



Toshiba BU205M Specifications

Cmos camera

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CMOS Camera

BU Series

BU205M

BU406M/BU406MN

BU406MC/BU406MCF

Specifications

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D4222901M

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Related Manuals for Toshiba BU205M

[Digital Camera Toshiba BU505MCG Instruction Manual](#)

Cmos camera (94 pages)

[Digital Camera Toshiba BU302MG Instruction Manual](#)

(83 pages)

[Digital Camera Toshiba BU Series Instruction Manual](#)

Cmos camera (81 pages)

[Digital Camera Toshiba BU406M Instruction Manual](#)

Bu series cmos camera (67 pages)

[Digital Camera Toshiba BU1207MG Manual](#)

Cmos camera (35 pages)

[Digital Camera Toshiba BU406M Specifications](#)

Cmos camera bu series (27 pages)

[Digital Camera Toshiba BU238M Instruction Manual](#)

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[Digital Camera Toshiba BU302MG Manual](#)

Cmos camera (35 pages)

[Digital Camera Toshiba BC Series Instruction Manual](#)

Cmos camera (75 pages)

[Digital Camera Toshiba PDR-3300 Owner's Manual](#)

Toshiba pdr-3300: owner manual (135 pages)

[Digital Camera Toshiba PDR-4300 Software Manual](#)

Toshiba pdr-4300: software manual (30 pages)

[Digital Camera Toshiba PDR-M25 Owner's Manual](#)

Toshiba pdr-m25: owner manual (102 pages)

[Digital Camera Toshiba PDR-M500 Instruction Manual](#)

Toshiba pdr-m500: owners manual (120 pages)

[Digital Camera Toshiba IK-TU51CU Service Manual](#)

Ccd camera (80 pages)

[Digital Camera Toshiba PDR-2300 Owner's Manual](#)

Toshiba pdr-2300: owner manual (98 pages)

[Digital Camera Toshiba PDR-2 Quick Reference Manual](#)

Toshiba pdr-2: quick start (21 pages)

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[Page 3: Restriction For Use](#)

(*2) :Equipment relating to maintenance of public services/functions involving factors of safety refers - Traffic control systems for air transportation, railways, roads, or marine transportation - Equipment for nuclear power generation - Equipment related to the above D4222901M
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[Page 4: Cases For Indemnity \(Limited Warranty\)](#)

□ Expenses we bear on this product shall be limited to the individual price of the product. □ The item that is not described in specifications of this product is off the subject of the guarantee. □ The attachment mistake of a cable. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 5: Usage Precautions](#)

If an intense magnetic or electromagnetic field is generated near the camera or connection cable, noise may be generated on the screen. If this occurs, move the camera or the cable. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved.
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[Page 6: Usage Precautions](#)

The brightness of the upper part of the screen may be different from that of the lower part. Note that this is a characteristic of a CMOS image sensor and is not a fault. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved.
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[Page 7: Overview](#)

Overview This BU CMOS series is an integrated-(one-body)-type camera that adopts a global shutter CMOS sensor. These are BU205M (2M 2/3 type) BU406M (4M 1/1 type). There is BU406MN which was more excellent in near-infrared (NIR) sensitivity in BU406M. Suffix [C] or [CF] are attached to the color models.

[Page 8](#) * Suffix [F] is not shown in the common part of specifications. 2.13 Compact and lightweight This camera is compact and lightweight; it is easy to integrate into industrial equipment. 2.14 EU RoHS & Chinese RoHS D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 9: Configuration](#)

* No application software and manuals are attached to this camera. Optional part - Camera mounting kit Model name: CPTBU Model name: CPTBUBG * Contact your dealer / distributor for details of option units. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 10: Functions](#)

(OPWB). Select the mode to suit the subject and purpose. 5.6.1 MWB R/B gain can be set independently. 5.6.2 OPWB When OPWB is executed, the camera adjusts R/B gain automatically. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 11](#) - When the interval of the input trigger signal is extremely short, or when the trigger signal is noisy, there is a possibility of causing the malfunction. In this case, please input a proper trigger signal. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 12](#) Note on Sequential Shutter: - In Sequential Shutter mode, window size is unchangeable. Trigger Delay You can add the delay between trigger signal input and the start of exposure. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 13](#) Valid Valid Valid Valid AntiGlitch Circuit Edge Edge Edge Edge Output Invalid Edge AntiChattering Insensible Insensible Value Time Time High AntiChattering Circuit Valid Valid

