveling and Casual Snapshots

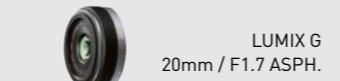


The 20mm pancake lens is always ready to grab photos on the fly.

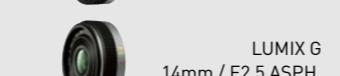


The 14mm wide-angle pancake lens or 7-14mm ultra-wide-angle lens lets you fit more into the photo when shooting in tight spaces, such as at an indoor party or inside a car.

The 14-42mm or 14-45mm standard zoom lens covers a wide range of uses, such as photographing landscapes and people during your travels.



LUMIX G
20mm / F1.7 ASPH.



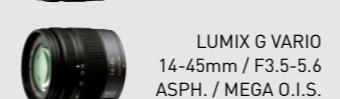
LUMIX G
14mm / F2.5 ASPH.



LUMIX G VARIO
7-14mm / F4.0 ASPH.



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



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

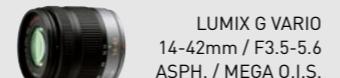
for Portraits



The 14-42mm, 14-45mm, and 14-140mm lenses let you capture natural-looking portraits from a medium distance while talking to your subject.



The large-aperture 45mm or 20mm pancake lens lets you capture the subject in clear focus while softly blurring the background.



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



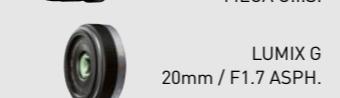
LUMIX G VARIO
14-45mm / F3.5-5.6
ASPH. / MEGA O.I.S.



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



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



LUMIX G
20mm / F1.7 ASPH.

for Animals



When photographing indoor pets that won't sit still, the 20mm lens lets you shoot at faster shutter speeds, making it possible to capture sharp, bright shots.

To photograph birds or other animals in the wild – when it would be dangerous or impossible to approach – use the 45-200mm or 100-300mm telephoto zoom lens.



LUMIX G
20mm / F1.7 ASPH.



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



LUMIX G VARIO
100-300mm / F4.0-5.6/
MEGA O.I.S.

for Sports and Vehicles



Use the 45-200mm or 100-300mm telephoto zoom lens to capture dynamic action shots from the stands at a sports event or racetrack.



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



LUMIX G VARIO
100-300mm / F4.0-5.6/
MEGA O.I.S.

for Events



The 14-140mm 10x optical zoom lens has the versatility to handle a wide range of shots. And you can use it not only to capture stunning photos, but when shooting HD movies too.



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

for Close-up Shots



The 45mm macro can render superb close-ups of small, detailed objects, such as flowers, insects or jewelry.

To capture detailed views of faraway objects – for example, the engravings on a distant building – use the 45-200mm or 100-300mm lens.



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



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



LUMIX G VARIO
100-300mm / F4.0-5.6/
MEGA O.I.S.

for Unique Shots



The 8mm fisheye and 7-14mm ultra-wide-angle lens let you capture distinctive, intriguing shots with unusual deformation effects. You can use them for both photos and movies.



LUMIX G FISHEYE
8mm / F3.5



LUMIX G VARIO
7-14mm / F4.0 ASPH.

Lens Knowledge

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



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 Micro System, 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.

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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 smaller the F-number, the brighter the lens (the larger the aperture). A bright lens has several key advantages. For example, a brighter lens lets you use a faster shutter speed, so you can get clear, blur-free shots even in dim lighting. It also lets 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 (bright lens) makes the depth of field shallower. A short focal length (wide-angle lens) or large F-number (dark lens) 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).



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.



0.25x



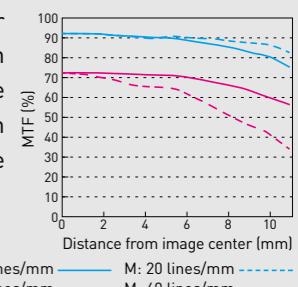
0.5x



1.0x

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.



S: 20 lines/mm
S: 40 lines/mm
M: 20 lines/mm
M: 40 lines/mm

Lens Designation

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

① ② ③ ④

① 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.

② 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.)

③ Aspherical lens

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

④ Hand-shake compensation

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

Lens Technology

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



Lenses Manufactured with Uncompromising Devotion to High Image Quality

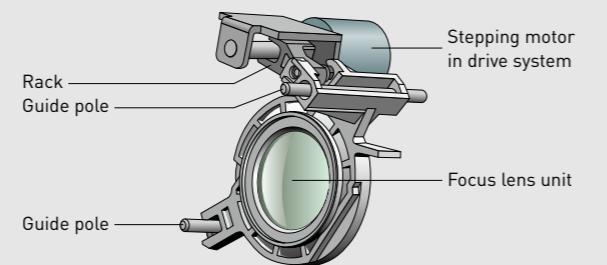
The LUMIX G/LEICA DG lenses are manufactured by an integrated production system in the Panasonic Yamagata Plant in Japan. From lens processing to assembly, inspection, and individual packaging, all processes are conducted in Clean Rooms according to rigorous environmental standards. For example, to inspect 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 flaring, the color of coatings, the operating feel of the focus ring, etc., 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.



