

# SOLUM

## Electronic Shelf Label

**SOLUM**  
Solution provider.

**INDUSTRY  
4.0**

ANALYTICS

AUTOMATION

CLOUD COMPUTING

GRATION

SMART FACTORY

INDUSTRIAL REVOLUTION

CYBER SECURITY

SMART  
TECHNOLOGY

NEW BUSINESS MODEL



# Contenido

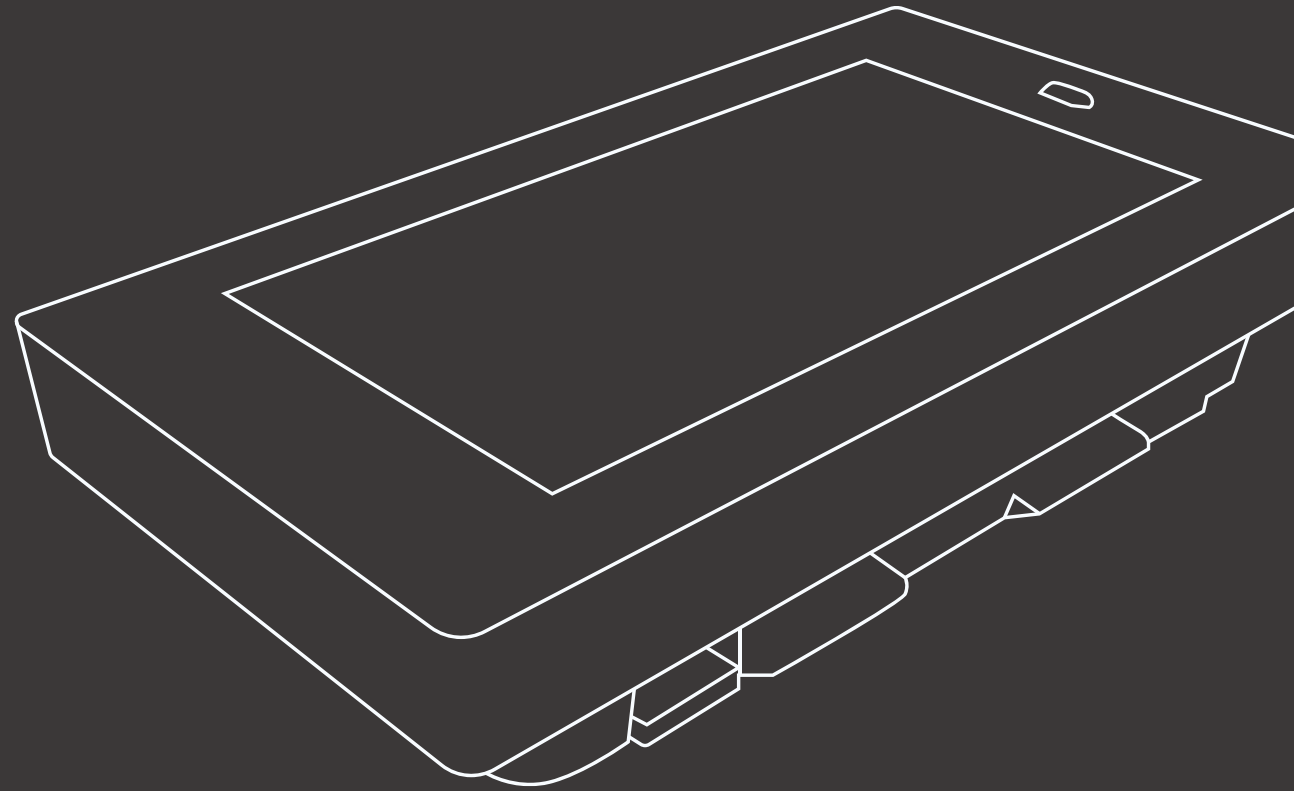
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Capítulo 1. Arquitectura Básica

Capítulo 2. Hardware

Capítulo 3. Software

Capítulo 4. Casos de Uso



## Capítulo 1. Arquitectura Básica

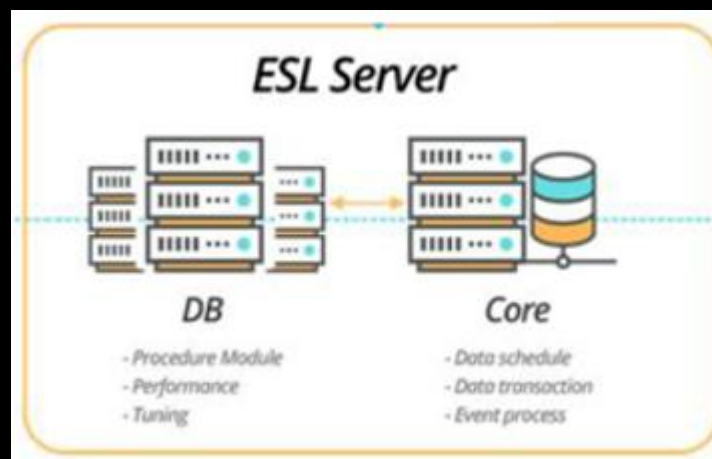
- ERP, SGA...
- .csv, .xml, .json...
- Webservice
- Middleware



ORIGEN DE DATOS

ESL SERVER

GATEWAY SOLUM



ETIQUETA NEWTON

## Capítulo 2. Hardware: Gateway

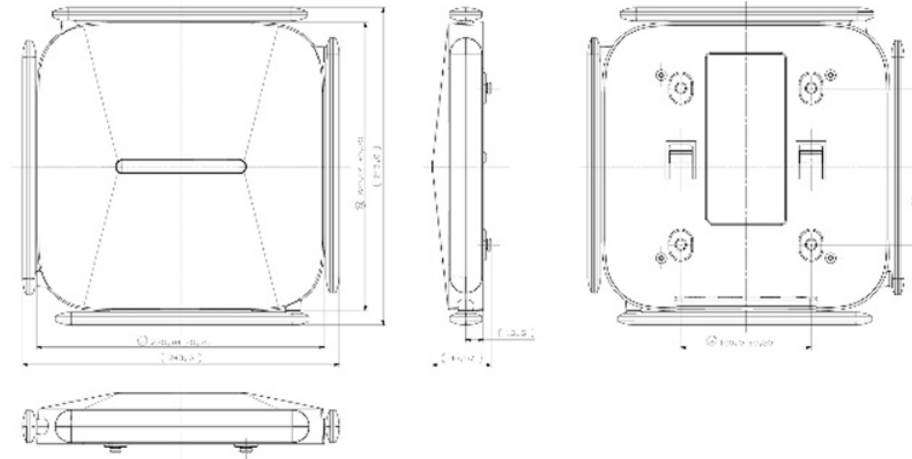


## Capítulo 2. Hardware: Gateway



|                                                                                                          |  |  |
|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  Capacity             | 50,000 labels                                                                       | 50,000 labels                                                                       |
|  Communication radius | 25 m                                                                                | 20 m                                                                                |
|  Flash memory         | 4GB                                                                                 | 4GB                                                                                 |
|  RAM                | 2GB                                                                                 | 1GB                                                                                 |
|  Power consumption  | 10W                                                                                 | 2.5W                                                                                |
|  Interface          | Ethernet                                                                            | USB                                                                                 |

## Capítulo 2. Hardware: Gateway



Newton Gateway digital numbering system gives it a modern and digitized look. But more importantly, this makes it easier for managers to identify the Gateway's ID for internal device management purposes.

Another improvement with Newton Gateway is that it has a tag and load-balancing system which means that the number of connected labels will always be evenly distributed.

### Communications

Ethernet (10/100/1000 Mbps)  
2.4 GHz SOLUM Proprietary Protocol

### Capacity

50,000 labels

### Dimensions (WxHxD) (mm)

243 x 243 x 46

### Weight

650 g / 23 oz

### Enclosures

Plastic (ABS)

### Power

PoE (Power over Ethernet (IEEE802.3af))  
AUX DC Input (5-12V, 10W)

### 2.4 GHz RF Antenna Type

External Antenna Internal Antenna

**Fantasy Band (Tx, Rx):** 2402MHz - 2480MHz

**Antenna Gain:** External: 3.4 dBi / Internal 3.2 dBi

### Operating Temperature

0°C to +40°C



Newton Gateway

## Newton USB Gateway

## Capítulo 2. Hardware: Etiquetas Electrónicas



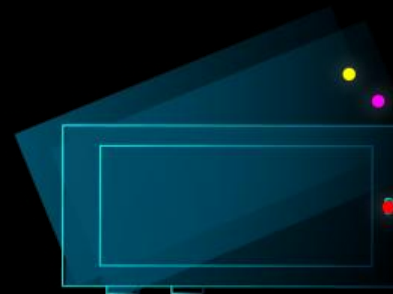
| MODELO                          | 1.6”                                                                        | 2.2”                                      | 2.6”                                      | 2.7”                                      | 2.9”                                      | 4.2”                                      | 4.3”                                      | 6.0”                                      | 7.5”                                      | 11.6”                                     |
|---------------------------------|-----------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| DIMENSIONES (mm)                | 36.7 x 45.0 x 13.1                                                          | 67.1 x 37.4 x 13.1                        | 79.3 x 42.4 x 13.1                        | 76.0 x 49.5 x 13.1                        | 86.0 x 41.3 x 13.1                        | 98.1 x 83.8 x 14.5                        | 130.3 x 42.4 x 13.9                       | 133.0 x 109.0 x 14.7                      | 125.0 x 183.0 x 15.2                      | 192.0 x 268.0 x 21.9                      |
| ÁREA ACTIVA PANTALLA(mm)        | 27.0 x 27.0                                                                 | 48.1 x 26.0                               | 60.1 x 30.7                               | 57.3 x 38.1                               | 67.6 x 29.6                               | 84.8 x 63.6                               | 105.4 x 30.7                              | 114.9 x 85.8                              | 163.2 x 97.9                              | 163.0 x 244.5                             |
| RESOLUCIÓN (Pixel)              | 200 x 200                                                                   | 296 x 160                                 | 360 x 184                                 | 300 x 200                                 | 384 x 168                                 | 400 x 300                                 | 522 x 152                                 | 600 x 448                                 | 800 x 480                                 | 640 x 960                                 |
| DENSIDAD PIXELS                 | 184 dpi                                                                     | 156 dpi                                   | 152 dpi                                   | 133 dpi                                   | 144 dpi                                   | 120 dpi                                   | 125 dpi                                   | 132 dpi                                   | 126 dpi                                   | 100 dpi                                   |
| TECNOLOGÍA DE PANTALLA          | Pantalla de e-papel totalmente gráfica                                      |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| COLORES                         | BW(Negro, Blanco) / BWR(Negro, Blanco, Rojo) / BWY(Negro, Blanco, Amarillo) |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| ÁNGULO DE VISIBILIDAD           | Casi 180°                                                                   |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| PÁGINAS EN MEMÓRIA              | Hasta 7 páginas                                                             | Hasta 7 páginas                           | Hasta 7 páginas                           | Hasta 7 páginas                           | Hasta 7 páginas                           | Hasta 7 páginas                           | Hasta 7 páginas                           | Hasta 3 páginas                           | Hasta 3 páginas                           | Hasta 3 páginas                           |
| RANGO DE TEMPERATURA            | 0 ~ 40°                                                                     |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| BATERÍA                         | CR2450 x 1                                                                  | CR2450 x 2                                | CR2450 x 2                                | CR2450 x 2                                | CR2450 x 2                                | CR2450 x 2                                | CR2450 x 2                                | CR2450 x 4                                | CR2450 x 4                                | AA x 4                                    |
| VIDA DE BATERIA                 | Hasta 10 años (2 actualizaciones diarias)                                   | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) | Hasta 10 años (2 actualizaciones diarias) |
| ENCRIPTADO                      | 128-Bit AES                                                                 |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| NORMATIVAS                      | CE, ROHS, FCC                                                               |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| NFC                             | FeliCa NFC Forum Type 3                                                     |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| PROTECCIÓN                      | IP67                                                                        |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| BOTONES                         | 2 Botones                                                                   |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| LED                             | 7 Colores (Rojo/Verde/Azul/Amarillo/Cian/Magenta/Blanco)                    |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| FRECUENCIA DE COMUNICACIONES    | 2.4 Ghz                                                                     |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |
| ACTUALIZACIÓN DE FW INALÁMBRICA | Si                                                                          |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |                                           |

## Capítulo 2. Hardware: Etiquetas Electrónicas



### 1. Botones interactivos multifunción

La solución permite la personalización de la función de los botones interactivos integrados en las propias etiquetas, lo que permite una amplia variedad de casos de uso.



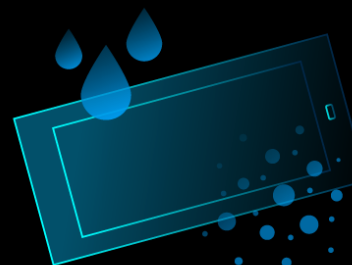
### 2. LED 7 colores

Todos los formatos de la serie Newton incluyen un led integrado de 7 colores, con una visibilidad de 180 grados, que permite diferentes aplicaciones.



### 3. Protección de pantalla

Gracias a la protección de la pantalla, la serie M3 Newton es un 80% más resistente que los antiguos modelos de ESL.



### 4. Protección IP67

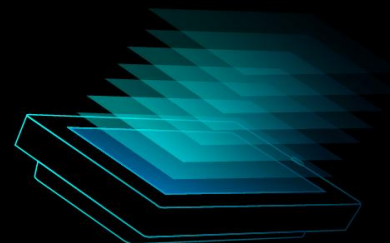
Lo que permite su instalación en entornos de interior o exterior y alarga al máximo la vida útil de los equipos, optimizando el retorno de inversión.

## Capítulo 2. Hardware: Etiquetas Electrónicas



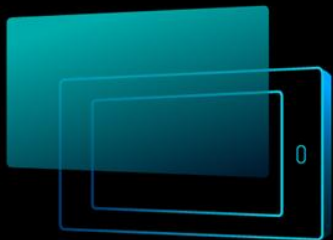
### 5. NFC

Chip NFC integrado en todos los formatos, lo que permite gran variedad de aplicaciones



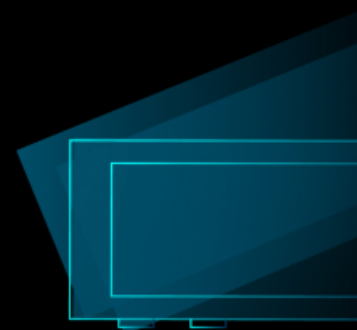
### 6. 7 Páginas

La serie Newton dispone de hasta 7 páginas internas para garantizar que las etiquetas muestran el máximo de información posible.



### 7. ALTA RESOLUCION

Se ha incrementado la resolución de todos los formatos M3 Newton en un 20% con respecto a la anterior serie.

