

**ORTUS TECHNOLOGY**  
- Commitment to environmental preservation

**ISO14001**

- **ORTUS TECHNOLOGY KOCHI Factory: Certified in 1998**
- **ORTUSTECH (MALAYSIA) SDN.BHD.: Certified in 2014**

**Prevention of Global Warming**

■ **Reduction of Greenhouse Effect Gases**

·CFC substitutes have been eliminated from the parts cleaning process at all the production facilities, including our associated factories (2004).

■ **Energy Saving Efforts**

·ORTUS TECHNOLOGY succeeded in the attempt to substitute cleaning gas and etching gas with gas of warming potential 1, then is committed to continuously reducing CO2 emissions.

**Recycling Society and the Recycling of Resources**

**Promotion of waste reduction and the recycling of materials**

·ORTUS TECHNOLOGY continues to promote the zero-emission initiative (100% achieved by 2004).

\*At ORTUS TECHNOLOGY, the zero-emission initiative is defined as limiting landfill waste to less than 1% of total waste.

**Environmental Conservation**

■ **Preventing Air Pollution and Protecting the Ozone Layer**

·NF3 (nitrogen trifluoride) used in manufacturing processes of TFT-LCD display has been completely eliminated, also, replacing etching gas SF6 (sulfur hexafluoride).

First in the world to implement COF2 (carbonyl fluoride), which has an effect on prevention for global warming. (2005).

·ORTUS TECHNOLOGY received jury special award from the Ninth Ozone Layer Protection/Global Warming Prevention Grand Prix (2006).

■ **Preventing Water and Land Contamination**

·The water used in manufacturing processes is treated to make it safe for drinking and then discharged into local rivers.



**The Toppan Group Declaration on the Global Environment**

As responsible members of international society, we who work within the Toppan Group strive to realize a sustainable society through forward looking corporate activities with consideration for the conservation of the global environment.

**Basic Principles**

1. We observe all laws, regulations and in-company rules relating to the environment.
2. For the future of the Earth, we strive for the effective utilization of limited resources and the reduction of all types of environmental burden.
3. With foresight, we promote the development and widespread use of products that show consideration for the environment, and contribute to the environmental activities of customers.
4. We engage in communication related to the environment with a wide range of peoples both inside and outside the company, and strive for mutual understanding.
5. We also take a proactive approach to environmental conservation in corporate activities in international society.

Established in April 1992 Revised in April 2009

**Business Location**

■ **Sales and Design Offices**

**ORTUS TECHNOLOGY CO., LTD. Tokyo Main office**

ISO9001  
ISO/TS16949 Certified



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191-0065, Japan  
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Marketing, Sales and Product Planning Group  
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Osaka-shi, Osaka 541-0056, Japan  
TEL:+81-6-6243-6245 FAX:+81-6-6243-6860

**Taiwan Liaison Office (Resident Office)**

% TOPPAN ELECTRONICS (TAIWAN) CO.,LTD.  
10F, No.109, Sec.3, Min Sheng East Road, Taipei, Taiwan 10544.  
TEL: +886-2-2719-0065 Ext: 217,222  
FAX: +886-2-2719-0067

■ **Production Facilities**

**ORTUS TECHNOLOGY Main Plant : KOCHI Plant**

ISO9001/14001 ISO/TS16949 Certified



2420 Kureda, Nankoku-shi, Kochi  
783-0062, Japan  
TEL:+81-88-862-1000

**ORTUSTECH (MALAYSIA) SDN. BHD.**

ISO9001/14001 Certified



Lot 760, Jalan Haji Sirat Kiang 42100,  
Selangor Darul Ehsan, Malaysia  
TEL:+60-3-3291-0233

■ **Customer Service Center**

**ORTUS TECHNOLOGY KOCHI plant.  
Quality Assurance Division**

2420 Kureda, Nankoku-shi, Kochi 783-0062, Japan  
TEL:+81-88-862-1000

**Taiwan Device CS Center**

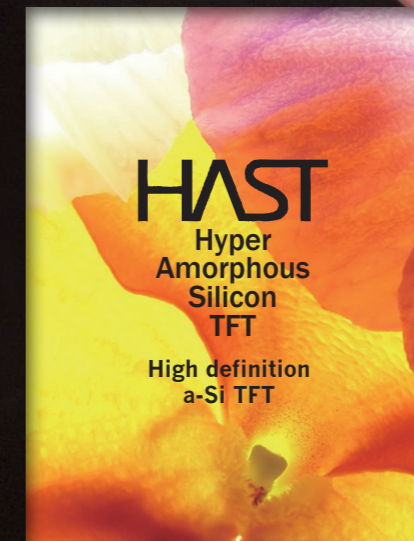
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# ORTUSTECH

## ORTUS TECHNOLOGY Liquid Crystal Display



# ORTUSTECH

**ORTUS TECHNOLOGY CO., LTD.**

**Product information**

<http://www.ortustech.co.jp/english/>

The contents of this catalog are accurate as of September 2017.

