Main Parts and Controls

1. Speaker
2. NFC antenna
3. Flash / AF Assist Lamp
4. Control ring
5. LEICA DC ELMARIT lens / Outward facing camera
6. Microphone
7. Volume button
8. Power ON/OFF button
9. Camera selector switch
10. Shutter button
11. microUSB terminal
12. Ringtone lamp / Charging lamp
13. Light sensor / Proximity sensor
14. Earpiece
15. Earphone terminal
16. Inward facing camera
17. Display
18. Mouthpiece / Microphone
19. microSIM card slot
20. microSD card slot

■ DMC-CM1 Specifications

DIMENSIONS / WEIGHT	Dimensions (W x H x D)	Approx. 135.4 x 68.0 x 21.1 (Body 15.2) mm (5.33 x 2.68 x 0.83 (0.60) inch)	
	Weight	Approx. 203 g without SIM Card and microSD Memory Card (0.45 lb) Approx. 204 g with SIM Card and microSD Memory Card (0.45 lb)	
IMAGE SENSOR	Camera Effective Pixels	20.1 Megapixels	
	Sensor Size / Total Pixels / Filte	1-inch High Sensitivity MOS Sensor / Total Pixel Number 20.9 Megapixels / Primary Color Filter	
LENS	Aperture	F2.8 - 11 / Multistage Iris Diaphragm	
	Optical Zoom	1x (Fixed focal length)	
	Focal Length	f = 10.2mm (31mm in 35mm equiv. in 4:3) (28mm in 35mm equiv. in 3:2) (30mm in 35mm equiv. in 16:9) (36mm in 35mm equiv. in 1:1) (43mm in 35mm equiv. in 4K video recording)	
	Extra Optical Zoom (EZ)	Picture Quality M: Max. 1.32x (4:3 / 3:2 / 1:1), Max. 1.41x (16:9) Picture Quality S: Max. 2.0x Picture Quality XS: Max. 2.83x (3:2 / 16:9), Max. 4x (4:3 / 1:1)	
	Intelligent Zoom	2x	
	Lens	LEICA DC ELMARIT 6 elements in 5 groups (3 Aspherical Lenses / 6 Aspherical Surfaces)	
	Optical Image Stabilizer	-	
	Digital Zoom	Max. 2x (When Digital Zoom is used simultaneously with Extra Optical Zoom or Intelligent Zoom, the total zoom ratio is max. 4x.)	
FOCUS	Focusing Area	10 cm - infinity	
	AF Assist Lamp	Yes (On / Off)	
	Focus	AF / MF	
	AF Metering	Face Detection / Tracking / 23-area / 1-area	
SHUTTER	Shutter Type	Mechanical Shutter / Auto (Mechanical Shutter + Eerectronic Shutter)	
	Shutter Speed	Still Image: Mechanical Shutter : Approx. 60 - 1/2,000 sec Auto : Approx. 60 - 1/16,000 sec	Motion Picture: Approx. 1/30 - 1/16,000 sec
	Self Timer	2 sec / 10 sec	
RECORDING SYSTEM	File Format	Still Image: JPEG (DCF/Exif2.3) *1 / RAW *2	Motion Picture: MP4
	Image Quality	RAW / RAW+Fine / Fine / Standard	
	Recording Media	microSD Memory Card, microSDHC Memory Card, microSDXC Memory Card	
	Color Space	sRGB, AdobeRGB	
	Still Picture Recording	4:3 4864x3648 (18M) (L) / 3456x2592 (9M) (M) / 2432x1824 (4.5M) (S) / 640x480 (0.3M) (XS)	
		3:2 5472x3648 (20M) (L) / 3888x2592 (10M) (M) / 2736x1824 (5M) (S) / 1920x1280 (2.5M) (XS)	
		16:9 4732x3080 (17M) (L) / 3840x2160 (8M) (M) / 2560x1440 (3.5M) (S) / 1920x1080 (2M) (XS)	
		1:1 3648x3648 (13M) (L) / 2592x2592 (7M) (M) / 1824x1824 (3.5M) (S) / 640x640 (0.4M) (XS)	
	Recording Mode	Intelligent Auto, Intelligent Auto Plus, P, A, S, M, C1 (Custom), C2 (Custom), Scene Guide, Creative Control, Panorama Shot	
	Photo Style	Standard, Vivid, Natural, Monochrome, Scenery, Portrait	
	Picture Adjustment	Contrast, Sharpness, Noise Reduction, Saturation*, Color Tone**, * Except for Monochrome mode. ** For Monochrome mode only	
	Filter (Creative Control) (Still Image)	Expressive, Retro, Old Days, High Key, Low Key, Sepia, Monochrome, Dynamic Monochrome,Impressive Art, High Dynamic, Cross Process, Toy Effect, Toy Pop, Bleach Bypass, Miniature Effect, Fantasy, Star Filter, One Point Color (18 filters)	
	Scene Guide (Still Image)	Clear Portrait / Silky Skin / Backlit Softness / Relaxing Tone / Sweet Child's Face / Distinct Scenery / Bright Blue Sky / Romantic Sunset Glow / Vivid Sunset Glow / Glistening Water / Clear Nightscape / Cool Night Sky / Warm Glowing Nightscape / Artistic Nightscape / Glittering Illuminations / Handheld Night Shot / Clear Night Portrait / Appetizing Food / Cute Dessert / Freeze Animal Motion / Clear Sports Shot / Monochrome (22 modes)	
	Continuous Shooting Mode (Approx.)	SH 50 frames/sec (max. 5M, max. 23 images in JPEG) *3	
		H 10 frames/sec (max. 5 images in JPEG, max. 3 images in RAW+JPEG)	
		M 5 frames/sec (with Live View, max. 6 images in JPEG, max. 3 images in RAW+JPEG)	
		L 2 frames/sec (with Live View, max. 9 images in JPEG, max. 3 images in RAW+JPEG) (depending on memory card size, battery power, picture size, and compression)	