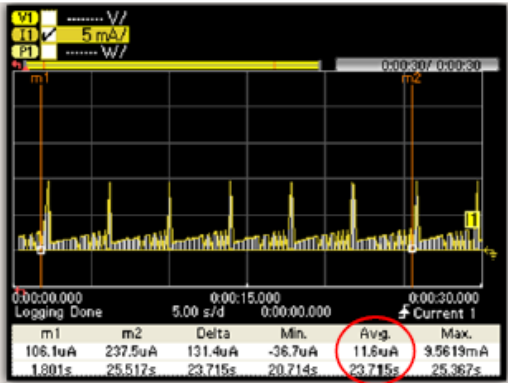


### 8. SELLADO COMPLETO

los formatos M3 Newton están completamente sellados, para garantizar la máxima durabilidad del epaper.

# Capítulo 2. Hardware: Etiquetas Electrónicas Baterías de larga duración

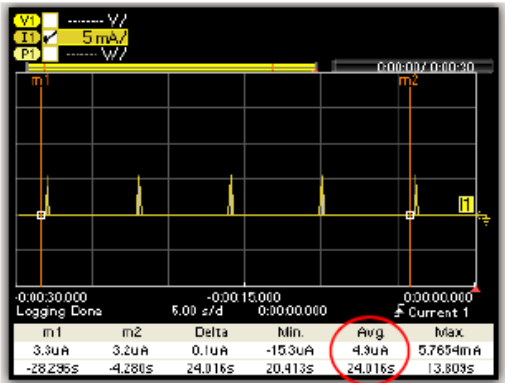
M2



Average Current 11.6uA

5 years  
(Expected battery life)

Newton



Average Current 4.9uA

10 years  
(Expected battery life)

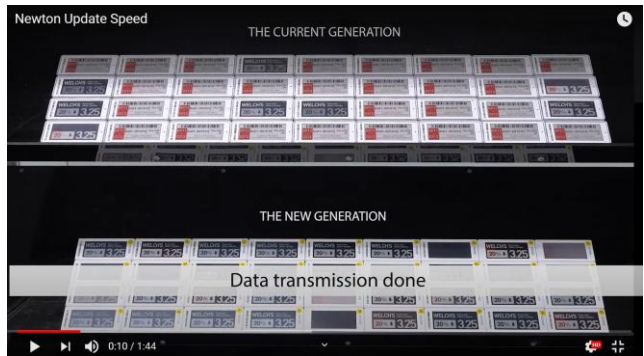
## Details of Newton Battery Life

|                                                                                       |                                              |
|---------------------------------------------------------------------------------------|----------------------------------------------|
| Average battery consumption current                                                   | Others : 12uA<br>Newton : 5uA                |
| Expected battery life<br>(2 updates/day, 100 sec LED/day)                             | 1.3"~1.6" : 7 years<br>2.2"~11.6" : 13 years |
| Battery Warranty<br>(2 updates/day, 100 sec LED/day)                                  | 1.3"~1.6" : 5 years<br>2.2"~11.6" : 10 years |
| Maximize usage of LED<br>(guaranteed over 5 years of battery life)                    | 1 hour LED blinking / day                    |
| Maximize usage of price / display update<br>(guaranteed over 5 years of battery life) | 10 price/display updates / day               |

\* Others: other RF based ESL

## Capítulo 2. Hardware: Etiquetas Electrónicas

### Rápida actualización: Real-time speed



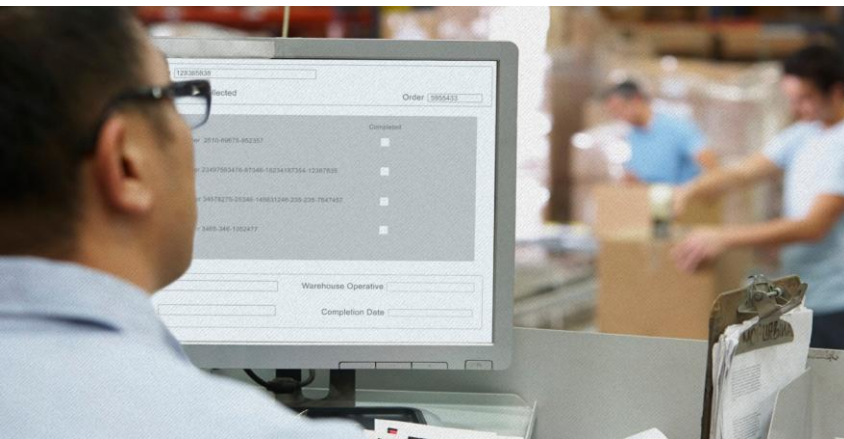
<https://youtu.be/Q0Ag8Axw0x4>

| Details of Newton Real-time Speed   |                                                |
|-------------------------------------|------------------------------------------------|
| Newton wake up period               | 3 or 6 sec. Configurable.                      |
| 1 label assignment speed            | Others: 30 sec~1 min<br>Newton: 5 ~ 10 sec     |
| 1 label image update speed          | Others: 30 sec~1 min<br>Newton: ~ 5 sec        |
| 1 label LED reaction speed          | Others: 30 sec~1 min<br>Newton: ~ 5 sec        |
| 1 GW 5 min update speed capability  | Others: 200pcs~500pcs<br>Newton: 4,000pcs      |
| 1 GW 1 hour update speed capability | Others: 2,500pcs~4,500pcs<br>Newton: 46,000pcs |

La serie M3 Newton tiene una velocidad de actualización 10 veces más rápida que cualquier otro sistema del mercado basado en transmisiones RF.

## Capítulo 3. Software

### 1. Site Server



### 2. Central server



### 3. SaaS Server



## Capítulo 3. Software Dashboard

**SOLUM**  
ESL DASHBOARD

Overview

Overview

Label Info

Product Info

Gateway Info

Template Info

Multifunction Info

Firmware Info

Store Info

User Info

Config

LOTTEMART > KOREA > SOUTH > SUWON > 광고점

광고점 (Store code : 1005)

English

Chloe Choi CC

### Overview

#### Label Status

Update success

**95%**

19,000ea / 20,000ea

Processing

**4%**

800ea / 20,000ea

Update failure

**1%**

200ea / 20,000ea

Total product

**53,330,000**

Total assigned product

**25,000**

Total label

**20,000**

#### Exception Status

Label offline

**40**

Low battery

**8,500**

Bad signal

**10**

Misused

**2**

#### Gateway Status

Gateway offline

**72**

Total gateway

**950**

#### Update Status

Latest update status



**67%**

1,624ea / 2,424ea

Total update Order



## Capítulo 3. Software Layout Designer



## Capítulo 3. Software PDA



# Newton

## CORE 4 Color

### PRODUCT SPECIFICATION ON SHEET

Jan.31.2024

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## Full Line-Up



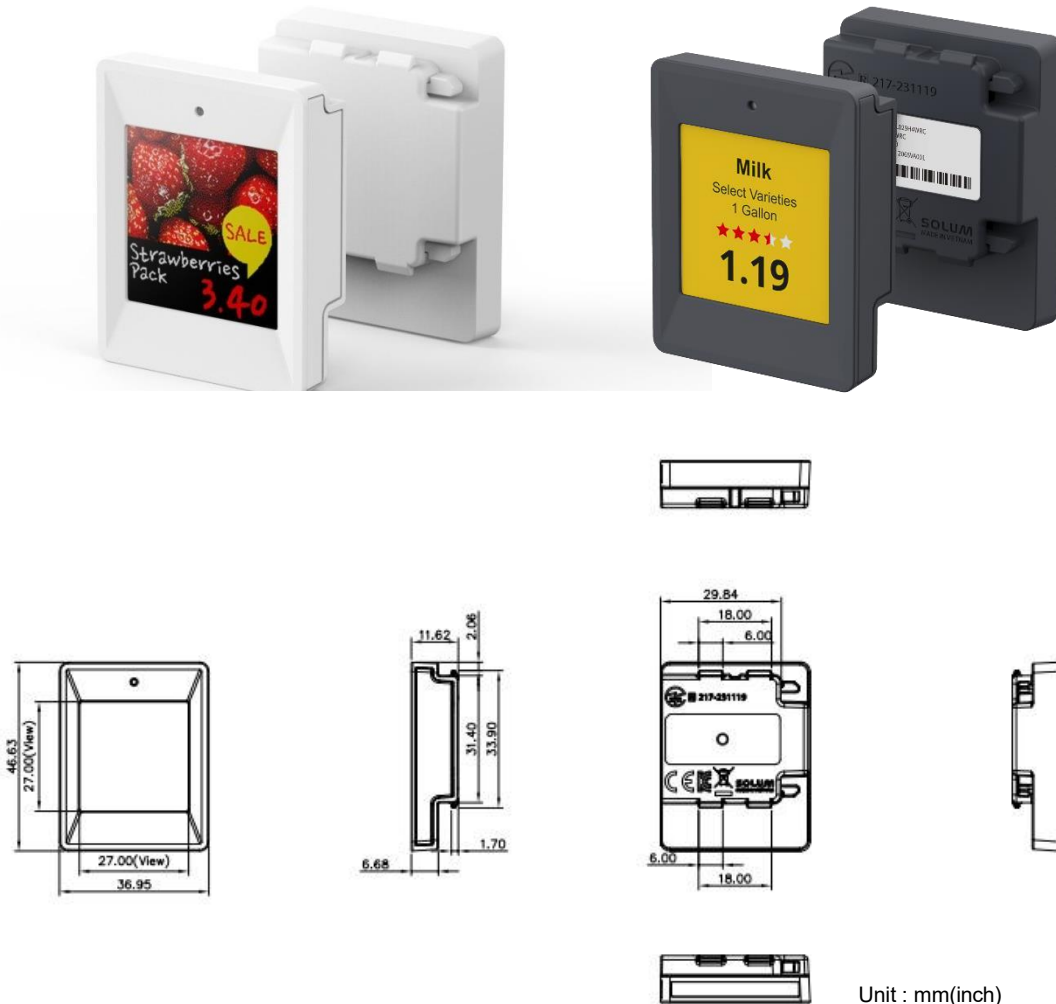
| Product Specification Summary |                                  |                       |                       |                       |                       |                       |                        |                        |                         |                         |                         |                         |                         |                         |
|-------------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Model                         | 1.6"                             | 2.2"                  | 2.6"                  | 2.9"                  | 3.5"                  | 4.2"                  | 4.3"                   | 5.8"                   | 6.0"                    | 6.1"                    | 7.5"                    | 9.7"                    | 11.6"                   | 12.2"                   |
| Dimension (mm)                | 36.95 x 46.63 x 11.62            | 66.95 x 36.95 x 11.62 | 78.12 x 42.79 x 11.62 | 85.67 x 42.79 x 11.62 | 99.73 x 49.35 x 12.80 | 97.13 x 82.18 x 13.55 | 128.73 x 41.90 x 12.80 | 166.16 x 65.67 x 13.26 | 133.20 x 109.96 x 14.85 | 133.20 x 109.96 x 14.90 | 124.10 x 185.50 x 14.85 | 168.05 x 224.07 x 14.81 | 190.31 x 267.70 x 14.85 | 215.95 x 259.82 x 14.85 |
| Active Area (mm)              | 27.0 x 27.0                      | 48.1 x 26.0           | 60.1 x 30.7           | 67.6 x 29.6           | 81.0 x 37.9           | 84.8 x 63.6           | 105.4 x 30.7           | 139.00 x 47.74         | 114.9 x 85.79           | 118.78 x 88.22          | 97.9 x 163.2            | 141.12 x 201.6          | 163.0 x 244.5           | 190.08 x 237.6          |
| Resolution (Pixel)            | 200 x 200                        | 296 x 160             | 360 x 184             | 384 x 168             | 384 x 180             | 400 x 300             | 522 x 152              | 792 x 272              | 600 x 448               | 648 x 480               | 528 x 880               | 672 x 960               | 640 x 960               | 768 x 960               |
| Pixel Density                 | 184 dpi                          | 156 dpi               | 152 dpi               | 144 dpi               | 120 dpi               | 120 dpi               | 125 dpi                | 144 dpi                | 132 dpi                 | 138 dpi                 | 136 dpi                 | 121 dpi                 | 100 dpi                 | 102dpi                  |
| Pixel Colors                  | BWRY (Black, White, Red, Yellow) |                       |                       |                       |                       |                       |                        |                        |                         |                         |                         |                         |                         |                         |

# SPECIFICATION SUMMARY

| MODEL                         | 1.6"                                                            | 2.2"                                                    | 2.6"                                                 | 2.9"                                                 | 3.5"                                                 | 4.2"                                                 | 4.3"                                                  |
|-------------------------------|-----------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|
| DIMENSION (mm/inch)           | 36.95 × 46.63 × 11.62 mm<br>(1.45 x 1.84 x 0.46 inches)         | 66.95 x 36.95 x 11.62 mm<br>(2.64 x 1.45 x 0.46 inches) | 78.12 x 42.79 x 11.62 mm (3.08 x 1.68 x 0.46 inches) | 85.67 x 42.79 x 11.62 mm (3.37 x 1.68 x 0.46 inches) | 99.73 x 49.35 x 12.80 mm (3.93 x 1.94 x 0.50 inches) | 97.13 x 82.18 x 13.55 mm (3.82 x 3.24 x 0.53 inches) | 128.73 × 41.90 × 12.80 mm (5.07 x 1.65 x 0.50 inches) |
| ACTIVE DISPLAY AREA (mm/inch) | 27.0 × 27.0 mm (1.06 × 1.06 inches)                             | 48.1 x 26.0 mm (1.89 x 1.02 inches)                     | 60.1 x 30.7 mm (2.37 x 1.21 inches)                  | 67.6 x 29.6 mm (2.66 x 1.17 inches)                  | 81.0 x 37.9 mm (3.19 x 1.49 inches)                  | 84.8 x 63.6 mm (3.34 x 2.50 inches)                  | 105.4 x 30.7 mm (4.15 x 1.21 inches)                  |
| RESOLUTION (pixels)           | 200 × 200                                                       | 296 x 160                                               | 360 x 184                                            | 384 x 168                                            | 384 x 180                                            | 400 x 300                                            | 522 x 152                                             |
| PIXEL DENSITY                 | 184 dpi                                                         | 156 dpi                                                 | 152 dpi                                              | 144 dpi                                              | 120 dpi                                              | 120 dpi                                              | 125 dpi                                               |
| DISPLAY TECHNOLOGY            | Full Graphic E-Ink Display                                      |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| PIXEL COLORS                  | BWRY (Black, White, Red, Yellow)                                |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| VIEWING ANGLE                 | Nearly 180°                                                     |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| USABLE PAGES                  | Up to 7 pages                                                   |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| OPERATING TEMPERATURE         | 0 ~ 40° / 32 ~ 104°F                                            |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| BATTERY LIFETIME              | Up To 5 years (2 Update/day)                                    | Up To 10 years (2 Update/day)                           |                                                      |                                                      |                                                      |                                                      |                                                       |
| BATTERY                       | CR2450 x 1                                                      | CR2450 x 2                                              |                                                      |                                                      | CR2450 x 2 (battery pack)                            |                                                      | CR2450 × 3 (battery pack)                             |
| ENCRYPTION                    | 128-Bit AES                                                     |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| COMPLIANCE                    | FCC, IC, CE, TELEC, KC, RoHS                                    |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| NFC                           | FeliCa NFC Forum Type 3                                         |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| WATERPROOF                    | N/A                                                             |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| BUTTON                        | N/A                                                             |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| LED                           | 7 Colors (Red / Green / Blue / Yellow / Cyan / Magenta / White) |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| ESL OPERATING FREQUENCY       | 2.4 Ghz                                                         |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |
| WIRELESS FIRMWARE UPDATE      | Yes                                                             |                                                         |                                                      |                                                      |                                                      |                                                      |                                                       |

※ This specification May varies depending on the installation environment and user scenario.