# We are Small-to-medium size display specialist.

## 1 Outdoor readability and Low power consumption

ORTUSTECH correspond to various needs and applications by full line-up products of excellent outdoor readability and low power consumption.

## 2 Long-term stable supply

ORTUSTECH provide long-term continuous available products to support customer's long-life products.

## 3 Full in-house Production

ORTUSTECH establish an integrated production system from TFT array and color filter to final module assembly.

## 4 Production suit to small volume demand

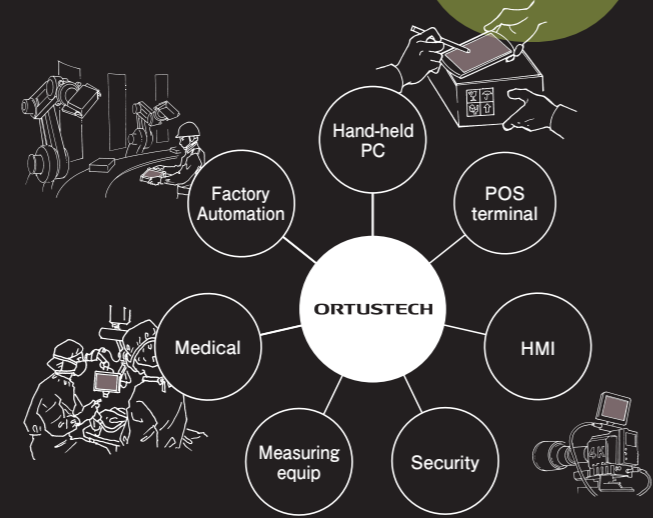
ORTUSTECH flexibly respond to the customers with small volume size.

## 5 Specialized to Small-to-medium size TFT-LCD

ORTUSTECH focus on unique and high quality small-to-medium size display creation.

## 6 Flexible and Quick support system

ORTUSTECH is always aware of market needs and provide flexible and quick support to customer demand.



**New-Blanview LCD**  
High-pixel, high-definition and low power consumption TFT LCD with further improved color purity, reflectance and transmittance

**Blanview LCD**  
Low power TFT-LCD with superior outdoor readability under any light condition

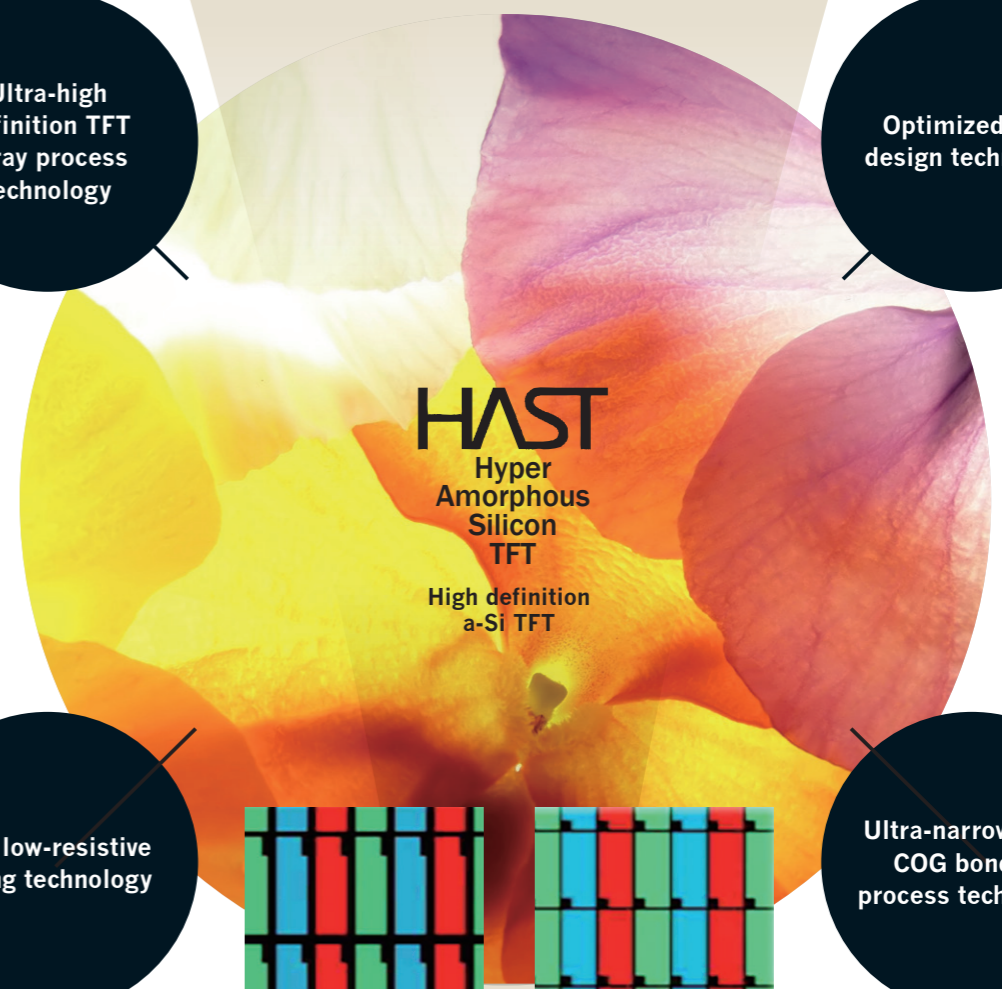
**Ultra-high definition LCD**  
Ultra-high definition TFT-LCD with high definition and high transmittance in corresponding to Full-High-Vision and 4K