An Original Lens Drive Motor for High-Precision, High-Speed Contrast AF

In conventional digital SLR cameras, contrast AF is more accurate than phase difference AF, but it has a slower focus speed. LUMIX G/LEICA DG lenses overcome this problem by incorporating a unique stepping motor in the drive system. A screw unit integrated with the motor shaft moves the focus lens directly, without relay gears or cams. Auto focusing is swift and accurate. Some lens models are equipped with a linear motor to further reduce drive noise – ideal when recording movies with sound. The number of mount signal contacts has been increased from the 9 used in conventional Four Thirds System cameras to

11, so information transfer between lens and camera is faster. This has also helped achieve a contrast AF system that excels in both speed and accuracy.



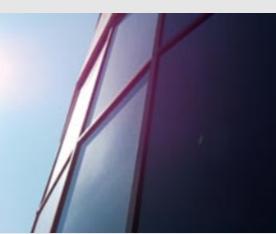
MEGA O.I.S. (Optical Image Stabilizer)

The smaller and lighter the camera body, the greater the hand-shake effect during shooting. LUMIX G/LEICA DG lenses feature MEGA O.I.S., an image stabilizing function that 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.



Multicoating Process

Utmost caution is exercised in coating the LUMIX G/LEICA DG lenses to suppress ghosts and flaring, while ensuring optimum color balance. In addition to a standard broadband anti-reflection coating, LUMIX G/LEICA DG 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.



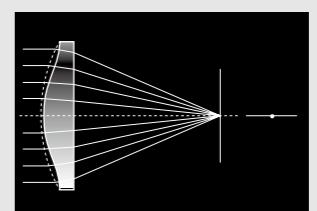
Without multicoating



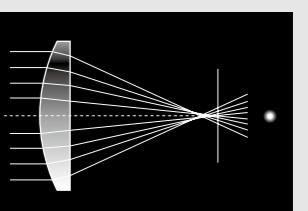
With multicoating

Aspherical Lenses

To assure superior image quality while reducing size and weight, each LUMIX G/LEICA DG lens features 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, and today the plant manufactures a wide variety of lenses – including concave lenses that have a large thickness difference and measure a mere 0.3 mm at the thinnest part. The aspherical lenses with superb image rendering ability produced at this plant now see widespread use.



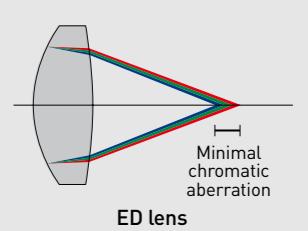
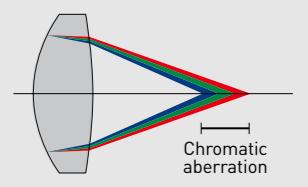
Aspherical lens



Spherical lens

Extra-Low Dispersion 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 Extra-Low Dispersion (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 ED lens is used mainly in LUMIX G/LEICA DG telephoto lenses and wide-angle zoom lenses to render sharp, high-contrast images with clear colors from corner to corner.



ED lens

Specifications

Micro Four Thirds System Standard



	Lens	35mm Equivalent Focal Length	AF Actuator	MEGA O.I.S.	Lens Construction Elements-Groups	Angle of View	Number of Blades	Minimum Aperture	Closest Focusing Distance (m / ft.)	Maximum Image Magnification (35mm equivalent)	Filter Size (mm)	Diameter (φ) x Length (mm / in.)	Weight (g / oz.)	Standard Accessories
Wide Zoom	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
Standard Zoom	LUMIX G VARIO 14-42mm / F3.5-5.6 ASPH. / MEGA O.I.S.	28-84mm	Stepping Motor	●	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	●	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 HD 14-140mm / F4.0-5.8 ASPH. / MEGA O.I.S.	28-280mm	Linear Motor	●	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
Telephoto Zoom	LUMIX G VARIO 45-200mm / F4.0-5.6 / MEGA O.I.S.	90-400mm	Stepping Motor	●	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	●	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
Macro	LEICA DG MACRO-ELMARIT 45mm / F2.8 ASPH. / MEGA O.I.S.	90mm	Stepping Motor	●	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
Single Focal Length	LUMIX G 14mm / F2.5 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 / 1.9	Lens cap, Lens rear cap, Lens storage bag
	LUMIX G 20mm / F1.7 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	100 / 3.53	Lens cap, 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
Adaptor	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	-
3D	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

Four Thirds System Standard



	Lens	35mm Equivalent Focal Length	AF Actuator	MEGA O.I.S.	Lens Construction Elements-Groups	Angle of View	Number of Blades	Minimum Aperture	Closest Focusing Distance (m / ft.)	Maximum Image Magnification (35mm equivalent)	Filter Size (mm)	Diameter (φ) x Length (mm / in.)	Weight (g / oz.)	Standard Accessories
Standard Zoom	LEICA D VARIO-ELMARIT 14-50mm / F2.8-3.5 ASPH. / MEGA O.I.S.	28-100mm	DC Motor	●	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	●	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	●	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
Single Focal Length	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

*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 22mm / 0.86 inch x 22mm / 0.86 inch

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

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