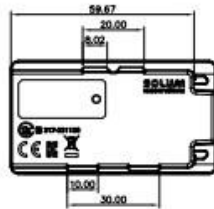
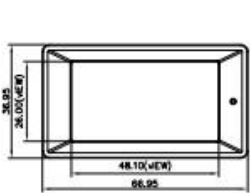
# 1.6 inch



|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL016F5C4C/WWW<br>W : EL016F5W4C/WWW<br>B : EL016F5B4C/WWW |
| <b>DIMENSION</b>                | 36.95 x 46.63 x 11.62 mm (1.45 x 1.84 x 0.46 inches)           |
| <b>ACTIVE DISPLAY AREA</b>      | 27.0 x 27.0 mm (1.06 x 1.06 inches)                            |
| <b>RESOLUTION (Pixel)</b>       | 200 × 200                                                      |
| <b>PIXEL DENSITY</b>            | 184 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 × 1ea                                                   |
| <b>BATTERY LIFETIME</b>         | Up To 5 years (2 Update/day)                                   |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 2.2inch

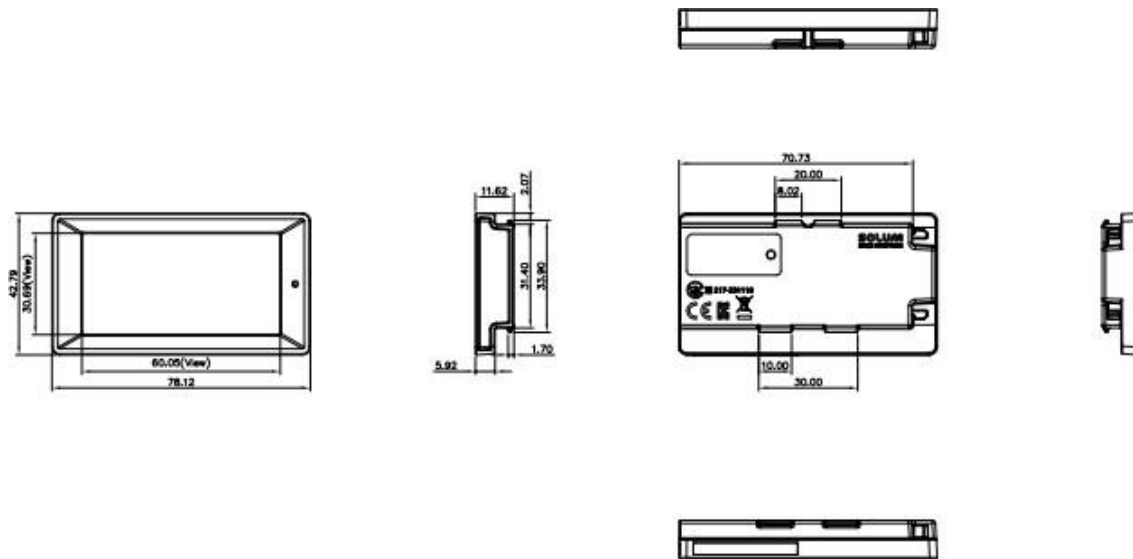


Unit : mm(inch)

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| MODEL                    | G : EL022F5C4C/WWW<br>W : EL022F5W4C/WWW<br>B : EL022F5B4C/WWW |
| DIMENSION                | 66.95 x 36.95 x 11.62 mm (2.64 x 1.45 x 0.46 inches)           |
| ACTIVE DISPLAY AREA      | 48.1 x 26.0 mm (1.89 x 1.02 inches)                            |
| RESOLUTION (Pixel)       | 296 x 160                                                      |
| PIXEL DENSITY            | 156 dpi                                                        |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                                     |
| BEZEL COLOR              | Gray / white / black, customizable color(optional)             |
| PIXEL COLORS             | BWRY(Black, White, Red, Yellow)                                |
| VIEWING ANGLE            | Nearly 180°                                                    |
| USABLE PAGES             | Up to 7 pages                                                  |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                          |
| BATTERY                  | CR2450 × 2ea                                                   |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                                  |
| ENCRYPTION               | 128-Bit AES                                                    |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| NFC                      | FeliCa NFC Forum Type 3                                        |
| WATERPROOF               | N/A                                                            |
| BUTTON                   | N/A                                                            |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                                        |
| WIRELESS FIRMWARE UPDATE | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 2.6 inch

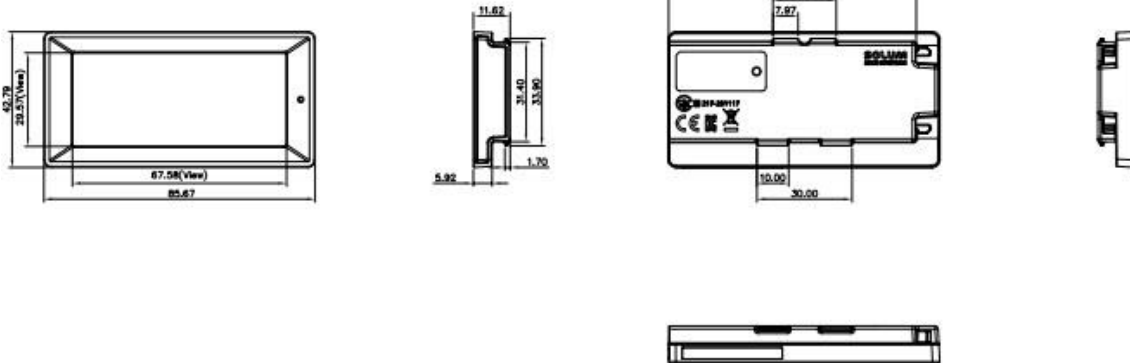


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL026F5C4C/WWW<br>W : EL026F5W4C/WWW<br>B : EL026F5B4C/WWW |
| <b>DIMENSION</b>                | 78.12 x 42.79 x 11.62 mm (3.08 x 1.68 x 0.46 inches)           |
| <b>ACTIVE DISPLAY AREA</b>      | 60.1 x 30.7 mm (2.37 x 1.21 inches)                            |
| <b>RESOLUTION (Pixel)</b>       | 360 x 184                                                      |
| <b>PIXEL DENSITY</b>            | 152 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 × 2ea                                                   |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (2 Update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 2.9 inch

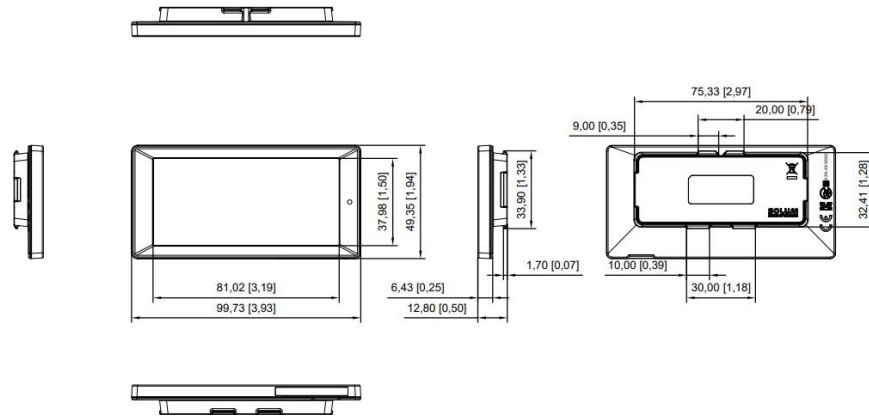


Unit : mm(inch)

|                          |                                                                |
|--------------------------|----------------------------------------------------------------|
| MODEL                    | G : EL029F5C4C/WWW<br>W : EL029F5W4C/WWW<br>B : EL029F5B4C/WWW |
| DIMENSION                | 85.67 x 42.79 x 11.62 mm (3.37 x 1.68 x 0.46 inches)           |
| ACTIVE DISPLAY AREA      | 67.6 x 29.6 mm (2.66 x 1.17 inches)                            |
| RESOLUTION (Pixel)       | 384 × 168                                                      |
| PIXEL DENSITY            | 144 dpi                                                        |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                                     |
| BEZEL COLOR              | Gray / white / black, customizable color(optional)             |
| PIXEL COLORS             | BWRY(Black, White, Red, Yellow)                                |
| VIEWING ANGLE            | Nearly 180°                                                    |
| USABLE PAGES             | Up to 7 pages                                                  |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                          |
| BATTERY                  | CR2450 × 2ea                                                   |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                                  |
| ENCRYPTION               | 128-Bit AES                                                    |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| NFC                      | FeliCa NFC Forum Type 3                                        |
| WATERPROOF               | N/A                                                            |
| BUTTON                   | N/A                                                            |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                                        |
| WIRELESS FIRMWARE UPDATE | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 3.5 inch

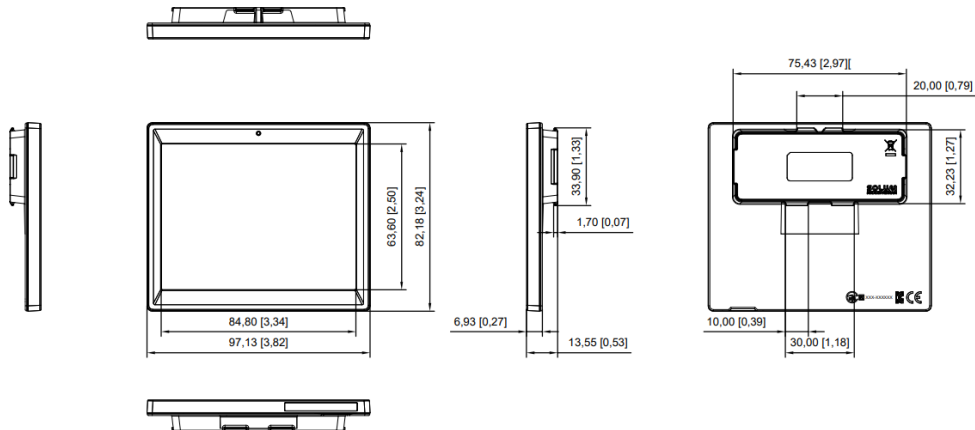


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL035F5C4C/WWW<br>W : EL035F5W4C/WWW<br>B : EL035F5B4C/WWW |
| <b>DIMENSION</b>                | 99.73 x 49.35 x 12.80 mm (3.93 x 1.94 x 0.50 inches)           |
| <b>ACTIVE DISPLAY AREA</b>      | 81.0 x 37.9 mm (3.19 x 1.49 inches)                            |
| <b>RESOLUTION (Pixel)</b>       | 384 x 180                                                      |
| <b>PIXEL DENSITY</b>            | 120 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 2 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (2 Update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 4.2 inch

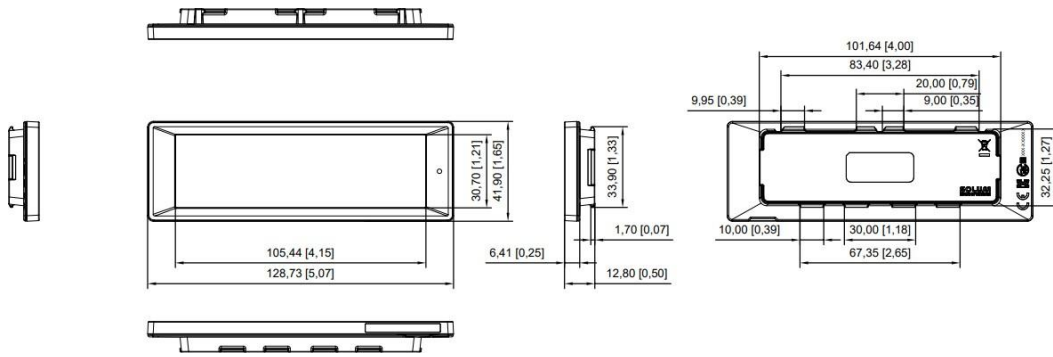


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL042F5C4C/WWW<br>W : EL042F5W4C/WWW<br>B : EL042F5B4C/WWW |
| <b>DIMENSION</b>                | 97.13 x 82.18 x 13.55 mm (3.82 x 3.24 x 0.53 inches)           |
| <b>ACTIVE DISPLAY AREA</b>      | 84.8 x 63.6 mm (3.34 x 2.50 inches)                            |
| <b>RESOLUTION (Pixel)</b>       | 400 x 300                                                      |
| <b>PIXEL DENSITY</b>            | 120 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 2 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (2 Update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 4.3 inch



Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL043F5C4C/WWW<br>W : EL043F5W4C/WWW<br>B : EL043F5B4C/WWW |
| <b>DIMENSION</b>                | 128.73 × 41.90 × 12.80 mm (5.07 x 1.65 x 0.50 inches)          |
| <b>ACTIVE DISPLAY AREA</b>      | 105.4 x 30.7 mm (4.15 x 1.21 inches)                           |
| <b>RESOLUTION (Pixel)</b>       | 522 x 152                                                      |
| <b>PIXEL DENSITY</b>            | 125 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 × 3 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (2 Update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

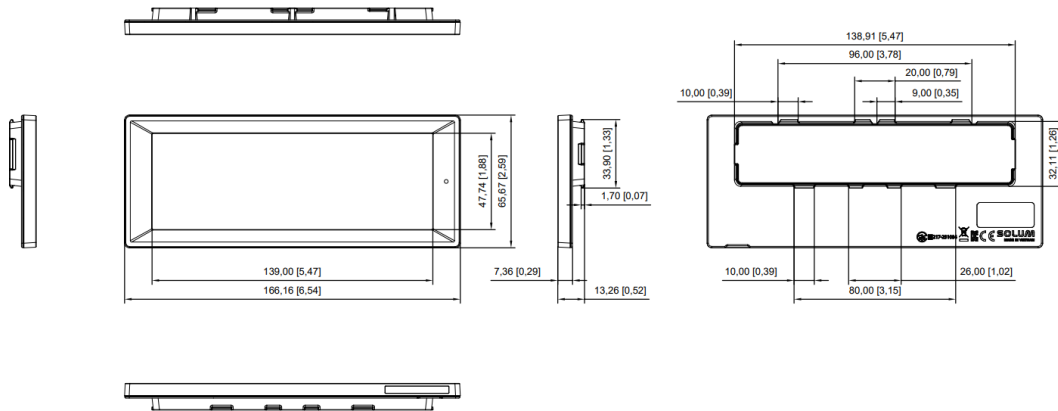
※ This specification May varies depending on the installation environment and user scenario.