Ultra-high definition TFT array process technology

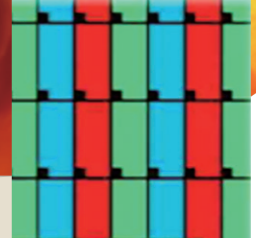
Optimized LCD design technology

Fine low-resistive wiring technology

Ultra-narrow pitch COG bonding process technology



Ordinary a-Si TFT



ORTUS TECHNOLOGY a-Si TFT(HAST)

ORTUSTECH's small-to-medium size liquid crystal display is ubiquitous in a wide variety of industrial electronics applications worldwide.

By combining CASIO's unique display technologies and TOPPAN's cutting-edge printing technologies, ORTUSTECH offers high-performance, high-quality and low power small-to-medium size display products for industrial electronics market worldwide.

# New-Blanview

Improve color purity !

Improve reflectance !

Improve transmittance !

A beautiful display is realized even under direct sun light and even in indoors with ultra low power consumption..

New-Blanview further evolve Blanview with excellent performance for outdoor readability. And, enable both more beautiful display and lower power consumption with original technology.

Original high reflectance performance

Excellent outdoor readability

Overwhelming ultra low power consumption



COM40H4M66  
4.0inch  
Full size

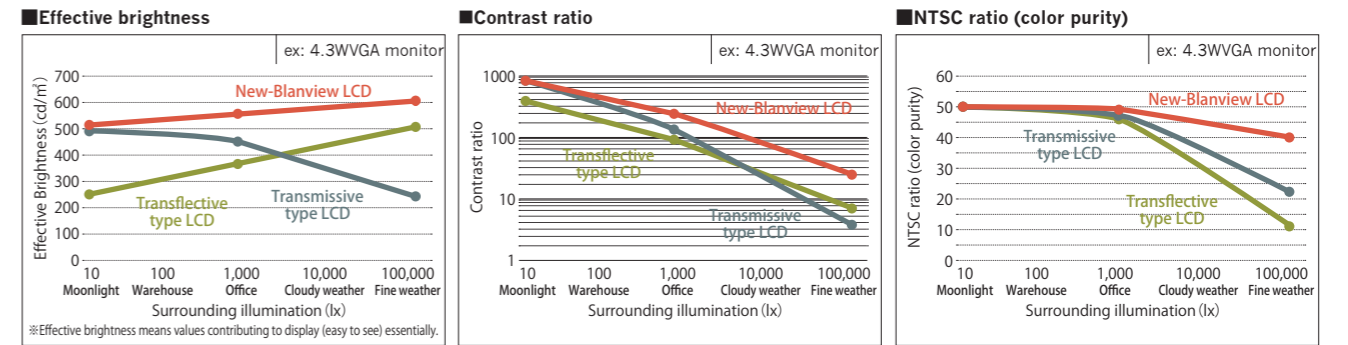
## Image comparison under direct sun light (100,000lux)

Not only improve color purity, reflectance, and outdoor readability but enable product with a large number of pixels and high-definition. "Evolving" energy-saving display



## Optical characteristic by surrounding condition

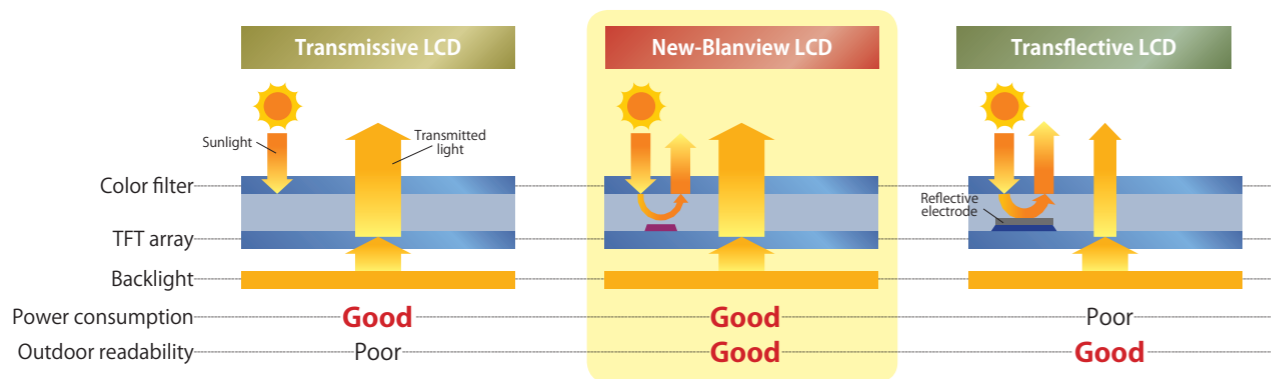
New-Blanview display performance is less dependent on surrounding luminous environment, compared to transmissive and transreflective type displays.