Output Signal Signal D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 14](#) : End of transferring streaming data. (6) ExposureStart : Start of Exposure. (7) ExposureEnd : End of Exposure. (8) Timer0Start : Start of Timer0. (9) Timer0End : End of Timer0. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 15](#) An External trigger is input during this period, exposure starts immediately. EXT_TRIG Exposure CMOS Transfer USB Bus Delay Duration TIMER0 ACTIVE EXPOSURE ACTIVE FRAME ACTIVE FRAME TRANSFER FRAME TRIGGER WAIT * ActiveLow D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 16](#) In the scalable mode, camera reads out only necessary area at the normal speed and reads out other area at high speed. The trigger interval can be shorter when the vertical height size is small. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 17](#) Grey B : Full screen 85 LSB (01010101) (@ 8-bit) Horizontal ramp waveform Vertical ramp waveform Grey scale (B/W model only) Color bars (Color model only) D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 18: Specifications](#)

Black, White, Grey A, Grey B, Grey scale Horizontal ramp waveform, Vertical ramp waveform (factory setting : OFF) Power supply DC +5V□5% (from USB connector) Power consumption 2.7W (maximum) (at the all pixel readout) D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 19](#) Black, White, Grey A, Grey B, Color bars Horizontal ramp waveform, Vertical ramp waveform (factory setting : OFF) Power supply DC +5V□5% (from USB connector) Power consumption 2.7W (maximum) (at the all pixel readout) D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 20](#) Low: 0 to 0.5V, High: 2.0 to 24.0V Polarity High active / Low active (factory setting : Low active) Pulse width 50μs (minimum) Input impedance High impedance D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 21](#) - Pin 3 is signal ground. It is conducted with camera frame. Using shield cable, terminal processing of the shield is referred as above. - Please confirm the EMC adaptability in whole of your system. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 22](#) Please note that loading other than UsetSet1 will change to input setting. Note on Input Level: - Line0 and Line2 have a different input level. Please use input level within the voltage described in this specification. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 23](#) 0 to 2000000μs (factory setting : 0μs) TimerTriggerSource Line0Active, ExposureStart, FrameTrigger Interface specification Interface USB 3.0 (Only SuperSpeed is supported) Transmission speed 5Gbps (Maximum) Protocol USB3 Vision D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 24](#) 6.10 Event notification FrameTrigger, FrameTriggerError, FrameTriggerWait Event name FrameTransferStart, FrameTransferEnd ExposureStart, ExposureEnd Timer0Start, Timer0End Event notification delay approx. 10us later from the event occurs Time stamp unit 16.7ns (60.0MHz) D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 25](#) UL1533 (AWG28) (Hitachi Cable, Ltd.) Connection: e-CON GPIO(Line2) GPIO(Line2) GPIO(Line1) GPIO(Line1) TRIG IN TRIG IN Please confirm the EMC adaptability when it combines

with parts other than them. D4222901M Copyright © 2013 - 2018 TOSHIBA TELI CORPORATION, All rights reserved. <http://www.toshiba-teli.co.jp/en/index.htm...>

[Page 26](#) [↑TOP](#) * Above figure is connector view from insert side. Pin No. Signal Name
Function Line2 GPIO Input / Output Line1 GPIO Output Ground Line0 GPIO Input D4222901M
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[Page 27](#) 6.14 Typical spectral response The lens characteristics and light source
characteristics is not reflected in table. <BU205M / BU406M / BU406MN> D4222901M Copyright
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[Page 29: Timing Chart](#)

Frame Rate setting by the application. BU406M/MN/MC 11.1 11.1 * If the value of T2 is not set
by the application, it will be the same as T1. D4222901M Copyright © 2013 - 2018 TOSHIBA
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[Page 30](#) - When the interval of the input trigger signal is extremely short, or when the trigger
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[Page 31: Warranty Rules](#)

9. Forgery product, products which does not have proper serial number, products of which serial
number is forged, damaged or deleted 10. All defects that happened after the expiration for a
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[Page 32: Repair](#)

10. The immunity from responsibility of the product is applied in the repair completion products.
* Please refer for the inquiry about the software to our homepage or sales personnel.
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[Page 33: Outline Drawing](#)

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[Page 34](#) (18)Cable BG series LAN (Model Meters BU series USB (Model Meters <For
dealer use> Reception date : Receipt No. : JOB No. : Check : D4222901M Copyright © 2013 -
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<http://www.toshiba-teli.co.jp/en/index.htm...>

This manual is also suitable for:

[Bu series](#)[Bu406m](#)[Bu406mn](#)[Bu406mc](#)[Bu406mcf](#)