# SPECIFICATION SUMMARY

| MODEL                         | 5.8"                                                            | 6.0"                                                  | 6.1"                                                    | 7.5"                                                     | 9.7"                                                      | 11.6"                                                      | 12.2"                                                      |
|-------------------------------|-----------------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|
| DIMENSION (mm/inch)           | 166.16× 65.67× 13.26 mm<br>(6.54 x 2.59 x 0.52 inches)          | 133.20× 109.96× 14.85 mm<br>/ 5.24 x 4.33 x 0.58 inch | 133.20× 109.96× 14.90 mm<br>(5.24 x 4.33 x 0.59 inches) | 124.10× 185.50 x 14.85 mm<br>(4.89 x 7.30 x 0.58 inches) | 168.05 x 224.07 x 14.81 mm<br>(6.62 x 8.82 x 0.58 inches) | 190.31 x 267.70 x 14.85 mm<br>(7.49 x 10.54 x 0.58 inches) | 215.95 x 259.82 x 14.85 mm<br>(8.50 x 10.23 x 0.58 inches) |
| ACTIVE DISPLAY AREA (mm/inch) | 139.00 x 47.74 mm (5.47 x 1.88 inches)                          | 114.9 x 85.79 mm<br>/ 4.52 x 3.38 inch                | 118.78 x 88.22 mm (4.68 x 3.47 inches)                  | 97.9 x 163.2 mm (3.85 x 6.43 inches)                     | 141.12 x 201.6 mm (5.56 x 7.94 inches)                    | 163.0 x 244.5 mm (6.42 x 9.63 inches)                      | 190.08 x 237.6 mm (7.48 x 9.35 inches)                     |
| RESOLUTION (pixels)           | 792 x 272                                                       | 600 x 448                                             | 648 x 480                                               | 528 x 880                                                | 672 x 960                                                 | 640 x 960                                                  | 768 x 960                                                  |
| PIXEL DENSITY                 | 144 dpi                                                         | 132 dpi                                               | 138                                                     | 136 dpi                                                  | 121dpi                                                    | 100 dpi                                                    | 102 dpi                                                    |
| DISPLAY TECHNOLOGY            | Full Graphic E-Ink Display                                      |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| PIXEL COLORS                  | BWRY (Black, White, Red, Yellow)                                |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| VIEWING ANGLE                 | Nearly 180°                                                     |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| USABLE PAGES                  | Up to 7 pages                                                   |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| OPERATING TEMPERATURE         | 0 ~ 40° / 32 ~ 104°F                                            |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| BATTERY LIFETIME              | Up To 10 years (1 Update/day)                                   |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| BATTERY                       | CR2450 x 3 (battery pack)                                       | CR2450 x 4 (battery pack)                             |                                                         |                                                          | CR2450 x 5 (battery pack)                                 |                                                            | CR2450 x 6 (battery pack)                                  |
| ENCRYPTION                    | 128-Bit AES                                                     |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| COMPLIANCE                    | FCC, IC, CE, TELEC, KC, RoHS                                    |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| NFC                           | FeliCa NFC Forum Type 3                                         |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| WATERPROOF                    | N/A                                                             |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| BUTTON                        | N/A                                                             |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| LED                           | 7 Colors (Red / Green / Blue / Yellow / Cyan / Magenta / White) |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| ESL OPERATING FREQUENCY       | 2.4 Ghz                                                         |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |
| WIRELESS FIRMWARE UPDATE      | Yes                                                             |                                                       |                                                         |                                                          |                                                           |                                                            |                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 5.8 inch

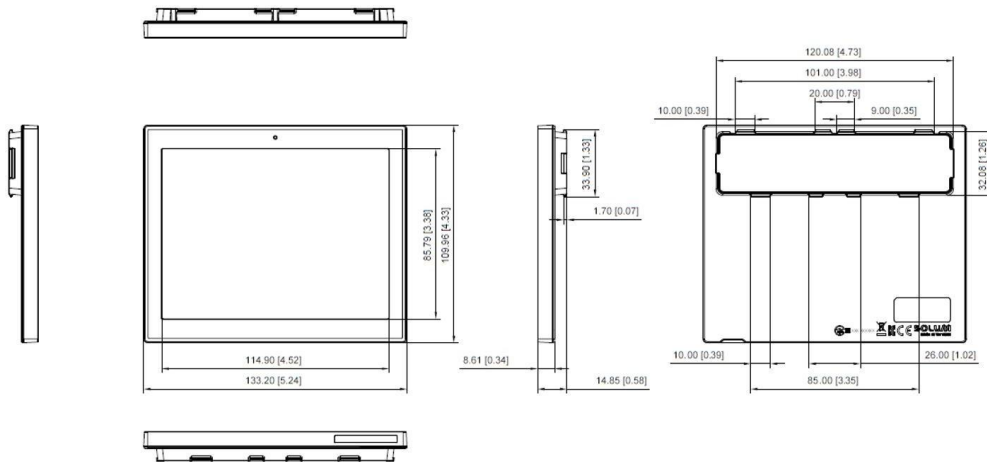


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL058F5C4C/WWW<br>W : EL058F5W4C/WWW<br>B : EL058F5B4C/WWW |
| <b>DIMENSION</b>                | 166.16 × 65.67 × 13.26 mm (6.54 x 2.59 x 0.52 inches)          |
| <b>ACTIVE DISPLAY AREA</b>      | 139.00 x 47.74 mm (5.47 x 1.88 inches)                         |
| <b>RESOLUTION (Pixel)</b>       | 792 x 272                                                      |
| <b>PIXEL DENSITY</b>            | 144 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 3 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 6.0 inch

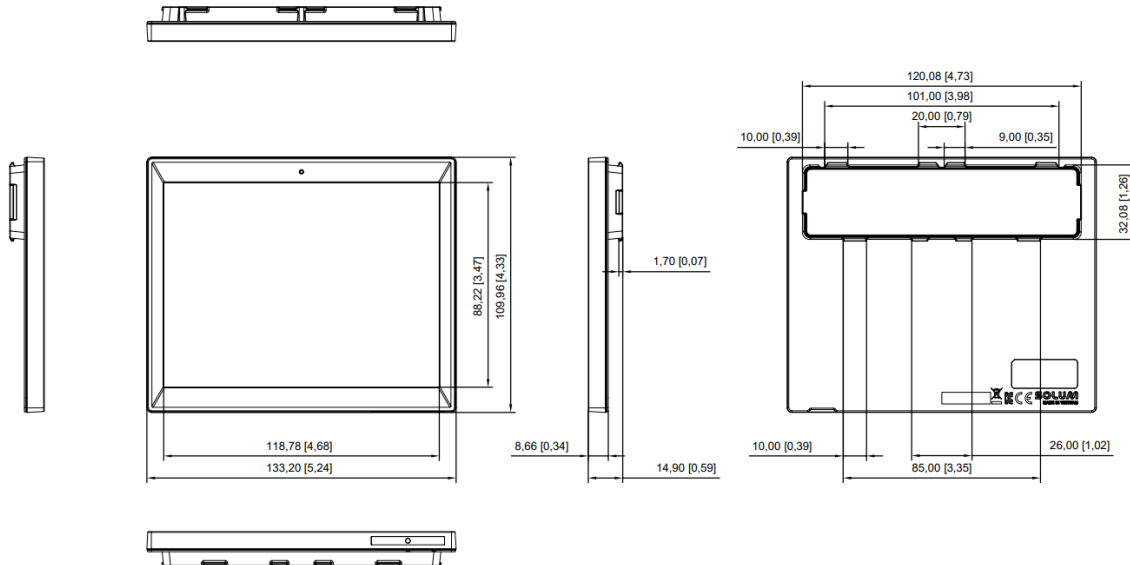


Unit: mm (inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL060F5C4C/WWW<br>W : EL060F5W4C/WWW<br>B : EL060F5B4C/WWW |
| <b>DIMENSION</b>                | 133.20 × 109.96 × 14.85 mm / 5.24 x 4.33 x 0.58 inch           |
| <b>ACTIVE DISPLAY AREA</b>      | 114.9 x 85.79 mm / 4.52 x 3.38 inch                            |
| <b>RESOLUTION (Pixel)</b>       | 600 x 448                                                      |
| <b>PIXEL DENSITY</b>            | 132 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Grey / White / Black / Customizable Colors (Optional)          |
| <b>PIXEL COLORS</b>             | BWR (Black, White, Red)                                        |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 4 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 Update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | CE, RoHS, FCC                                                  |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | Not supported                                                  |
| <b>BUTTON</b>                   | Not supported                                                  |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 6.1 inch

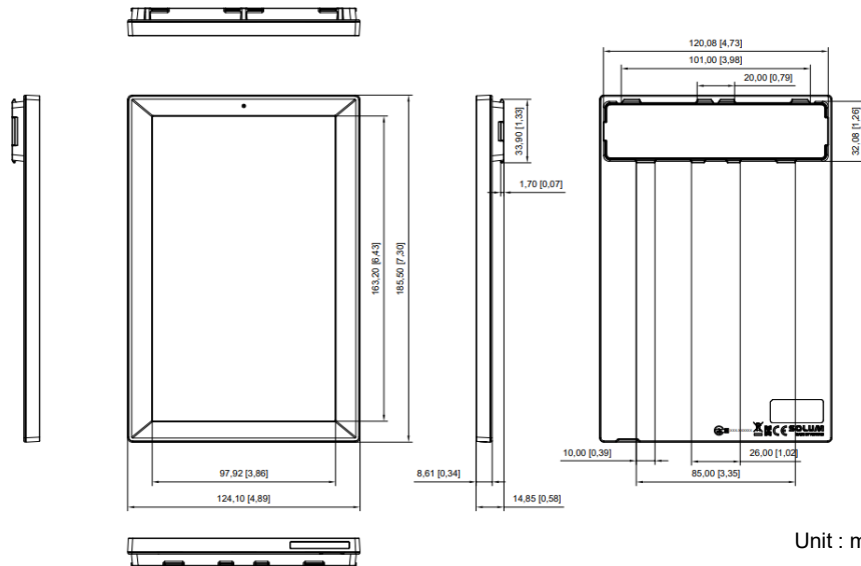


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL061F5C4C/WWW<br>W : EL061F5W4C/WWW<br>B : EL061F5B4C/WWW |
| <b>DIMENSION</b>                | 133.20 × 109.96 × 14.90 mm (5.24 x 4.33 x 0.59 inches)         |
| <b>ACTIVE DISPLAY AREA</b>      | 118.78 x 88.22 mm (4.68 x 3.47 inches)                         |
| <b>RESOLUTION (Pixel)</b>       | 648 x 480                                                      |
| <b>PIXEL DENSITY</b>            | 138 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 4 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 7.5 inch

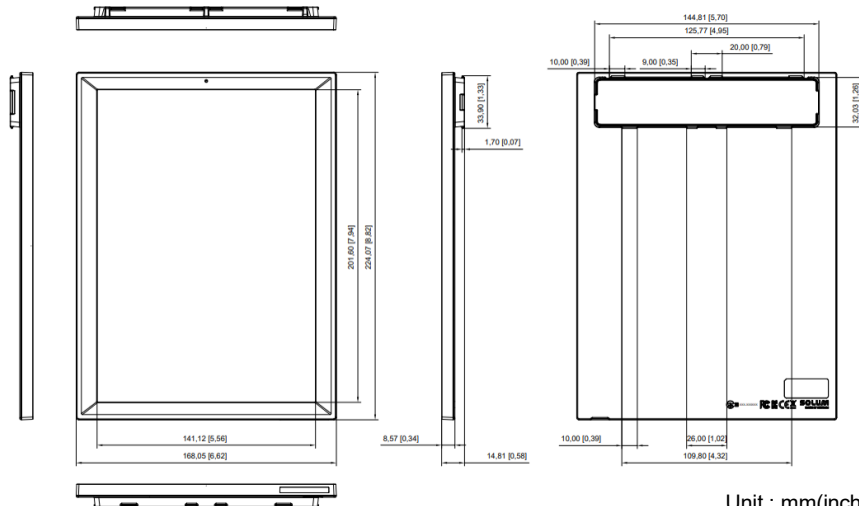


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL075F5C4C/WWW<br>W : EL075F5W4C/WWW<br>B : EL075F5B4C/WWW |
| <b>DIMENSION</b>                | 124.10 x 185.50 x 14.85 mm (4.89 x 7.30 x 0.58 inches)         |
| <b>ACTIVE DISPLAY AREA</b>      | 97.9 x 163.2 mm (3.85 x 6.43 inches)                           |
| <b>RESOLUTION (Pixel)</b>       | 528 x 880                                                      |
| <b>PIXEL DENSITY</b>            | 136 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 x 4 (battery pack)                                      |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 9.7 inch

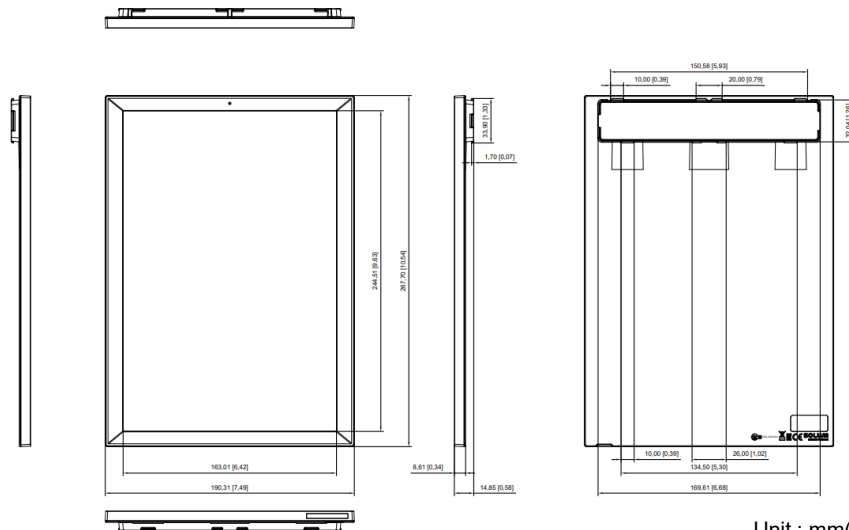


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL097F5C4C/WWW<br>W : EL097F5W4C/WWW<br>B : EL097F5B4C/WWW |
| <b>DIMENSION</b>                | 168.05 x 224.07 x 14.81 mm (6.62 x 8.82 x 0.58 inches)         |
| <b>ACTIVE DISPLAY AREA</b>      | 141.12 x 201.6 mm (5.56 x 7.94 inches)                         |
| <b>RESOLUTION (Pixel)</b>       | 672 x 960                                                      |
| <b>PIXEL DENSITY</b>            | 121 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450× 5ea (battery pack)                                     |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 11.6inch