## New-Blanview Advantages

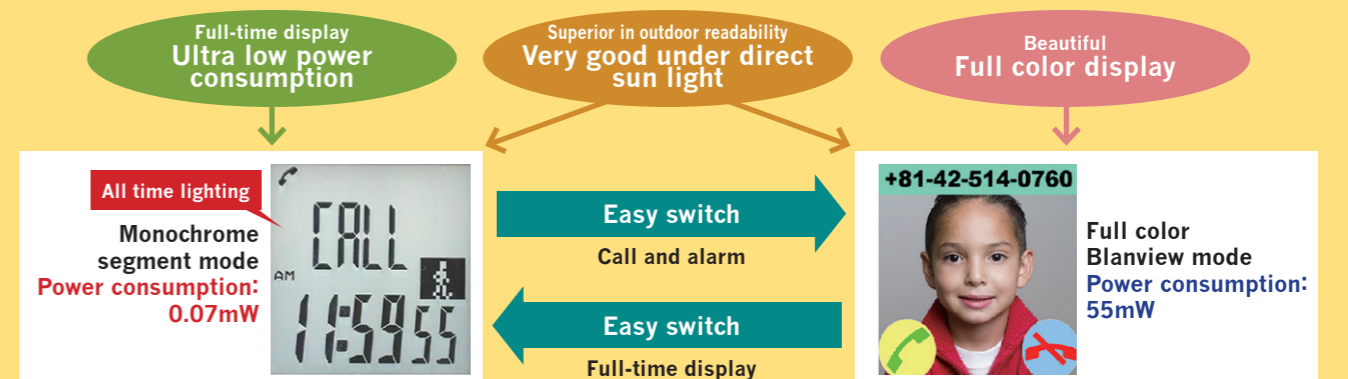
◆Sunlight Readable ◆Ultra-Low Power

New-Blanview (2nd Gen. Blanview technology) enables sunlight readable functionality and ultra-low power consumption together, by an optimized panel and optical design which can make full use of backlight and incoming sunlight.



## Hybrid Blanview

Segment and Color Graphic "Hybrid" display  
Display mode switchable to suit conditions




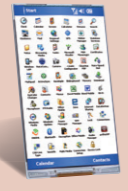

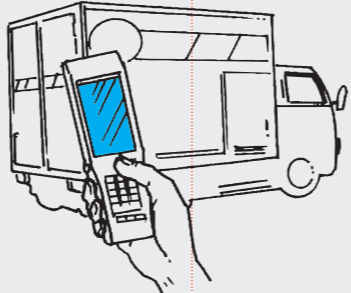
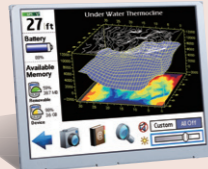
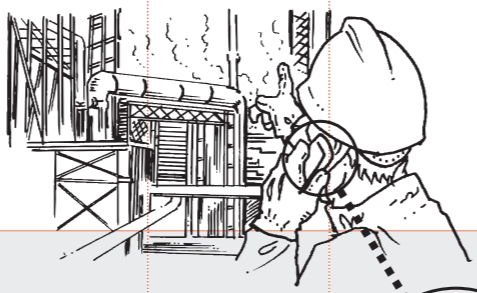

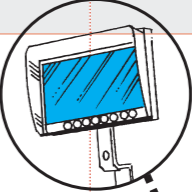
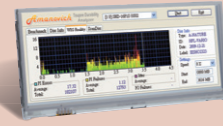
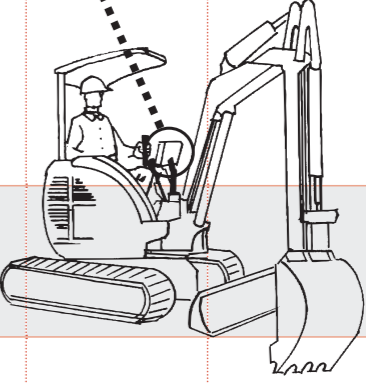



# New-Blanview

Color purity, reflectance and transmittance improvements enables to further upgrade outdoor readability, large number of pixels and ultra low power functionality. New-Blanview extend Blanview product family to high resolution/high definition display field.