RECORDING SYSTEM	Motion Picture Recording *4	4K Video 3840 x 2160 pixels, 15p (4K: 50Mbps / MP4) (Sensor output is 30fps) (AAC)	
		HD Video 1920 x 1080 pixels, 30p (FHD: 20Mbps / MP4) (Sensor output is 30fps) (AAC) 1280 x 720 pixels, 30p (HD: 10Mbps / MP4) (Sensor output is 30fps) (AAC)	
		STD Video 640 x 480, 30p (VGA: 4Mbps / MP4) (Sensor output is 30fps) (AAC) 640 x 640, 30p (1:1: 4Mbps / MP4) (Sensor output is 30fps) (AAC)	
EXPOSURE CONTROL	Exposure	Program AE, Aperture Priority AE, Shutter Priority AE, Manual	
	Exposure Compensation	1/3 EV step, +/-3 EV	
	Auto (AE) Bracketing	3 frames in 1/3, 2/3 or 1 EV step, Max. +/-1 EV	
	Light Metering	Intelligent Multiple / Center Weighted / Spot	
	ISO Sensitivity	Auto / i.ISO / 100 (Extended ISO) /125 / 200 / 400 / 800 / 1600 / 3200 / 6400 / 12800 / 25600 (Extended ISO) (Changeable to 1/3 EV step) (Motion picture recording: Auto)	
WHITE BALANCE	White Balance	Auto / Daylight / Cloudy / Shade / Incandescent / White Set / Color Temperature (White Balance Adjustment)	
FLASH	Flash (Included)	Auto, Forced On, Always On, Forced Off 0.6 - 5.3m (ISO Auto)	
OTHERS	Digital Red Eye Correction (Red-Eye Removal)	Yes (On / Off)	
	Level Gauge	Yes	
IMAGE SENSOR	Camera Effective Pixels	1.07 Megapixels	
	Picture Size	0.92 Megapixels	
	File Format	Still Image: JPEG (Exif2.2) Motion Picture: MP4	
FEATURES	OS	Android™ 4.4(KitKat)	
	CPU	Qualcomm® Snapdragon™801 (MSM8974AB)	
	Storage & Memory	Storage 16GB *5, Memory 2GB (Up to 128GB additional with optional microSDXC Card *6)	
	SIM Size	microSIM Class B / Class C	
	Sensors	Accelerometer, Gyro, Proximity, Compass, Pressure, Luminance	
WIRELESS	Baseband Supported Band	4G, 3G, 2G • Check the website of the Panasonic sales company in your country or region for details on the products that are available in your market.	
	NFC	Yes	
	Wi-Fi	Yes (IEEE 802.11a/b/g/n/ac) • Check the website of the Panasonic sales company in your country or region for details on the products that are available in your market.	
	Bluetooth	Yes (Bluetooth® v4.0)	
	GPS	Yes (GPS, GLONASS)	
DISPLAY	Type	TFT LCD Monitor with Static Touch Control, 16.8M Colors	
	Size	4.7", 16:9 aspect 1920 (W) x 1080 (H) RGB, 6,220k dots	
	Multi Touch	Yes	
INTERFACE	Microphone / Speaker	Stereo / Mono	
	microUSB	USB 2.0 (High Speed)	
	Headphone Output	φ3.5mm (3-pin / 4-pin)	
LANGUAGE	OSD Language	Japanese, English (US/UK), German, French, Spanish, Swedish ,Chinese (Traditional), Chinese (Simplified), Indonesian	
POWER	Battery	Li-ion Battery Pack (3.8V, 2600mAh, 9.9Wh) (Built-in) AC Adaptor (Input: 110 - 240V AC) *7	
	Battery Life (Approx.)	Still Image: 300 pictures (CIPA Standard) *8	
		Motion Picture *9: Continuous Recordable Time: 100 min (4K), 130 min (FHD) Actual Recordable Time: 70 min (4K), 90 min (FHD)	
		Standby: 630 hours (3G), 560 hours (GSM)	
		Talk: 12 hours (3G), 11 hours (GSM)	
	Battery Charging Time (Approx.)	150 minutes (100% charge) (When charged with the AC Adaptor)*7 330 minutes (When charged with the USB connection cable (5.0V, 0.5A))	
ACCESSORIES	Standard Accessories	AC Adaptor (Quick Charge 2.0) *7, Stereo Headset (EF model only)	