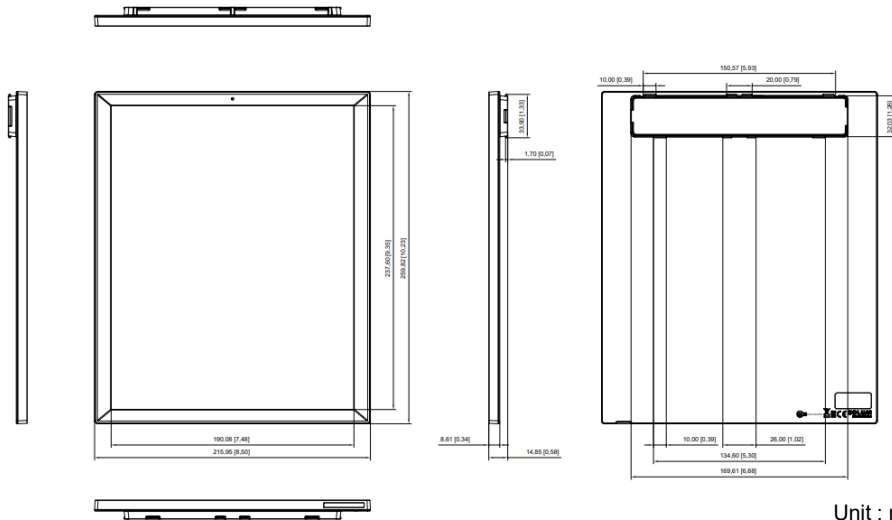


Unit : mm(inch)

|                                 |                                                                |
|---------------------------------|----------------------------------------------------------------|
| <b>MODEL</b>                    | G : EL116F5C4C/WWW<br>W : EL116F5W4C/WWW<br>B : EL116F5B4C/WWW |
| <b>DIMENSION</b>                | 190.31 x 267.70 x 14.85 mm (7.49 x 10.54 x 0.58 inches)        |
| <b>ACTIVE DISPLAY AREA</b>      | 163.0 x 244.5 mm (6.42 x 9.63 inches)                          |
| <b>RESOLUTION (Pixel)</b>       | 640 x 960                                                      |
| <b>PIXEL DENSITY</b>            | 100 dpi                                                        |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                                     |
| <b>BEZEL COLOR</b>              | Gray / white / black, customizable color(optional)             |
| <b>PIXEL COLORS</b>             | BWRY(Black, White, Red, Yellow)                                |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                                    |
| <b>USABLE PAGES</b>             | Up to 7 pages                                                  |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                          |
| <b>BATTERY</b>                  | CR2450 × 5ea (battery pack)                                    |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 update/day)                                  |
| <b>ENCRYPTION</b>               | 128-Bit AES                                                    |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                                   |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                                        |
| <b>WATERPROOF</b>               | N/A                                                            |
| <b>BUTTON</b>                   | N/A                                                            |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)            |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                                        |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                            |

※ This specification May varies depending on the installation environment and user scenario.

# 12.2 inch



Unit : mm(inch)

|                          |                                                         |
|--------------------------|---------------------------------------------------------|
| MODEL                    | G : EL122F5C4C/WWW                                      |
|                          | W : EL122F5W4C/WWW                                      |
|                          | B : EL122F5B4C/WWW                                      |
| DIMENSION                | 215.95 x 259.82 x 14.85 mm (8.50 x 10.23 x 0.58 inches) |
| ACTIVE DISPLAY AREA      | 190.08 x 237.6 mm (7.48 x 9.35 inches)                  |
| RESOLUTION (Pixel)       | 768 x 960                                               |
| PIXEL DENSITY            | 102 dpi                                                 |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                              |
| BEZEL COLOR              | Gray / white / black, customizable color(optional)      |
| PIXEL COLORS             | BWRY(Black, White, Red, Yellow)                         |
| VIEWING ANGLE            | Nearly 180°                                             |
| USABLE PAGES             | Up to 7 pages                                           |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                   |
| BATTERY                  | CR2450 × 6ea (battery pack)                             |
| BATTERY LIFETIME         | Up To 10 years (1 update/day)                           |
| ENCRYPTION               | 128-Bit AES                                             |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                            |
| NFC                      | FeliCa NFC Forum Type 3                                 |
| WATERPROOF               | N/A                                                     |
| BUTTON                   | N/A                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)     |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                                 |
| WIRELESS FIRMWARE UPDATE | Yes                                                     |

※ This specification May varies depending on the installation environment and user scenario.

# Newton

## Pro

### PRODUCT SPEC IFICATION SHEET

26 Jan 2024

**SOLUM**

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## Full Line-Up



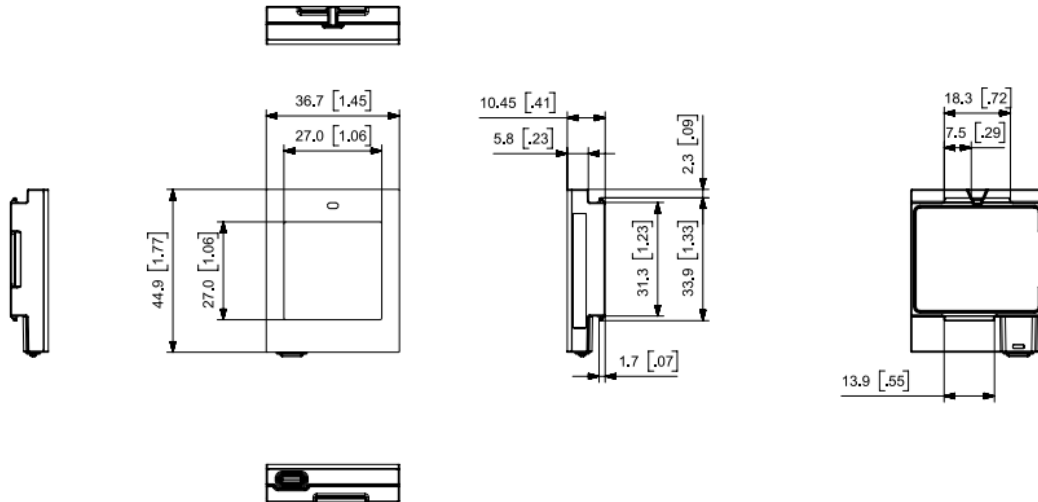
| Product Specification Summary |                                  |                     |                     |                     |                    |                     |                      |                     |                     |                     |                       |                         |                       |                       |                       |                       |
|-------------------------------|----------------------------------|---------------------|---------------------|---------------------|--------------------|---------------------|----------------------|---------------------|---------------------|---------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Model                         | 1.6" (V)                         | 1.6" (H)            | 2.2"                | 2.6"                | 2.7"               | 2.9"                | 3.5"                 | 4.2"                | 4.3"                | 5.8"                | 6.0"                  | 6.1"                    | 7.5"                  | 9.7"                  | 11.6"                 | 12.2"                 |
| Dimension (mm)                | 36.7 x 44.9 x 10.45              | 44.9 x 36.7 x 10.45 | 67.0 x 37.4 x 10.45 | 79.2 x 42.5 x 10.45 | 76.0 x 49.5 x 10.5 | 85.9 x 41.3 x 10.45 | 100.2 x 49.6 x 10.45 | 98.1 x 83.7 x 12.45 | 130.2 x 42.3 x 13.0 | 164.0 x 66.8 x 14.3 | 133.0 x 109.0 x 14.30 | 133.20 x 109.96 x 14.90 | 125.0 x 182.9 x 14.85 | 170.2 x 223.6 x 14.85 | 192.0 x 269.1 x 15.35 | 216.2 x 260.0 x 15.35 |
| Active Area (mm)              | 27.0 x 27.0                      | 27.0 x 27.0         | 48.1 x 26.0         | 60.0 x 30.7         | 57.3 x 38.2        | 67.6 x 29.6         | 81.0 x 38.0          | 84.8 x 63.6         | 105.4 x 30.7        | 139.0 x 47.7        | 114.9 x 85.8          | 118.78 x 88.22          | 97.9 x 163.2          | 141.1 x 201.6         | 163.0 x 244.5         | 190.1 x 237.6         |
| Resolution (Pixel)            | 200 x 200                        | 200 x 200           | 296 x 160           | 360 x 184           | 300 x 200          | 384 x 168           | 384 x 180            | 400 x 300           | 522 x 152           | 792 x 272           | 600 x 448             | 648 x 480               | 480 x 800             | 672 x 960             | 640 x 960             | 768 x 960             |
| Pixel Density                 | 184 dpi                          | 184 dpi             | 156 dpi             | 152 dpi             | 133 dpi            | 144 dpi             | 120 dpi              | 120 dpi             | 125 dpi             | 144 dpi             | 132 dpi               | 138 dpi                 | 126 dpi               | 121 dpi               | 100 dpi               | 103dpi                |
| Pixel Colors                  | BWRY (Black, White, Red, Yellow) |                     |                     |                     |                    |                     |                      |                     |                     |                     |                       |                         |                       |                       |                       |                       |

SPECIFICATION SHEET

| MODEL                         | 1.6" (V)                                                        | 1.6" (H)                                              | 2.2"                                                  | 2.6"                                                  | 2.7"                                                 | 2.9"                                                  |
|-------------------------------|-----------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|
| DIMENSION (mm/inch)           | 36.7 x 44.9 x 10.45 mm<br>(1.45 x 1.77 x 0.41 inches)           | 44.9 x 36.7 x 10.45 mm<br>(1.77 x 1.45 x 0.41 inches) | 67.0 x 37.4 x 10.45 mm<br>(2.64 x 1.47 x 0.41 inches) | 79.2 x 42.5 x 10.45 mm<br>(3.12 x 1.67 x 0.41 inches) | 76.0 x 49.5 x 10.5 mm<br>(2.99 x 1.95 x 0.41 inches) | 85.9 x 41.3 x 10.45 mm<br>(3.38 x 1.62 x 0.41 inches) |
| ACTIVE DISPLAY AREA (mm/inch) | 27.0 x 27.0mm<br>(1.06 x 1.06 inches)                           | 27.0 x 27.0mm<br>(1.06 x 1.06 inches)                 | 48.1 x 26.0mm<br>(1.89 x 1.02 inches)                 | 60.0 x 30.7mm<br>(2.37 x 1.21 inches)                 | 57.3 x 38.2mm<br>(2.25 x 1.50 inches)                | 67.6 x 29.6 mm<br>(2.66 x 1.16 inches)                |
| RESOLUTION (pixels)           | 200 x 200                                                       | 200 x 200                                             | 296 x 160                                             | 360 x 184                                             | 300 x 200                                            | 384 x 168                                             |
| PIXEL DENSITY                 | 184 dpi                                                         | 184 dpi                                               | 156 dpi                                               | 152 dpi                                               | 133 dpi                                              | 144 dpi                                               |
| DISPLAY TECHNOLOGY            | Full Graphic E-Ink Display                                      |                                                       |                                                       |                                                       |                                                      |                                                       |
| PIXEL COLORS                  | BWRY (Black, White, Red, Yellow)                                |                                                       |                                                       |                                                       |                                                      |                                                       |
| VIEWING ANGLE                 | Nearly 180°                                                     |                                                       |                                                       |                                                       |                                                      |                                                       |
| USABLE PAGES                  | Up to 7 pages                                                   |                                                       |                                                       |                                                       |                                                      |                                                       |
| OPERATING TEMPERATURE         | 0 ~ 40° / 32 ~ 104°F                                            |                                                       |                                                       |                                                       |                                                      |                                                       |
| BATTERY LIFETIME              | Up To 5 years (2 Update/day)                                    |                                                       | Up To 10 years (2 Update/day)                         |                                                       |                                                      |                                                       |
| BATTERY                       | CR2450 x 1                                                      |                                                       | CR2450 x 2                                            |                                                       |                                                      |                                                       |
| ENCRYPTION                    | 128-Bit AES                                                     |                                                       |                                                       |                                                       |                                                      |                                                       |
| COMPLIANCE                    | FCC, IC, CE, TELEC, KC, RoHS                                    |                                                       |                                                       |                                                       |                                                      |                                                       |
| NFC                           | FeliCa NFC Forum Type 3                                         |                                                       |                                                       |                                                       |                                                      |                                                       |
| WATERPROOF                    | IP68                                                            |                                                       |                                                       |                                                       |                                                      |                                                       |
| BUTTON                        | 1                                                               |                                                       |                                                       |                                                       |                                                      |                                                       |
| LED                           | 7 Colors (Red / Green / Blue / Yellow / Cyan / Magenta / White) |                                                       |                                                       |                                                       |                                                      |                                                       |
| ESL OPERATING FREQUENCY       | 2.4 Ghz                                                         |                                                       |                                                       |                                                       |                                                      |                                                       |
| WIRELESS FIRMWARE UPDATE      | Yes                                                             |                                                       |                                                       |                                                       |                                                      |                                                       |

※ This specification May varies depending on the installation environment and user scenario.