# Blanview

Blanview, the combination of high transmittance panel with HAST technology and optimized optical design to make use of incident lights, realizes superior outdoor readability and low power consumption together.

## Line up

|   | 2.2"  | 2.4"   | 2.7"   | 3.2"   | 3.5"  | 3.7"   | 4.0" | 4.1" | 4.3"  | 4.8"   | 5.0" | 5.7"  | 6.0"  |
|---|---|--|--|--|---|--|------|------|---|--|------|---|---|
| <b>HD</b><br>720xRGBx1280<br>  |   |  |  |  |   |  |      |      |   | <b>COM48H4N22</b><br>New-Blanview<br>P VA MIPI                                       |      |   |   |
| <b>WVGA</b><br>480xRGBx800<br>   |  |  |  | <b>COM32H3N89</b><br>Blanview<br>P VA  |  | <b>COM40H4M66</b><br>New-Blanview<br>P VA MIPI                                       |      |      | <b>COM43H4N09</b><br>New-Blanview<br>P VA MIPI<br><br><b>COM43H4N10</b><br>New-Blanview<br>P NTSC 50 VA MIPI<br><br><b>COM43H4M85</b><br>New-Blanview<br>P VA |  |      |   |   |
| <b>VGA</b><br>480xRGBx640<br>640xRGBx480<br>   |   |  |                        | <b>COM35H3N82</b><br>New-Blanview<br>P NTSC 50 VA MIPI<br><br><b>COM35H3P29</b><br>New-Blanview<br>P NTSC 50 VA<br><br><b>COM35H3P08</b><br>Blanview<br>P VA | <b>COM37H3N83</b><br>Blanview<br>P VA   |  |      |      |   |  |      | <b>COM57H5M64</b><br>Blanview<br>L WV<br>All in One LED 70,000h                       |   |
| <b>HVGA</b><br>640xRGBx240<br>   |   |  |  |  |   |  |      |      |   |  |      |  | <b>COM60H6M10</b><br>Blanview<br>L All in One |
| <b>WQVGA</b><br>480xRGBx272<br>  |   |  |  |  |   |  |      |      |   | <b>COM43H4N02</b><br>Blanview<br>L WV  |      |   |   |
| <b>QVGA</b><br>240 x RGB x 320<br><br><br>320 x RGB x 240<br> | <b>COM22H2P16</b><br>New-Blanview<br>P VA   | <b>COM24H2P39</b><br>New-Blanview<br>P NTSC 50 VA<br><br><b>COM24H2P29</b><br>Blanview<br>P WV | <b>COM27H2P37</b><br>New-Blanview<br>P NTSC 50 VA<br><br><b>COM27H2P40</b><br>New-Blanview<br>P NTSC 50 VA |  | <b>COM35H3P17</b><br>New-Blanview<br>P NTSC 50 VA                                   |  |      |      |   |  |      |   |   |
|   |   |  |  |  |   |  |      |      |   | <b>COM41H4N08</b><br>Blanview<br>L WV  |      | <b>COM50H5M81</b><br>Blanview<br>L WV   |   |

※The pictures shown in the screens are simulated images.

