# Clifton Cameras Product Specification

## Panasonic Lumix DMC-TZ70EB Camera Full Spec

**Metrics**

Dimensions (W x H x D) 110.7 x 64.6 x 34.4 mm/(4.36 x 2.54 x 1.35 inch)

Weight Approx. 217 g without Battery and SD Memory Card (0.478 lb)/Approx. 243 g with Battery and SD Memory Card (0.536 lb)

**Pixels**

Camera Effective Pixels 12.1 Megapixels

**Sensor**

Sensor Size / Total Pixels / Filter 1/2.3-type High Sensitivity MOS Sensor / Total Pixel Number 12.8 Megapixels / Primary Color Filter

**Lens**

Aperture F3.3 - 6.4 / Multistage Iris Diaphragm (F3.3 - 8.0 (W), F6.4 - 8.0 (T))

Optical Zoom 30x

Focal Length f = 4.3 - 129mm (24 - 720mm in 35mm equiv.)/(28 - 840mm in 35mm equiv. in 16:9 video recording / Level Shot function Off)/(30 - 900mm in 35mm equiv. in 16:9 video recording / Level Shot function On)

Extra Optical Zoom (EZ) 36.7x (4:3 / 8M), 46.9x (4:3 / 5M), 58.6x (4:3 / under 3M)

Intelligent Zoom 60x

Lens LEICA DC VARIO-ELMAR/12 elements in 9 groups/(5 Aspherical Lenses / 10 Aspherical surfaces / 3 ED Lenses)

2- Speed Zoom Yes

Optical Image Stabilizer/Five Axis Correction HYBRID O.I.S. + (On / Off) / Yes

Digital Zoom Max. 4x (Max. 2x for TZ71)

Conversion Lens Compatibility -

**Focus**

Focusing Area Normal: Wide 50cm - infinity / Tele 200cm - infinity/AF Macro / MF / Intelligent Auto / Motion Picture: Wide 3 cm - infinity / Tele 200 cm - infinity

AF Assist Lamp Yes (On/Off)

Focus Normal / AF Macro / Macro Zoom / MF/Quick AF On / Off (on in Intelligent Auto), Continuous AF (only for motion picture)/AF/AE Lock Button (Set the Fn button in custom menu to AF/AE lock)/Focus Peaking, One Shot AF (Set the Fn button in custom menu to AF-ON), AF Area Select, AF Tracking

AF Metering Face / AF Tracking / 23-area / 1-area (flexible / scalable)

**Shutter**

Shutter Speed Approx. 4 - 1/2,000 sec/Starry Sky Mode: 15, 30, 60 sec

**Finder**

Viewfinder 0.20" LVF (Live View Finder) (1,166K dots equiv.), Field of View: Approx. 100%, Lens 19.6x/Magnification: Approx. 2.59x / 0.46x (35 mm camera equivalent)

**File**

File Format Still Image: JPEG (DCF/Exif2.3) / RAW, DPOF/3D Image: MPO/Motion Picture: AVCHD, MP4

**Recording Modes**

Mode Dial / Mode Button Intelligent Auto, P, A, S, M, C1 (Custom), C2 (Custom), Panorama Shot, Scene, Creative Control

Creative Control mode Expressive, Retro, Old Days, High Key, Low Key, Sepia, Dynamic Monochrome, Impressive Art, High Dynamic, Cross Process, Toy Effect, Miniature Effect, Soft Focus, Star Filter, One Point Color (15 filters)

Still Image Scene Mode Portrait, Soft Skin, Scenery, Sports, Night Portrait, Night Scenery, Handheld Night Shot, Food, Baby1, Baby2, Pet, Sunset, High Sensitivity, Glass Through, HDR, Starry Sky, High Speed Video, 3D Photo

Continuous Shooting Mode Full-Resolution Image: 10 frames/sec, Max. 6 images/with AF Tracking: 6 frames/sec, 3 frames/sec/Intelligent Burst Shooting/High-speed Burst: Approx. 60 frames / sec/(recorded in 2.5M / 0.3M for 4:3, 3M / 0.3M for 3:2, 3.5M / 0.2M for 16:9, 2M / 0.2M for 1:1)/Approx. 40 frames / sec/(recorded in 5M / 3M / 0.3M for 4:3, 4.5M / 2.5M / 0.3M for 3:2, 3.5M / 2M / 0.2M for 16:9, 3.5M / 2.5M / 0.2M for 1:1)/Flash Burst Shooting

**Motion Picture Recording (\*2)**

HD Video 1920 x 1080 pixels, 50p (FHD: 28Mbps / AVCHD) (Sensor Output is 50fps)/1920 x 1080 pixels, 50i (FHD: 17Mbps / AVCHD) (Sensor Output is 50fps)/1280 x 720 pixels, 50p (HD: 17Mbps / AVCHD) (Sensor Output is 50fps)/1920 x 1080 pixels, 25p (FHD: 20Mbps / MP4) (Sensor Output is 25fps)/1280 x 720 pixels, 25p (HD: 10Mbps / MP4) (Sensor Output is 25fps)

STD Video 640 x 480, 25p (VGA: 4Mbps / MP4) (Sensor Output is 25fps)