# 1.6 inch (V)

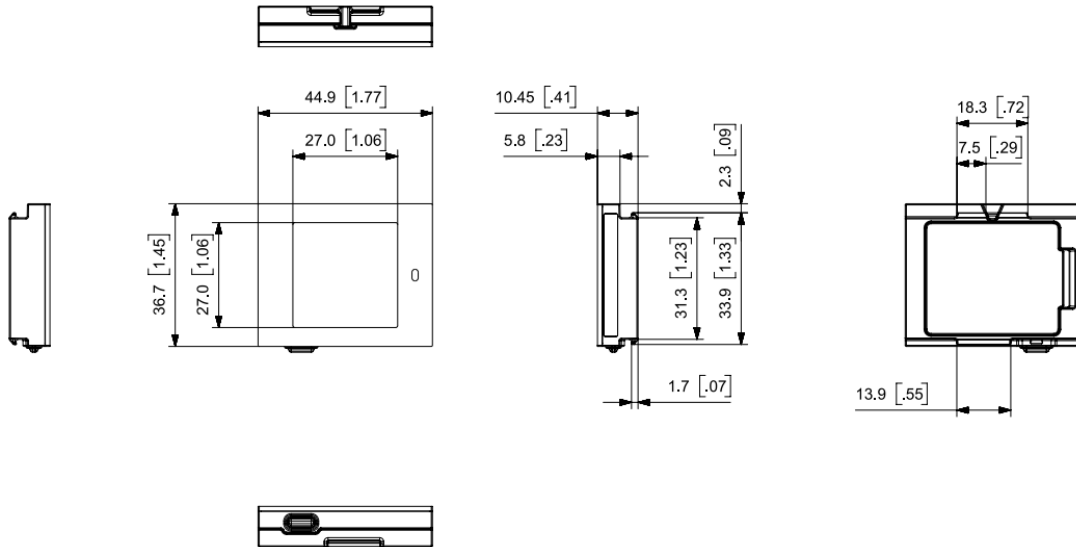


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL016F6W4A/WWW, B : EL016F6B4A/WWW                |
| DIMENSION                | 36.7 x 44.9 x 10.45 mm (1.45 x 1.77 x 0.41 inches)    |
| ACTIVE DISPLAY AREA      | 27.0 x 27.0mm (1.06 x 1.06 inches)                    |
| RESOLUTION (Pixel)       | 200 x 200                                             |
| PIXEL DENSITY            | 184 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 1ea                                          |
| BATTERY LIFETIME         | Up To 5 years (2 Update/day)                          |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 1.6 inch (H)

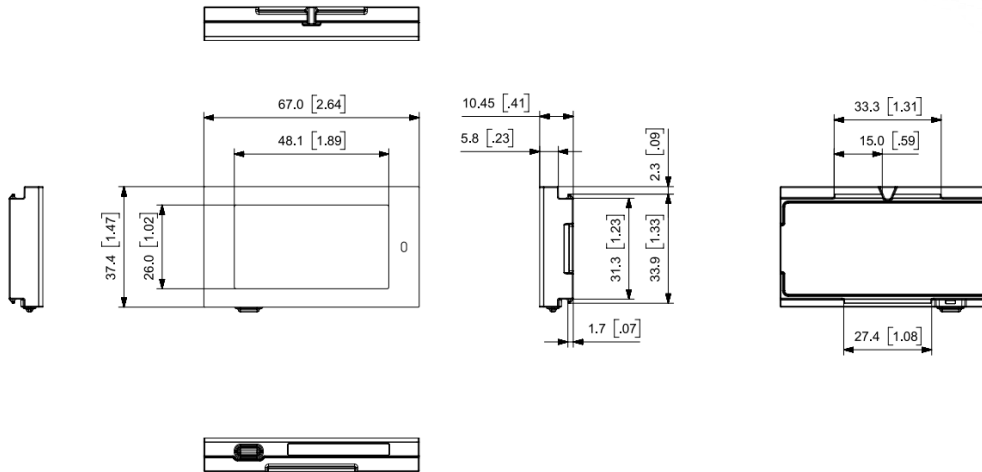


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL016F6W4A/WST, B : EL016F6B4A/WST                |
| DIMENSION                | 44.9 x 36.7 x 10.45 mm (1.77 x 1.45 x 0.41 inches)    |
| ACTIVE DISPLAY AREA      | 27.0 x 27.0mm (1.06 x 1.06 inches)                    |
| RESOLUTION (Pixel)       | 200 x 200                                             |
| PIXEL DENSITY            | 184 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 1ea                                          |
| BATTERY LIFETIME         | Up To 5 years (2 Update/day)                          |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 2.2inch

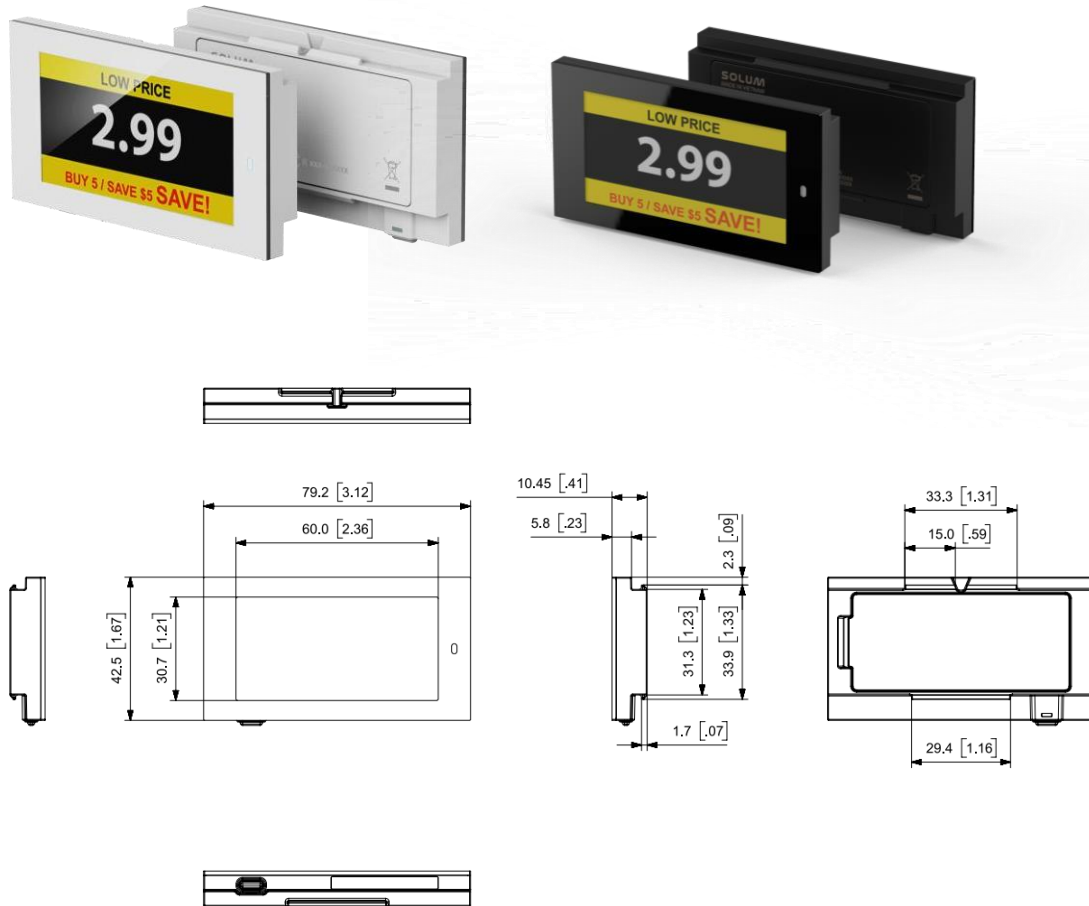


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL022F6W4A/WWW, B : EL022F6B4A/WWW                |
| DIMENSION                | 67.0 x 37.4 x 10.45 mm (2.64 x 1.47 x 0.41 inches)    |
| ACTIVE DISPLAY AREA      | 48.1 x 26.0mm (1.89 x 1.02 inches)                    |
| RESOLUTION (Pixel)       | 296 x 160                                             |
| PIXEL DENSITY            | 156 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 2ea                                          |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 2.6 inch

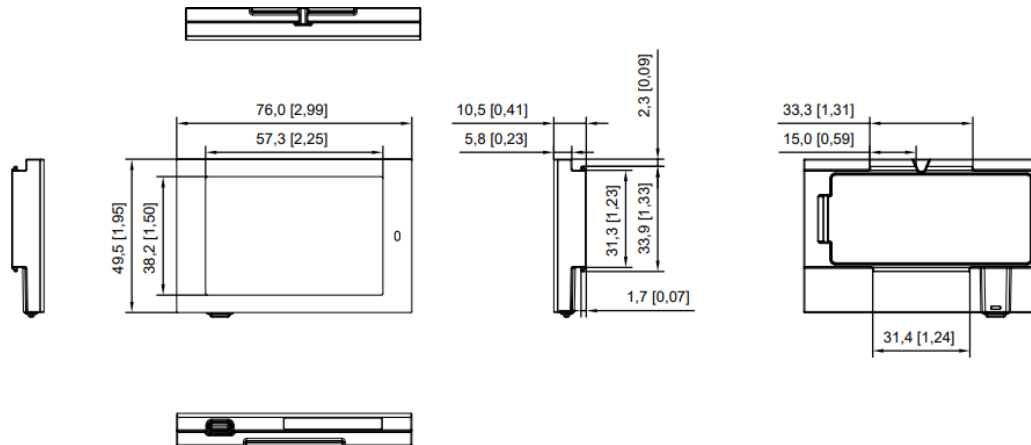


Unit : mm(inch)

|                                 |                                                       |
|---------------------------------|-------------------------------------------------------|
| <b>MODEL</b>                    | W : EL026F6W4A/WWW, B : EL026F6B4A/WWW                |
| <b>DIMENSION</b>                | 79.2 x 42.5 x 10.45 mm (3.12 x 1.67 x 0.41 inches)    |
| <b>ACTIVE DISPLAY AREA</b>      | 60.0 x 30.7mm (2.36 x 1.21 inches)                    |
| <b>RESOLUTION (Pixel)</b>       | 360 x 184                                             |
| <b>PIXEL DENSITY</b>            | 152 dpi                                               |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                            |
| <b>BEZEL COLOR</b>              | Grey / White / Black / Customizable Colors (Optional) |
| <b>PIXEL COLORS</b>             | BWRY (Black, White, Red, Yellow)                      |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                           |
| <b>USABLE PAGES</b>             | Up to 7 pages                                         |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                 |
| <b>BATTERY</b>                  | CR2450 × 2ea                                          |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (2 Update/day)                         |
| <b>ENCRYPTION</b>               | 128-Bit AES                                           |
| <b>COMPLIANCE</b>               | FCC, IC, CE, TELEC, KC, RoHS                          |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                               |
| <b>WATERPROOF</b>               | IP68                                                  |
| <b>BUTTON</b>                   | 1                                                     |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                               |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 2.7 inch

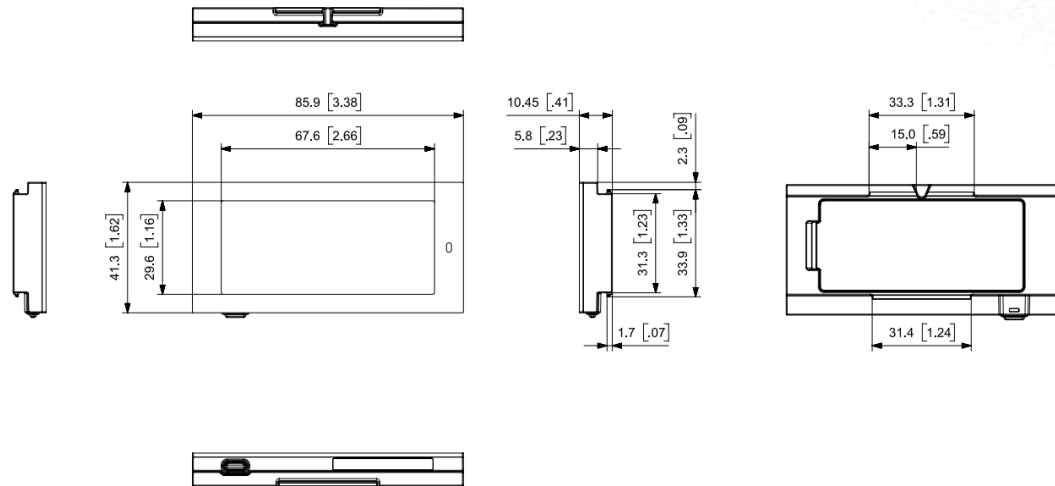


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W: EL027F6W4A/WWW, B: EL027F6B4A/WWW                  |
| DIMENSION                | 76.0 x 49.5 x 10.5 mm (2.99 x 1.95 x 0.41 inches)     |
| ACTIVE DISPLAY AREA      | 57.3 x 38.2mm (2.25 x 1.50 inches)                    |
| RESOLUTION (Pixel)       | 300 x 200                                             |
| PIXEL DENSITY            | 133 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 2ea                                          |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 2.9 inch



Unit : mm(inch)

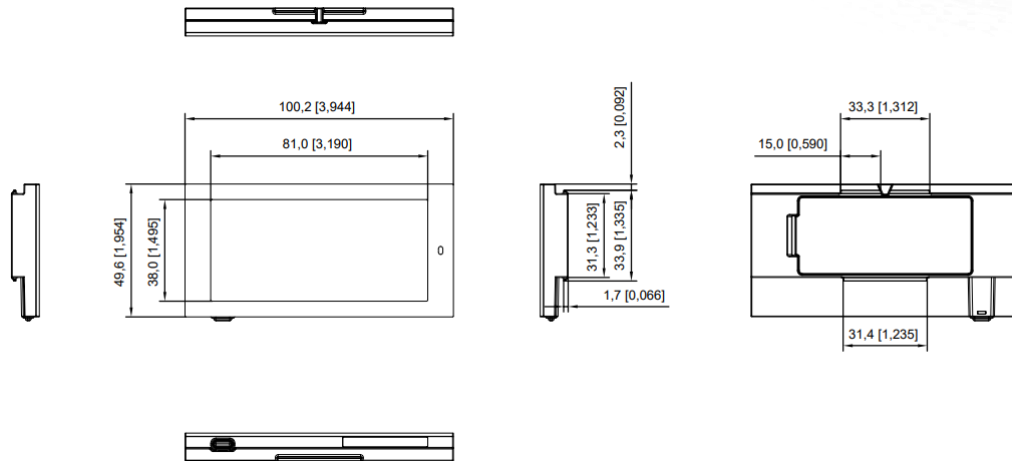
|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL029F6W4A/WWW, B : EL029F6B4A/WWW                |
| DIMENSION                | 85.9 x 41.3 x 10.45 mm (3.38 x 1.62 x 0.41 inches)    |
| ACTIVE DISPLAY AREA      | 67.6 x 29.6 mm (2.66 x 1.16 inches)                   |
| RESOLUTION (Pixel)       | 384 x 168                                             |
| PIXEL DENSITY            | 144 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 2ea                                          |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