*1 Based on "Exif 2.2" standard when taking pictures in Panorama Shot Mode or when recording motion picture.
*2 The software to process RAW file on PC is not bundled with DMC-CM1. To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using PC connected to the Internet.
*3 SH use Electronic shutter automatically.
*4 - Use a card with SD Speed Class with "Class 4" or higher when recording motion pictures.
    - Use a card with SD Speed Class with "Class 10" when recording motion pictures with [MP4] in [4K].
    (SD speed class is the speed standard regarding continuous writing.)
    (The SD speed class represents the level of performance of microSD cards.
    The SD speed class does not serve as a guarantee of performace for all operations.)
    - The maximum continuous recordable time of a motion picture is 29 minutes and 59 seconds, which is equivalent to a file size of approximately 4 GB.
    - Maximum time to record motion pictures continuously with [MP4] in [4K] is 10 minutes 50 seconds.
    - Maximum time to record motion pictures continuously with [MP4] in [FHD] is 26 minutes 58 seconds.
*5 Operation has been tested and confirmed using Panasonic SD Memory Card with a capacity of up to 2GB, Panasonic SDHC Memory Card with a capacity of up to 32GB, and Panasonic SDXC Memory Card with a capacity of up to 64GB. Operation on other SD equipment is not guaranteed.

*6 Total usable memory will be less depending upon actual system configuration.
*7 The AC Adaptor is not included in the GT model.
*8 Recording conditions by CIPA standard
    - Temperature: 23 oC (73.4 oF) / Humidity: 50%RH when LCD monitor is ON.
    - Using a Panasonic microSDHC Memory Card
    - Starting recording 30 seconds after the camera application is turned on.
    - Recording once every 30 seconds with full flash every second recording.
    - The number of recordable pictures varies depending on the recording interval time.
    - If the recording interval time becomes longer, the number of recordable pictures decreases.
    - CIPA is an abbreviation of [Camera & Imaging Products Association].
    - If the recording interval time becomes longer, the number of recordable pictures decreases.
    - CIPA is an abbreviation of [Camera & Imaging Products Association].
*9 - These are standard times taken at a temperature of 23 oC (73.4 oF) and a humidity of 50%RH.
    - The time available for recording varies depending on the environment, the interval between recordings, and the manner of use.
    - The actual recordable time is the time of recording possible with repeated start/stop of the camera function, and start/stop of recording


Panasonic

A New Way to See the World

Actual Size

Communication Camera

LUMIX CM1

* Actual resolution: 3840 x 2160p

Actual photos taken by LUMIX CM1.