# New-Blanview

## Product specification

| Screen size                     | 2.2"            | 2.4"            | 2.7"            |                 | 3.5"            |                   | 4.0"            | 4.3"            |                 |                 | 4.8"            |                 |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                 | QVGA            | QVGA            | QVGA            | QVGA            | QVGA            | VGA               | WVGA            | WVGA            |                 |                 | HD              |                 |
| Model name                      | COM22H2P16      | NEW COM24H2P39  | NEW COM27H2P37  | NEW COM27H2P40  | NEW COM35H3P17  | NEW COM35H3N82    | NEW COM35H3P29  | COM40H4M66      | COM43H4N09      | COM43H4N10      | COM43H4M85      | COM48H4N22      |
| Resolution                      | 240xRGBx320     | 240xRGBx320     | 240xRGBx320     | 240xRGBx320     | 240xRGBx320     | 480xRGBx640       | 480xRGBx640     | 480xRGBx800     | 480xRGBx800     | 480xRGBx800     | 480xRGBx800     | 720xRGBx1280    |
| Interface                       | CPU             | CPU             | RGB 6bit        | CPU             | RGB 6bit        | MIPI              | RGB 6bit        | MIPI            | MIPI            | MIPI            | RGB 6bit        | MIPI            |
| Number of colors                | 262,144         | 262,144         | 262,144         | 262,144         | 262,144         | 16,777,216        | 262,144         | 16,777,216      | 16,777,216      | 16,777,216      | 262,144         | 16,777,216      |
| Brightness (cd/m <sup>2</sup> ) | 400 (at 6mA)    | 300 (at 7.5mA)  | 350 (at 7mA)    | 350 (at 7mA)    | 250 (at 6.5mA)  | 900 (at 20mA)     | 330 (at 10mA)   | 350 (at 10mA)   | 340 (at 7mA)    | 300 (at 7mA)    | 400 (at 10mA)   | 300 (at 10mA)   |
| Contrast                        | 800             | 800             | 800             | 800             | 800             | 900               | 800             | 600             | 600             | 600             | 600             | 700             |
| Viewing angle (U/D/L/R)         | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80°   | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° |
| Power supply voltage            | 2.8V            | 2.7V            | 3.0V            | 2.7V            | 3.0V            | 2.8V/1.8V         | 3.0V            | 3.3V/1.8V       | 3.3V/1.8V       | 3.3V/1.8V       | 3.0V/1.8V       | 2.9V/1.9V       |
| Operating temperature           | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C          | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        |
| Storage temperature             | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C          | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        |
| External dimensions (mm: w x h) | 38.64x53.72     | 42.5x58.5       | 47.0x66.0       | 47.0x66.0       | 63.5x85.0       | 61.00x81.75       | 63.5x85.0       | 57.20x95.83     | 61.2x103.0      | 61.2x103.0      | 63.0x105.3      | 63.68x115.51    |
| Tchickness (mm)                 | 2.35            | 2.55            | 2.89            | 2.89            | 3.03            | 2.60              | 3.03            | 1.55            | 1.80            | 1.80            | 2.90            | 1.67            |
| Main features                   | P VA            | P VA NTSC 50    | P VA NTSC 50    | P VA NTSC 50    | P VA NTSC 50    | P VA MIPI NTSC 50 | P VA NTSC 50    | P VA MIPI       | P VA MIPI       | P VA VA MIPI    | P VA            | P VA MIPI       |

Option: Touch screen    Option: Touch screen    Option: Touch screen

Option: Touch screen

Option: Touch screen

# Blanview

MIPI MIPI interface

LED 70,000h Long-life LED 70kH

WV Wide viewing angle TN mode

VA Wide viewing angle High image quality VA mode

All in One All-in-One

NTSC 50 NTSC 50%

P Portrait

L Landscape

| Screen size                     | 2.4"            | 3.2"            | 3.5"            | 3.7"            | 3.5"               | 4.1"               | 5.0"               | 5.7"                        | 4.3"            | 6.0"            |
|---------------------------------|-----------------|-----------------|-----------------|-----------------|--------------------|--------------------|--------------------|-----------------------------|-----------------|-----------------|
|                                 | QVGA            | WVGA            | VGA             | VGA             | QVGA               | QVGA               | QVGA               | VGA                         | WQVGA           | HVGA            |
| Model name                      | COM24H2P29      | COM32H3N89      | COM35H3P08      | COM37H3N83      | COM35H3P04         | COM41H4N08         | COM50H5M81         | COM57H5M64                  | COM43H4N02      | COM60H6M10      |
| Resolution                      | 240xRGBx320     | 480xRGBx800     | 480xRGBx640     | 480xRGBx640     | 320xRGBx240        | 320xRGBx240        | 320xRGBx240        | 640xRGBx480                 | 480xRGBx272     | 640xRGBx240     |
| Interface                       | RGB 6bit        | RGB 8bit        | RGB 6/8bit      | RGB 6bit        | RGB 6/8bit         | RGB 6/8bit         | RGB 6/8bit         | RGB 6bit                    | RGB 8bit        | RGB 6bit        |
| Number of colors                | 262,144         | 16,777,216      | 262,144         | 262,144         | 262,144/16,777,216 | 262,144/16,777,216 | 262,144/16,777,216 | 262,144                     | 16,777,216      | 262,144         |
| Brightness (cd/m <sup>2</sup> ) | 300 (at 7.5mA)  | 380 (at 8.5mA)  | 250 (at 7.1mA)  | 320 (at 8.0mA)  | 300 (at 7.1mA)     | 350 (at 6.5mA)     | 450 (at 7.1mA)     | 400 (at 30mA)               | 450 (at 6.5mA)  | 500             |
| Contrast                        | 400             | 1000            | 600             | 600             | 400                | 400                | 400                | 700                         | 400             | 300             |
| Viewing angle (U/D/L/R)         | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80°    | 80°/80°/80°/80°    | 80°/80°/80°/80°    | 60°/65°/80°/80°             | 80°/80°/80°/80° | 15°/60°/35°/35° |
| Power supply voltage            | 3.0V            | 2.7V/1.8V       | 3.0V/1.8V       | 3.0V/1.8V       | 3.0V               | 3.0V               | 3.0V               | 3.3V                        | 3.3V            | 3.3V/12V        |
| Operating temperature           | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C           | -20~70°C           | -20~70°C           | -30~80°C                    | -20~70°C        | -20~70°C        |
| Storage temperature             | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C           | -30~80°C           | -30~80°C           | -30~80°C                    | -30~80°C        | -30~80°C        |
| External dimensions (mm: w x h) | 42.5x58.5       | 46.66x78.55     | 63.5x85.0       | 65.0x89.0       | 76.9x63.9          | 90.31x74.62        | 108.30x87.55       | 130.32x101.20               | 105.5x67.2      | 156.49x69.98    |
| Tchickness (mm)                 | 2.55            | 1.75            | 3.03            | 3.0             | 3.13               | 3.13               | 3.0                | 5.13                        | 2.90            | 8.81            |
| Main features                   | P WV            | P VA            | P VA            | P VA            | L WV               | L WV               | L WV               | L WV LED 70,000h All in One | L WV            | L All in One    |