SPECIFICATION SHEET

| MODEL                         | 3.5"                                                            | 4.2"                                               | 4.3"                                               | 5.8"                                               | 6.0"                                               | 6.1"                                                   | 7.5"                                                | 9.7"                                                 | 11.6"                                                | 12.2"                                                 |
|-------------------------------|-----------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|
| DIMENSION (mm/inch)           | 100.2 x 49.6 x 10.45 mm (3.94 x 1.95 x 0.41 inches)             | 98.1 x 83.7 x 12.45 mm (3.86 x 3.29 x 0.49 inches) | 130.2 x 42.3 x 13.0 mm (5.13 x 1.67 x 0.51 inches) | 164.0 x 66.8 x 14.3 mm (6.46 x 2.63 x 0.56 inches) | 133.0 x 109.0 x 14.30 mm / 5.23 x 4.29 x 0.56 inch | 133.20 x 109.96 x 14.90 mm (5.24 x 4.33 x 0.58 inches) | 125.0 x 182.9 x 14.85 mm (4.92 x 7.2 x 0.58 inches) | 170.2 x 223.6 x 14.85 mm (6.70 x 8.80 x 0.58 inches) | 192.0 x 269.1 x 15.35 mm (7.50 x 10.6 x 0.60 inches) | 216.2 x 260.0 x 15.35 mm (8.51 x 10.23 x 0.60 inches) |
| ACTIVE DISPLAY AREA (mm/inch) | 81.0 x 38.0 mm (3.19 x 1.50 inches)                             | 84.8 x 63.6mm (3.34 x 2.50 inches)                 | 105.4 x 30.7mm (4.15 x 1.21 inches)                | 139.0 x 47.7 mm (5.47 x 1.88 inches)               | 114.9 x 85.8 mm / 4.52 x 3.38 inch                 | 118.78 x 88.22 mm (4.68 x 3.47 inches)                 | 97.9 x 163.2 mm (3.8 x 6.4 inches)                  | 141.12 x 201.6 mm (5.56 x 7.94 inches)               | 163.0 x 244.5 mm (6.42 x 9.63 inches)                | 190.1 x 237.6 mm (7.48 x 9.35 inches)                 |
| RESOLUTION (pixels)           | 384 x 180                                                       | 400 x 300                                          | 522 x 152                                          | 792 x 272                                          | 600 x 448                                          | 648 x 480                                              | 480 x 800                                           | 672 x 960                                            | 640 x 960                                            | 768 x 960                                             |
| PIXEL DENSITY                 | 120 dpi                                                         | 120 dpi                                            | 125 dpi                                            | 144 dpi                                            | 132 dpi                                            | 138 dpi                                                | 126 dpi                                             | 121 dpi                                              | 100 dpi                                              | 103 dpi                                               |
| DISPLAY TECHNOLOGY            | Full Graphic E-Ink Display                                      |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| PIXEL COLORS                  | BWRY (Black, White, Red, Yellow)                                |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| VIEWING ANGLE                 | Nearly 180°                                                     |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| USABLE PAGES                  | Up to 7 pages                                                   |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| OPERATING TEMPERATURE         | 0 ~ 40° / 32 ~ 104°F                                            |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| BATTERY LIFETIME              | Up To 10 years (2 Update/day)                                   |                                                    |                                                    | Up To 10 years (1 Update/day)                      |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| BATTERY                       | CR2450 x 2                                                      |                                                    | CR2450 x 3 (Battery pack)                          |                                                    | CR2450 x 4 (Battery pack)                          |                                                        |                                                     | CR2450 x 5 (Battery pack)                            |                                                      | CR2450 x 6 (Battery pack)                             |
| ENCRYPTION                    | 128-Bit AES                                                     |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| COMPLIANCE                    | FCC, IC, CE, TELEC, KC, RoHS                                    |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| NFC                           | FeliCa NFC Forum Type 3                                         |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| WATERPROOF                    | IP68                                                            |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| BUTTON                        | 1                                                               |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| LED                           | 7 Colors (Red / Green / Blue / Yellow / Cyan / Magenta / White) |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| ESL OPERATING FREQUENCY       | 2.4 Ghz                                                         |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |
| WIRELESS FIRMWARE UPDATE      | Yes                                                             |                                                    |                                                    |                                                    |                                                    |                                                        |                                                     |                                                      |                                                      |                                                       |

# 3.5 inch

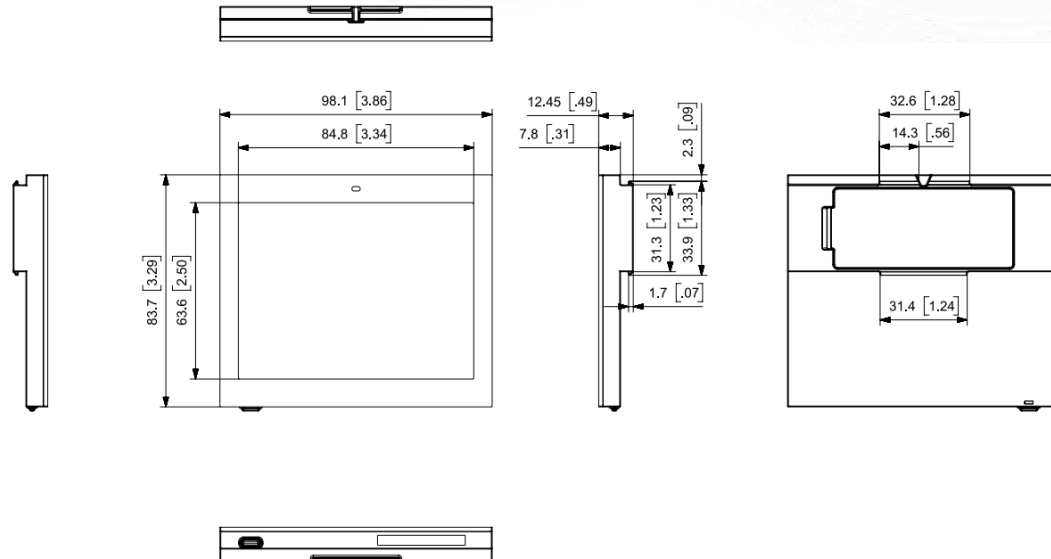


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL035F6W4A/WWW, B : EL035F6B4A/WWW                |
| DIMENSION                | 100.20 x 49.6 x 10.45 mm (3.94 x 1.95 x 0.41 inches)  |
| ACTIVE DISPLAY AREA      | 81.0 x 38.0 mm (3.19 x 1.50 inches)                   |
| RESOLUTION (Pixel)       | 384 x 180                                             |
| PIXEL DENSITY            | 120 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 2ea                                          |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 4.2 inch

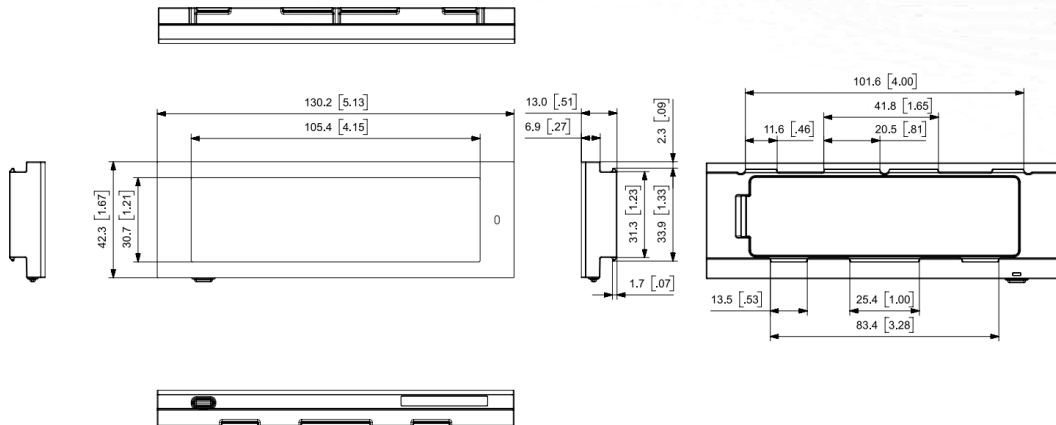


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL042F6W4A/WWW, B : EL042F6B4A/WWW                |
| DIMENSION                | 98.1 x 83.7 x 12.45 mm (3.86 x 3.29 x 0.49 inches)    |
| ACTIVE DISPLAY AREA      | 84.8 x 63.6mm (3.34 x 2.50 inches)                    |
| RESOLUTION (Pixel)       | 400 x 300                                             |
| PIXEL DENSITY            | 120 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 2ea                                          |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 4.3 inch

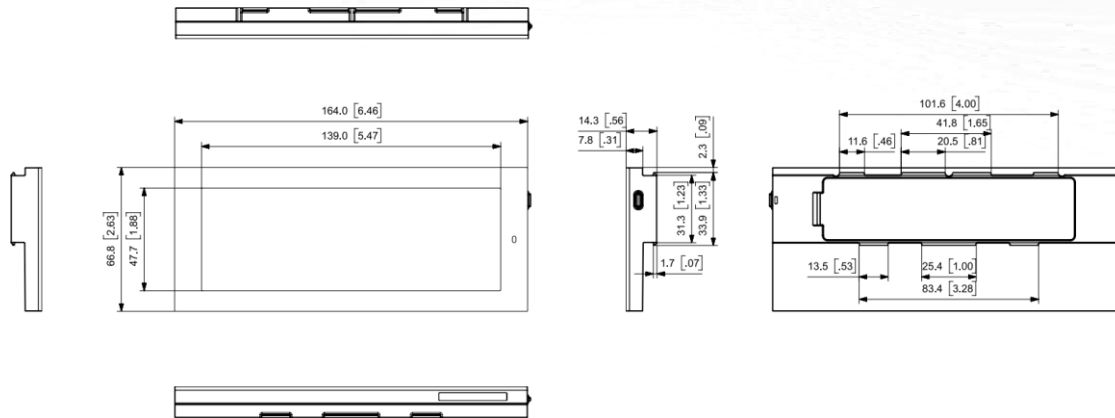


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL043F6W4A/WWW, B : EL043F6B4A/WWW                |
| DIMENSION                | 130.2 x 42.3 x 13.0 mm (5.13 x 1.67 x 0.51 inches)    |
| ACTIVE DISPLAY AREA      | 105.4 x 30.7mm (4.15 x 1.21 inches)                   |
| RESOLUTION (Pixel)       | 522 x 152                                             |
| PIXEL DENSITY            | 125 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450× 3ea (Battery pack)                            |
| BATTERY LIFETIME         | Up To 10 years (2 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 5.8 inch

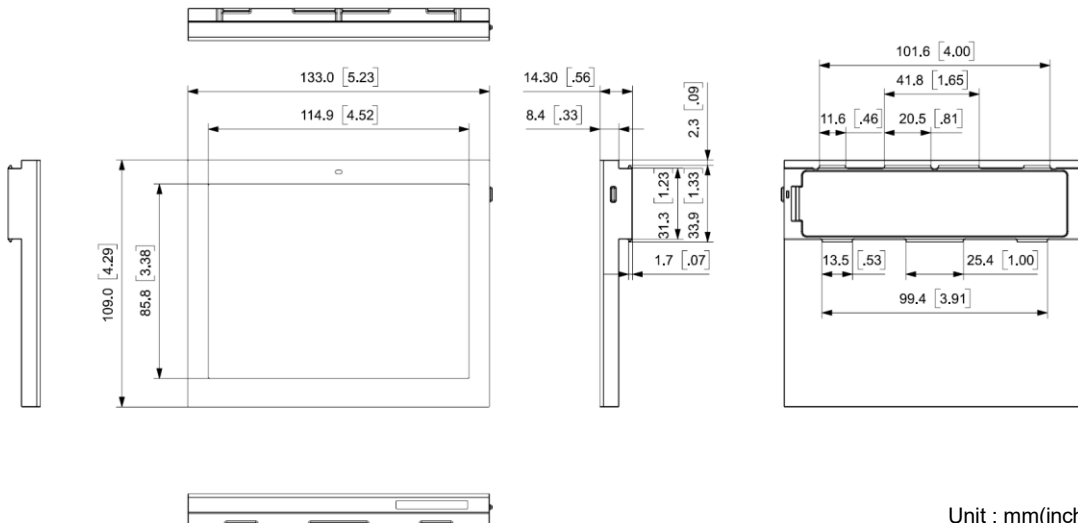


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL058F6W4A/WWW, B : EL058F6B4A/WWW                |
| DIMENSION                | 164.0 x 66.8 x 14.3 (6.46 x 2.63 x 0.56 inches)       |
| ACTIVE DISPLAY AREA      | 139.0 x 47.7 (5.47 x 1.88 inches)                     |
| RESOLUTION (Pixel)       | 792 x 272                                             |
| PIXEL DENSITY            | 145 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450× 3ea (Battery pack)                            |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 6.0 inch

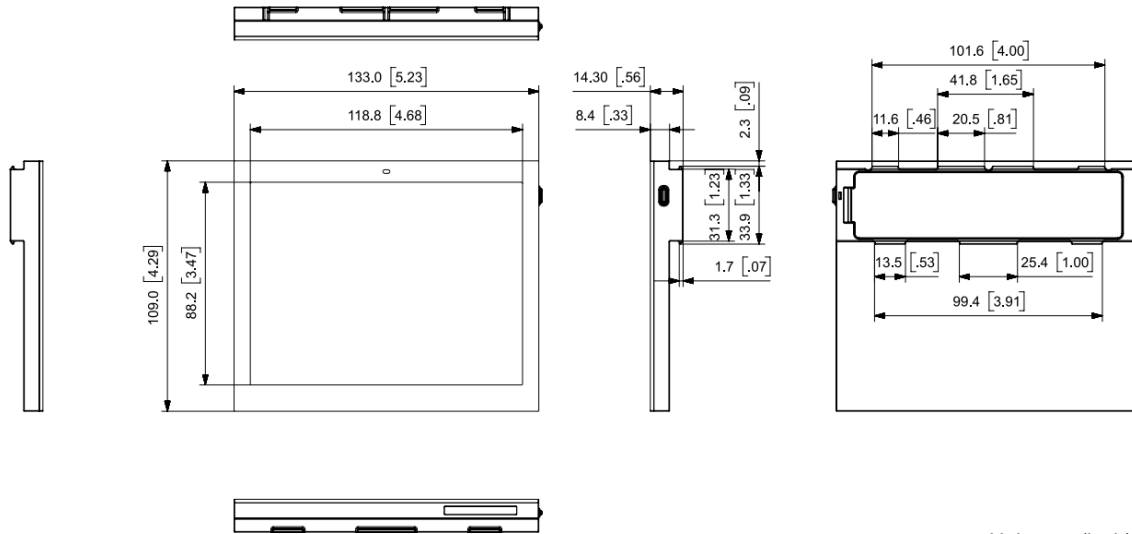


Unit : mm(inch)

|                                 |                                                       |
|---------------------------------|-------------------------------------------------------|
| <b>MODEL</b>                    | W : EL060F6W4A/WWW, B : EL060F6B4A/WWW                |
| <b>DIMENSION</b>                | 133.0 x 109.0 x 14.30 mm / 5.23 x 4.29 x 0.56 inch    |
| <b>ACTIVE DISPLAY AREA</b>      | 114.9 x 85.8 mm / 4.52 x 3.38 inch                    |
| <b>RESOLUTION (Pixel)</b>       | 600 x 448                                             |
| <b>PIXEL DENSITY</b>            | 132 dpi                                               |
| <b>DISPLAY TECHNOLOGY</b>       | Full Graphic E-ink Display                            |
| <b>BEZEL COLOR</b>              | Grey / White / Black / Customizable Colors (Optional) |
| <b>PIXEL COLORS</b>             | BWRY (Black, White, Red, Yellow)                      |
| <b>VIEWING ANGLE</b>            | Nearly 180°                                           |
| <b>USABLE PAGES</b>             | Up to 7 pages                                         |
| <b>OPERATING TEMPERATURE</b>    | 0 ~ 40°C (32 ~ 104°F)                                 |
| <b>BATTERY</b>                  | CR2450 x 4ea (Battery pack)                           |
| <b>BATTERY LIFETIME</b>         | Up To 10 years (1 Update/day)                         |
| <b>ENCRYPTION</b>               | 128-Bit AES                                           |
| <b>COMPLIANCE</b>               | CE, RoHS, FCC                                         |
| <b>NFC</b>                      | FeliCa NFC Forum Type 3                               |
| <b>WATERPROOF</b>               | IP68                                                  |
| <b>BUTTON</b>                   | 1                                                     |
| <b>LED</b>                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| <b>ESL OPERATING FREQUENCY</b>  | 2.4 Ghz                                               |
| <b>WIRELESS FIRMWARE UPDATE</b> | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 6.1 inch



Unit : mm(inch)

|                          |                                                        |
|--------------------------|--------------------------------------------------------|
| MODEL                    | W: EL061F6W4A/WWW, B: EL061F6B4A/WWW                   |
| DIMENSION                | 133.20 × 109.96 × 14.90 mm (5.24 x 4.33 x 0.58 inches) |
| ACTIVE DISPLAY AREA      | 118.8 × 88.2 mm (4.68 x 3.47 inches)                   |
| RESOLUTION (Pixel)       | 648 x 480                                              |
| PIXEL DENSITY            | 138 dpi                                                |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                             |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional)  |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                       |
| VIEWING ANGLE            | Nearly 180°                                            |
| USABLE PAGES             | Up to 7 pages                                          |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                  |
| BATTERY                  | CR2450 × 4ea (Battery pack)                            |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                          |
| ENCRYPTION               | 128-Bit AES                                            |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                           |
| NFC                      | FeliCa NFC Forum Type 3                                |
| WATERPROOF               | IP68                                                   |
| BUTTON                   | 1                                                      |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)    |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                                |
| WIRELESS FIRMWARE UPDATE | Yes                                                    |

※ This specification May varies depending on the installation environment and user scenario.