Actual photos taken by LUMIX CM1.

The World's Slimmest* Camera with Large Sensor

Large, 1-inch Camera Sensor in a Pocked-sized Body

The 1-inch 20-megapixel High Sensitivity MOS sensor is larger than that on a smartphone, and usually only found in higher spec compact cameras. But because of the size, it offers outstanding low light performance with minimum noise levels — even at high ISO. The LUMIX CM1 produces crisp, highly dynamic images full of intricate details and accurately rendered soft focus.
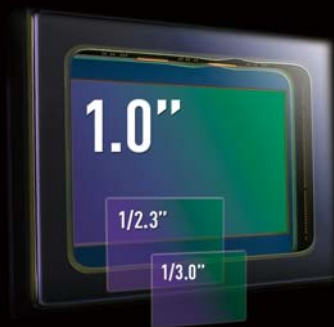
Maximum ISO Sensitivity of 25600

The LUMIX CM1 has an extended ISO sensitivity of ISO25600. It also supports low ISO sensitivity of ISO100.

Wider Dynamic Range

The wide dynamic range offered by the LUMIX CM1 provides rich gradation to reproduce bright highlights and dark shadows with natural tones.

The World's Slimmest* Body

Panasonic's downsizing and slimming technology has achieved a pocket-size body that measures about 15.2mm at the thinnest part.
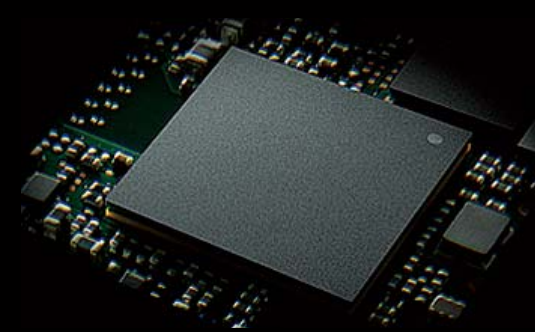

LEICA DC Lens for Impressive Bokeh Expression

The LUMIX CM1 features a unique 28mm lens designed by Leica, one of the foremost optics manufacturers. The lens overcomes the defects typically seen in smartphone images. The lens configuration reduces image distortions such as vignettes, flaring, ghosting and chromatic inconsistencies while increasing resolution and edge-to-edge sharpness.

Venus Engine for Detailed and Clear Pictures

The Venus Engine uses advanced image processing to offer picture quality far beyond the standard found in most smartphones. Combined with a highly tuned High performance sensor, the Venus Engine uses a combination of noise reduction systems such as Multi Process NR, Random Filter and Aperture Filter to capture colour and detail in a natural and accurate manner

• Leica is a registered trademark of Leica Microsystems IR GmbH. • ELMARIT is registered trademark of Leica Camera AG.
• Leica DC 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.

* As a digital camera with 1-inch sensor, as of 15 September, 2014.

Full Manual Operation for Expressive Control

Control Ring with the Operating Feel of a DSLM Lens

The LUMIX CM1 is designed to help you explore and develop your photography. Central is the manual control ring, giving direct access to key functions such as shutter speed, aperture and ISO. Compose your images with the 3D level gauge, histogram, auto focus, manual focus assist and focus peaking.

Shooting Functions That Enhance the Joy of Taking Pictures

Comprehensive Shooting Modes

MF Assist

Level Gauge

Focus Peaking
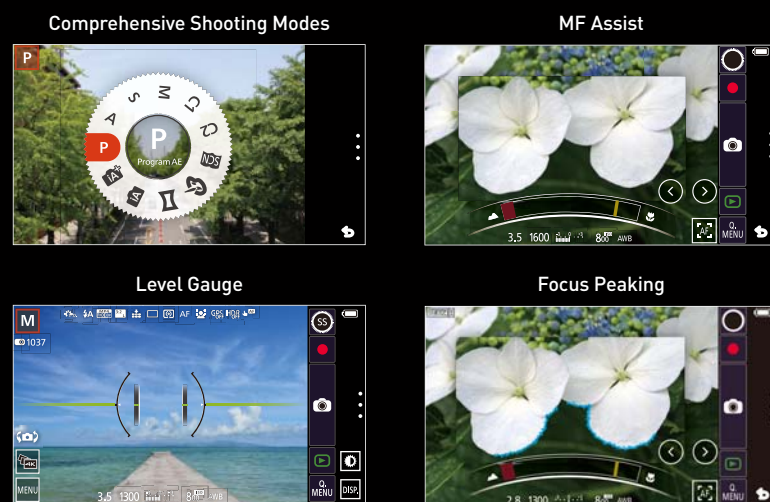
Exposure Compensation
±3EV