Option: Touch screen    Option: Touch screen    Option: Touch screen

Option: Touch screen

※The pictures shown in the screens are simulated images.

# Standard product (Transmissive type)

By HAST technology, our lineup of standard product features display sizes and resolutions ideal for industrial applications. The products we provide help to satisfy various needs of our customers.

## Line up

|                             | 2.0"            | 2.2"               | 3.3"                                 | 3.5"               | 4.1"               | 4.3"                           | 5.0"            | 5.7"  | 6.5"                          | 7.0"                          |
|-----------------------------|-----------------|--------------------|--------------------------------------|--------------------|--------------------|--------------------------------|-----------------|---|-------------------------------|-------------------------------|
| <b>WVGA</b><br>800xRGBx480  |                 |                    |                                      |                    |                    |                                |                 |   |                               | COM70T7M17<br>L WV All in One |
| <b>VGA</b><br>640xRGBx480   |                 |                    |                                      |                    |                    |                                |                 | COM57T5M54<br>L LED 70,000h WV All in One     | COM65T6M13<br>L WV All in One |                               |
| <b>WQVGA</b><br>480xRGBx272 |                 |                    |                                      |                    |                    | COM43T4M71<br>L LED 70,000h WV |                 |   |                               |                               |
| <b>QVGA</b>                 | 240 x RGB x 320 | COM20T2P31<br>P VA |                                      | COM35T3N91<br>P WV |                    |                                |                 |   |                               |                               |
|                             |                 |                    |                                      |                    |                    |                                |                 |   |                               |                               |
|                             | 320xRGB x240    |                    | COM22T2P21<br>L WV                   |                    | COM35T3N54<br>L WV | COM41T4N05<br>L                |                 |   |                               |                               |
|                             | 320x240 (B/W)   |                    |                                      |                    |                    |                                | COM50T5M78<br>L | COM57T5M71<br>L WV B/W LED 70,000h All in One |                               |                               |
| <b>HQVGA</b><br>120xRGBx320 |                 |                    | COM33T3N71<br>L WV Horizontal stripe |                    |                    |                                |                 |   |                               |                               |

# Ultra-high definition

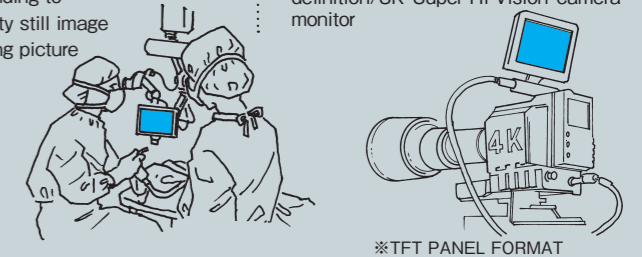
Ultra-high definition TFT-LCD in corresponding to Full-High-Vision and 4K create a new world.

## Line up

|                            | 2.0"                               | 9.6"                                  |
|----------------------------|------------------------------------|---------------------------------------|
| <b>4K</b><br>3840xRGBx2160 |                                    | COM96T9M02<br>L VA definition 458 ppi |
| <b>QHD</b><br>960xRGBx540  | COM20T2N52<br>L definition 546 ppi |                                       |

By our original HAST technology, ORTUS TECHNOLOGY realized high definition and an adequate aperture ratio, and, by optimizing the design and manufacturing processes, ORTUS TECHNOLOGY balanced high resolution and high transmittance.

- |   |   |
|---|---|
| <b>2.0" QHD</b><br><b>World's highest class definition (546ppi)</b> <ul style="list-style-type: none"> <li>● Ultra-high definition direct-view TFT-LCD</li> <li>● Corresponding to high quality still image and moving picture</li> </ul> | <b>9.6" 4K</b><br><b>9.6inch size 4K panel</b> <ul style="list-style-type: none"> <li>● 4K resolution (3840x2160) with 9.6" panel</li> <li>● Possible to downsize 4K Ultra-high definition/8K Super-Hi-Vision camera monitor</li> </ul> |
|---|---|