# 7.5 inch

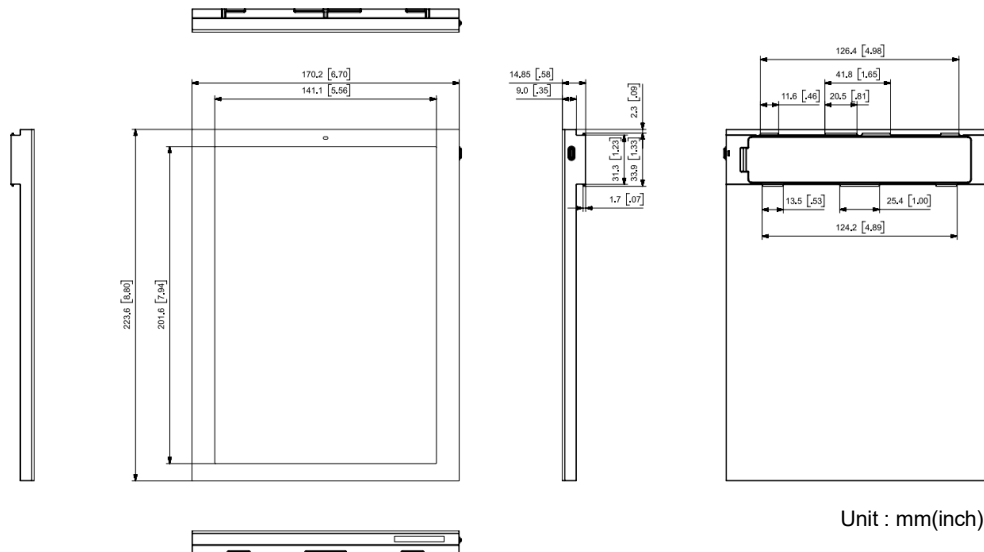


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL075F6W4A/WWW, B : EL075F6B4A/WWW                |
| DIMENSION                | 125.0 x 182.9 x 14.85 mm (4.92 x 7.2 x 0.58 inches)   |
| ACTIVE DISPLAY AREA      | 97.9 x 163.2 mm (3.86 x 6.43 inches)                  |
| RESOLUTION (Pixel)       | 480 x 800                                             |
| PIXEL DENSITY            | 126 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450× 4ea (Battery pack)                            |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

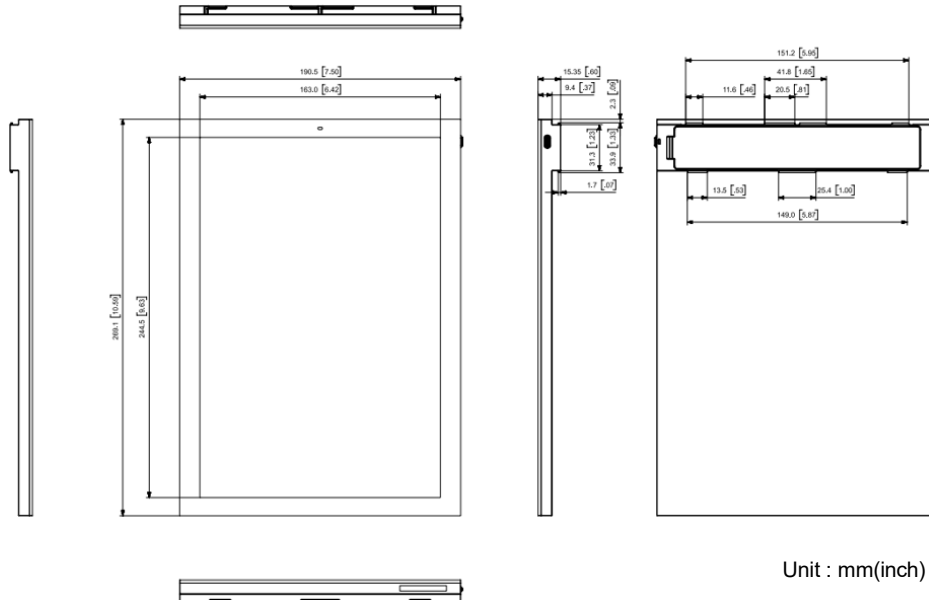
# 9.7 inch



|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL097F6W4A/WWW, B : EL097F6B4A/WWW                |
| DIMENSION                | 170.2 x 223.6 x 14.85 mm (6.70 x 8.80 x 0.58 inches)  |
| ACTIVE DISPLAY AREA      | 141.1 x 201.6 mm (5.56 x 7.94 inches)                 |
| RESOLUTION (Pixel)       | 672 x 960                                             |
| PIXEL DENSITY            | 121 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 5ea (Battery pack)                           |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 11.6 inch

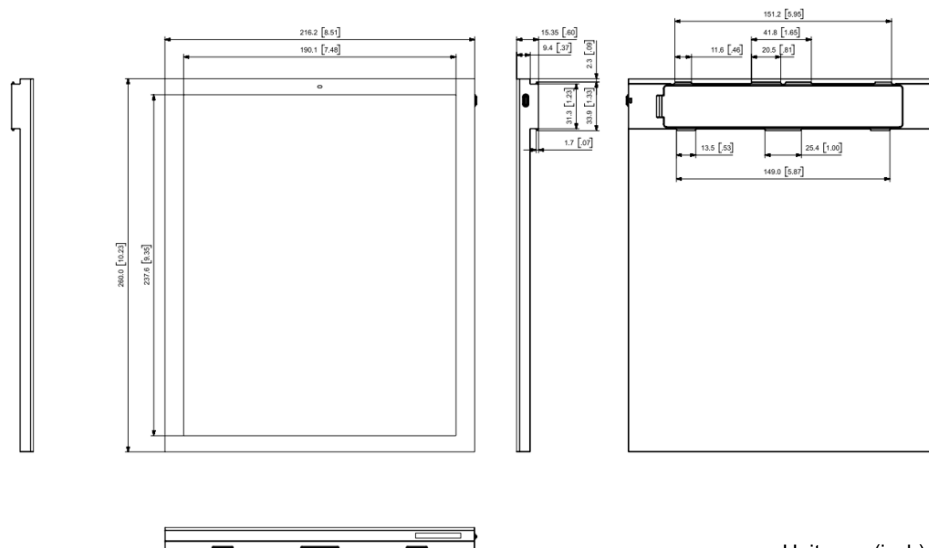


Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL116F6W4A/WWW, B : EL116F6B4A/WWW                |
| DIMENSION                | 192.0 x 269.1 x 15.35 mm (7.50 x 10.6 x 0.60 inches)  |
| ACTIVE DISPLAY AREA      | 163.0 x 244.5 mm (6.42 x 9.63 inches)                 |
| RESOLUTION (Pixel)       | 640 x 960                                             |
| PIXEL DENSITY            | 100 dpi                                               |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450× 5ea (Battery pack)                            |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# 12.2inch



Unit : mm(inch)

|                          |                                                       |
|--------------------------|-------------------------------------------------------|
| MODEL                    | W : EL122F6W4A/WWW, B : EL122F6B4A/WWW                |
| DIMENSION                | 216.2 x 260.0 x 15.35 mm (8.51 x 10.23 x 0.60 inches) |
| ACTIVE DISPLAY AREA      | 190.1 x 237.6 mm (7.48 x 9.35 inches)                 |
| RESOLUTION (Pixel)       | 768 x 960                                             |
| PIXEL DENSITY            | 103dpi                                                |
| DISPLAY TECHNOLOGY       | Full Graphic E-ink Display                            |
| BEZEL COLOR              | Grey / White / Black / Customizable Colors (Optional) |
| PIXEL COLORS             | BWRY (Black, White, Red, Yellow)                      |
| VIEWING ANGLE            | Nearly 180°                                           |
| USABLE PAGES             | Up to 7 pages                                         |
| OPERATING TEMPERATURE    | 0 ~ 40°C (32 ~ 104°F)                                 |
| BATTERY                  | CR2450 × 6ea (Battery pack)                           |
| BATTERY LIFETIME         | Up To 10 years (1 Update/day)                         |
| ENCRYPTION               | 128-Bit AES                                           |
| COMPLIANCE               | FCC, IC, CE, TELEC, KC, RoHS                          |
| NFC                      | FeliCa NFC Forum Type 3                               |
| WATERPROOF               | IP68                                                  |
| BUTTON                   | 1                                                     |
| LED                      | 7 Colors (Red/Green/Blue/Yellow/Cyan/Magenta/White)   |
| ESL OPERATING FREQUENCY  | 2.4 Ghz                                               |
| WIRELESS FIRMWARE UPDATE | Yes                                                   |

※ This specification May varies depending on the installation environment and user scenario.

# REFERENCIAS





**BOSCH**



**MAGNA**



**FALCONERI**



**SAMSUNG**

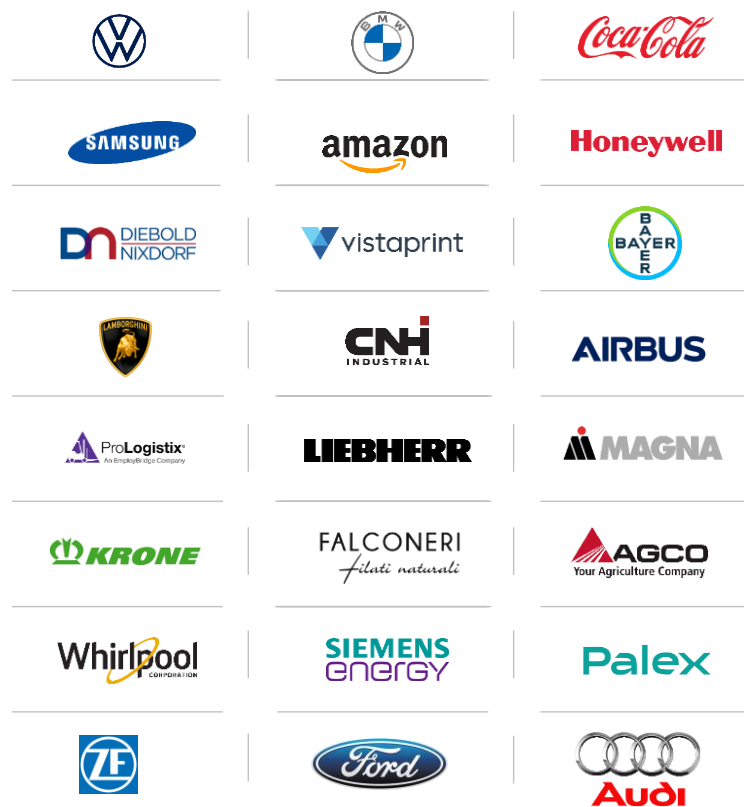
**faurecia**



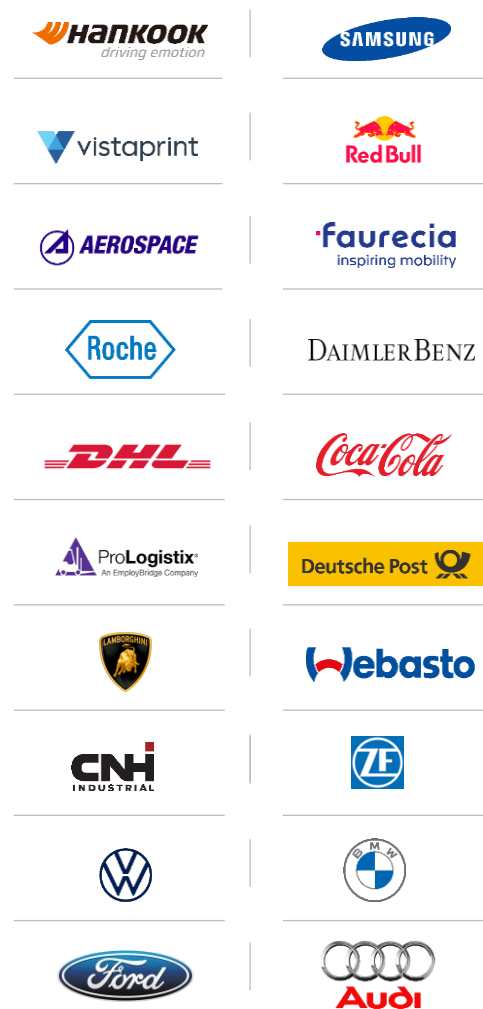
*Coca-Cola*

- In 2017, SOLUM introduced the **first Button and LED featured ESL for industrial market** (manufacturing, warehouse, logistics etc) which gives bi-directional user interaction with shelf and worker. Newton with x10 time faster speed, geo-location and its security feature give more possibilities for industrial use cases.
- Global car manufacturers such as VW group, BMW and leaders in other industrial sectors such as Coca-cola and SAMSUNG chose SOLUM ESL thanks to its performance, various features and reliability. They are already improving their operational efficiency and achieving their digital transformation using SOLUM ESL.

WAREHOUSE MANAGEMENT



MANUFACTURING PROCESS



SMART ORDERING



LBS