White Balance
Auto / Daylight / Cloudy / Shade / Incandescent / White Set / Color Temperature / White Balance Adjustment

ISO Sensitivity
Auto / i.ISO / 125-12800 / Extended ISO 100/25600

RAW Format: Just Like a Negative

The LUMIX CM1 captures pictures in both JPEG and RAW formats. RAW takes image data directly from the camera sensor, offering you a greater flexibility in terms of editing and post-production.

• The software to process RAW files on a PC is not bundled with the LUMIX CM1. To do this, SILKYPIX® Developer Studio is available for downloading at Ichikawa Soft Laboratory's website using a PC connected to the Internet.

4K Video and 4K Photo for New Image Creation

4K Pre-Burst App for Capturing the Perfect Moment

The LUMIX CM1 captures 1.5 seconds of 4K footage before and after pressing the shutter button — taking a total of 45 images for you to scroll through, review and find the exact moment.
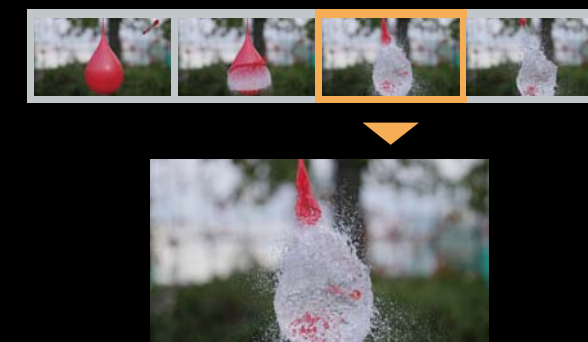
* Actual resolution: 3840 x 2160p

4K Pre-Burst

Press the shutter button.

Select the best image from among 1.5 seconds before and after you pressed the button.

Conventional Shooting

Failed!

Shooting opportunities are missed because the shutter button is pressed too soon or too late.

Never Miss a Picture with 4K PhotoCapture

Shoot action scenes using 4K video to find the exact picture that perfectly describes a scene. The LUMIX CM1 lets you review footage, frame by frame, and then extract it as a picture with an A3 print size. Pictures are crisp, with minimal blur — even in low light conditions.

Enjoy Rich Detail with 4K Video

The LUMIX CM1 records video in Full-HD and even 4K to deliver a more intense viewing experience. The native resolution of 3840 x 2160 pixels is four times greater than Full-HD, resulting in much higher levels of detail than you've ever seen before.

• When recording videos in 4K, use a microSD Memory Card with SD Speed Class of "Class 10."

Full-HD [1080] [1920]
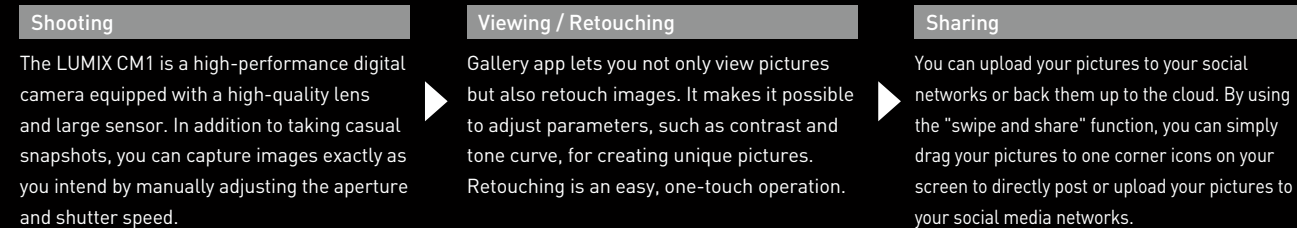
4K [2160] [3840]
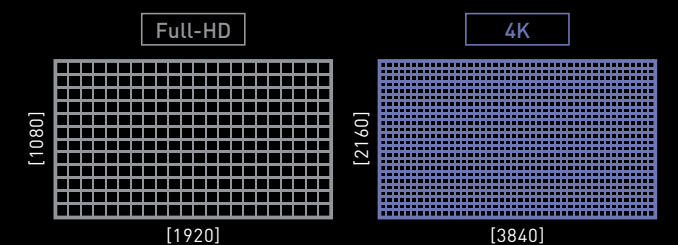
Sharing Daily Excitement through Photos