※TFT PANEL FORMAT

## Product specification

| Screen size                     | 2.0"            | 3.5"            | 2.2"               | 3.3"  | 3.5"               | 4.1"               | 4.3"                | 5.0"               | 5.7"                               | 6.5"            | 7.0"            | 2.0"            | 9.6"                 |                                 |
|---------------------------------|-----------------|-----------------|--------------------|---|--------------------|--------------------|---------------------|--------------------|------------------------------------|-----------------|-----------------|-----------------|----------------------|---------------------------------|
|                                 | QVGA            | QVGA            | QVGA               | HQVGA   | QVGA               | QVGA               | WQVGA               | QVGA               | QVGA                               | VGA             | VGA             | QHD             | 4K                   |                                 |
| Model name                      | COM20T2P31      | COM35T3N91      | COM22T2P21         | COM33T3N71  | COM35T3N54         | COM41T4N05         | COM43T4M71          | COM50T5M78         | COM57T5M71                         | COM57T5M54      | COM65T6M13      | COM70T7M17      | COM20T2N52           | COM96T9M02                      |
| Resolution                      | 240xRGBx320     | 240xRGBx320     | 320xRGBx240        | 120xRGBx320   | 320xRGBx240        | 320xRGBx240        | 480xRGBx272         | 320xRGBx240        | 320x240                            | 640xRGBx480     | 640xRGBx480     | 800xRGBx480     | 960xRGBx540          | 3840xRGBx2160                   |
| Interface                       | RGB 6bit/CPU    | RGB 6bit        | RGB 6/8bit         | Data 18/16bit RGB interface<br>Command: SPI interface | RGB 6/8bit         | RGB 6/8bit         | RGB 8bit            | RGB 6/8 bit        | 6bit                               | RGB 6bit        | RGB 6bit        | RGB 6bit        | RGB 8bit             | 2ch LVDS/8bitx4                 |
| Number of colors                | 262,144         | 262,144         | 262,144/16,777,216 | 262,144/65,536  | 262,144/16,777,216 | 262,144/16,777,216 | 16,777,216          | 262,144/16,777,216 | 64 gray-scale (Monochrome)         | 262,144         | 262,144         | 262,144         | 16,777,216           | 16,777,216                      |
| Brightness (cd/m <sup>2</sup> ) | 450             | 500             | 500                | 625   | 500                | 450                | 450                 | 500                | 350                                | 440             | 400             | 530             | 250                  | 500                             |
| Contrast                        | 800             | 400             | 400                | 300   | 400                | 200                | 400                 | 200                | 400                                | 700             | 400             | 400             | 200                  | 700                             |
| Viewing angle (U/D/L/R)         | 80°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80°    | 80°/80°/80°/80°                                       | 80°/80°/80°/80°    | 20°/50°/35°/35°    | 80°/80°/80°/80°     | 20°/50°/35°/35°    | 60°/80°/80°/80°                    | 55°/80°/80°/80° | 80°/80°/80°/80° | 80°/80°/80°/80° | 45°/45°/45°/45°      | 80°/80°/80°/80°                 |
| Power supply voltage            | 3.0V            | 3.0V            | 3.0V               | 3.3V  | 3.0V               | 3.0V               | 3.3V                | 3.0V               | 3.3V                               | 3.3V            | 3.3V/12V        | 3.3V            | 3.3V/1.8V            | 5.0V (Excluding backlight part) |
| Operating temperature           | -20~70°C        | -20~70°C        | -20~70°C           | -20~70°C  | -20~70°C           | -20~70°C           | -20~70°C            | -20~70°C           | -20~70°C                           | -20~70°C        | -20~70°C        | -20~70°C        | -20~70°C             | 0~60°C                          |
| Storage temperature             | -30~80°C        | -30~80°C        | -30~80°C           | -30~80°C  | -30~80°C           | -30~80°C           | -30~80°C            | -30~80°C           | -30~80°C                           | -30~80°C        | -30~80°C        | -30~80°C        | -30~80°C             | -10~70°C                        |
| External dimensions (mm: w x h) | 35.50x50.55     | 63.5x85.0       | 49.96x42.95        | 38.5x90.0   | 76.9x63.9          | 90.31x74.62        | 105.5x67.2          | 108.30x87.55       | 130.32x101.20                      | 130.32x101.20   | 152.0x117.0     | 165.0x105.8     | 55.04x39.07          | 287.4x146.6                     |
| Tthickness (mm)                 | 2.38            | 3.03            | 2.92               | 4.5   | 3.13               | 3.13               | 5.2                 | 3.0                | 5.13                               | 5.13            | 8.0             | 3.35            | 9.78                 | 23.4                            |
| Main features                   | P VA            | P WV            | L WV               | L WV<br>Horizontal stripe                             | L WV               | L                  | L WV<br>LED 70,000h | L                  | L WV B/W<br>LED 70,000h All in One | L WV All in One | L WV All in One | L WV All in One | L definition 546 ppi | L VA definition 458 ppi         |

Option: Touch screen

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※The pictures shown in the screens are simulated images.