High Speed Video 1280 x 720 pixels, 25p (HD: MP4) (Sensor Output is 100fps)/640 x 480 pixels, 25p (VGA: MP4) (Sensor Output is 200fps)

**Continuous recordable time (motion pictures)**

AVCHD Approx. 75 min (FHD/50p), Approx. 80 min (FHD/50i)

MP4 Approx. 90 min (FHD)

**Actual recordable time (motion pictures)**

AVCHD Approx. 30 min (FHD/50p), Approx. 35 min (FHD/50i)

MP4 Approx. 40 min (FHD)

**Exposure Parameters**

Exposure Program AE, Aperture Priority AE, Shutter Priority AE, Manual

Exposure Compensation 1/3 EV step, +/-2 EV

Auto (AE) Bracketing 1/3-1EV step, Max. +/-1 EV, 3 frames

Light Metering Intelligent Multiple / Center Weighted / Spot

ISO Sensitivity Auto / i.ISO / 80 / 100 / 200 / 400 / 800 / 1600 / 3200 / 6400

**Picture Quality**

Still Picture Recording [4:3] 4000x3000 (12M) / 3264x2448 (8M EZ) / 2560x1920 (5M EZ) / 2048x1536 (3M EZ) / 640x480 (0.3M EZ)/[3:2] 4000x2672 pixels (10.5M) / 3264x2176 (7M EZ) / 2560x1712 (4.5M EZ) / 2048x1360 (2.5M EZ) / 640x424 (0.3M EZ)/[16:9] 4000x2248 (9M) / 3840 x 2160 (8M EZ) / 2560x1440 (3.5M EZ) / 1920x1080 (2M EZ) / 640x360 (0.2M EZ)/[1:1] 2992x2992 (9M) / 2448x2448 (6M EZ) / 1920x1920 (3.5M EZ) / 1536x1536 (2.5M EZ) / 480x480 (0.2M EZ)

Image Quality RAW / RAW+Fine / RAW+Standard / Fine / Standard/(3D Mode: MPO+Fine / MPO+Standard)

White Balance Auto / Daylight / Cloudy / Shade / Incandescent / White Set/White Balance Adjustment (Except Auto)

Photo Style / Film Mode -

Color Mode / Color Effect / My color -

Picture Adjustment -

Aspect Bracketing -

**Other**

Digital Red Eye Correction (Red-Eye Removal) Yes (On/Off)

GPS -

Wi-FI IEEE 802.11b/g/n/2412 MHz – 2462 MHz (1-11 ch)/WPA / WPA2/Infrastracture Mode / WPS / Wi-Fi Direct/Wi-Fi Button

NFC ISO/IEC 18092 (NFCIP-1) NFC-F

Zoom in Motion Picture Yes

Self Timer 2 sec / 10 sec

Self Shot Mode -

**Display**

Playback Mode All, Slideshow, Filtering Play (Picture Only, Video Only, 3D Play, GPS Area Play\*, Travel, Category Selection, Select Date, Favorite), Calendar/\* Not available on products for China.

Thumbnails / Zoomed Playback 12,30-thumbnails / Yes

Calendar Display / Dual- Image Playback Yes (Menu / Zoom Lever) / No

Set Favorites / Rotate Image Yes / No

Show Histogram Yes

Show Highlights -

DPOF Print Setting / Set Protection Yes / Yes

**Edit**

Retouch Auto Retouch / Creative Retouch

Resize / Cropping / Aspect Conv. / Leveling Yes / Yes / No / No

Copy / Title Edit / Text Stamp Yes / Yes / Yes

Cut Animation Yes

Video Divide Yes

PictBridge Support Single / Multi / All / DPOF / Favorites

**Setup**

OSD language Japanese, English, German, French, Italian, Spanish

**Monitor**

LCD Monitor 7.5cm (3.0") TFT Screen LCD Display (1,040K dots), AR Coating/Field of View: Approx. 100%, Wide Viewing-angle/Power Monitor mode, AUTO Power Monitor mode

**Flash**

Built- in- Flash Auto, Auto/Red-eye Reduction, Forced On, Slow Sync./Red-eye Reduction, Forced Off/0.6 - 6.4m (Wide / ISO Auto), 2.0 - 3.3m (Tele / ISO Auto)

**Media**

Recording Media Built-in Memory, SD Memory Card, SDHC Memory Card, SDXC Memory Card

Built- in- Memory Approx. 86MB \* Approx. 86MB for China

**Audio**

Microphone / Speaker Stereo / Mono

**Interface**

Interface microHDMI, AV Output (PAL / NTSC), USB (AV/USB Multi)

**Power**

Power Li-ion Battery Pack (3.6V, 1250mAh, 4.5 Wh) (Included)/AC Adaptor (Input: 110 - 240V AC) (Included, connect with USB cable)

Battery life (approx.) 300 pictures (CIPA Standard)\*1

**Standard Package** I

ncluded Software PHOTOfunSTUDIO 9.6PE/LoiLoScope (trial version)/Adobe Reader/ãƒ» The software to process RAW file on PC is not bundled with DMC-TZ70/To do this, SILKYPIX Developer Studio is available for download at Ichikawa Soft Laboratory's website using PC connected to the Internet.

**Standard Accessories**

Battery Pack, AC Adaptor, USB Cable, Hand Strap, CD-ROM