Shooting, Viewing, Retouching and Sharing Pictures Seamlessly

The LUMIX CM1 lets you upload pictures of exciting everyday scenes over the Internet. It provides a new experience of sharing not only information but also emotional excitement through pictures. With the LUMIX CM1, you can easily post pictures on social media and upload them to a cloud for backup. Dragging & dropping an image is all it takes to quickly share or store a picture.

• Requires Wi-Fi® connection or a SIM card for data communication.

Shooting	Viewing / Retouching	Sharing
The LUMIX CM1 is a high-performance digital camera equipped with a high-quality lens and large sensor. In addition to taking casual snapshots, you can capture images exactly as you intend by manually adjusting the aperture and shutter speed.	Gallery app lets you not only view pictures but also retouch images. It makes it possible to adjust parameters, such as contrast and tone curve, for creating unique pictures. Retouching is an easy, one-touch operation.	You can upload your pictures to your social networks or back them up to the cloud. By using the "swipe and share" function, you can simply drag your pictures to one corner icons on your screen to directly post or upload your pictures to your social media networks.

A 4.7-inch, Approx. 6,220k-dot Full-HD Touch Screen

With a high 473ppi resolution, the touch screen displays the subject with exquisite detail and accuracy. It renders beautiful images when shooting and viewing, and makes it easy to confirm details when retouching.

High-speed LTE Communication Capability

The LUMIX CM1 is equipped with LTE communication capability. When Internet connection is available, photos, RAW format data and videos can be quickly stored online or uploaded to social media for sharing.

• High-speed LTE communication may not be supported in some countries / regions.

Photo Search App

The Photo Search app uses Google Maps™ and Panoramio data to help you find the best photo opportunities around you.

Google Drive™ Supported

Google Drive™ is pre-installed so that photos and videos can be automatically uploaded to a cloud for backup. This lets you concentrate on shooting without worrying about the space remaining on the microSD card.

• Requires Internet connection. Note that communication charges will be incurred.

Android™ 4.4 KitKat®

Pre-installed Android™ 4.4 KitKat® lets you download various apps for Android™ from Google Play™ and use social media and camera / photo apps. The switch on the top panel allows quick changing between Android™ and camera functions.

• Android 5.0™ will be available in May 2015.

Pashadelic App

The Pashadelic app can be used to share shooting locations and shooting dates and times of pictures with people all over the world for added convenience and fun.

• The Pashadelic app is not available in some countries / regions.

Other Functions

• Can be used as a smartphone when a SIM card is inserted.
• 2.3-GHz quad-core CPU for high-speed processing.
• Qualcomm® Quick Charge™ 2.0 for fast battery charging.
• Equipped with an app to shoot time-lapse video.

About SIM Cards

An appropriate SIM card must be inserted in the LUMIX CM1 to use its LTE / 3G communication.

• Insert a SIM card into the LUMIX CM1.
• A SIM card is not required when using only Wi-Fi® communication.
• A SIM card is usually provided when signing a contract with a telecommunications carrier.

The LUMIX CM1 supports microSIM cards.

• If your SIM card is not a microSIM card, one of the following methods must be applied to use the communication function.
- Follow the necessary procedure to change your SIM card to a microSIM card. (Compatibility varies depending on the telecommunications carrier.)
- Use a commercially available SIM adaptor to insert your card.

Use of the LUMIX CM1 as a Smartphone

By inserting a voice call microSIM card, the LUMIX CM1 can be used to make and receive phone calls to and from fixed phones, feature phones and smartphones worldwide.

microSIM Card
(3FF)

Note Regarding SIM Cards

• The microSIM card and microSD card are optional.
• When a voice call or packet communication is performed, charges set by the telecommunications carrier will be incurred.
• For details, contact the telecommunications carrier that issued the SIM card.

Communication Camera
DMC-CM1-S
(Silver)

* Actual resolution: 3840 x 2160p