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solutions catalogue

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2013
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Microsoft
Windows CE

ELECTRONIC ASSEMBLY is the Germany based company focusing on development and production of displays with built-in intelligence. All displays from Electronic Assembly have a serial interface and are in general very user-friendly, according to their slogan – "Displays designed to make things easy".

ELECTRONIC ASSEMBLY je německá společnost, která se zaměřuje na vývoj a výrobu displejů s vestavěnými inteligentními technologiemi. Všechny displeje od Electronic Assembly mají sériové rozhraní a jsou obecně velmi uživatelsky přívětivé, podle sloganu společnosti - "Displeje, které jsou navrženy pro usnadnění věcí".

ELECTRONIC ASSEMBLY ist ein deutsches Unternehmen, welches sich auf die Entwicklung und Produktion von Displays mit integrierten intelligenten Technologien spezialisiert. Sämtliche Displays von Electronic Assembly verfügen über eine serielle Schnittstelle und sind generell sehr benutzerfreundlich, gemäß dem Unternehmensmotto – „Displays, die dazu entworfen sind, um die Dinge einfacher zu machen".

Az német ELECTRONIC ASSEMBLY cég beépített intelligenciával rendelkező kijelzők fejlesztésével és gyártásával foglalkozik. Az Electronic Assembly minden kijelzője rendelkezik soros interfésszel és általában nagyon felhasználóbarát, mint ahogyan azt jelmondatuk is sugallja – „Kijelzők egyszerűségre tervezve".

ELECTRONIC ASSEMBLY to spółka niemiecka, koncentrująca się na rozwoju i produkcji wyświetlaczy z wbudowaną inteligencją. Wszystkie wyświetlacze od Electronic Assembly posiadają złącze szeregowe i są ogólnie bardzo przyjazne dla użytkownika, zgodnie z ich hasłem – "Wyświetlacze zaprojektowane by robić rzeczy prostymi".

ELECTRONIC ASSEMBY este o societate cu sediul în Germania specializată în dezvoltarea şi producţia de afişaje cu inteligenţă integrată. Toate afişajele de la Electronic Assembly sunt echipate cu o interfaţă serială şi extrem de familiară utilizatorului – conform sloganului lor „Afişaje făcute să simplifice lucrurile".

ELECTRONIC ASSEMBLY je nemecká spoločnosť, ktorá sa zameriava na vývoj a výrobu displejov so vstavanými inteligentnými technológiami. Všetky displeje od Electronic Assembly majú sériové rozhranie a sú všeobecne veľmi užívateľsky prívetivé, podľa slogan spoločnosti - " Displeje, ktoré sú navrhnuté pre uľahčenie vecí".

Electronic Assembly markets a broad spectrum of top-quality industrial displays to customers in a number of industries ranging from process automation and machinery manufacturing to IT. Because Electronic Assembly offers all the familiar advantages of a mid size company, it has the flexibility to accommodate the wide-ranging needs of its customers.

Electronic assembly provides free-to-download SW development tools. In a production range we can find world unique real 3,3V displays, modules with user-selectable backlight as well as intelligent graphic displays with powerful drawing and other graphic functions.

? Why ELECTRONIC ASSEMBLY?

- no time-consuming graphics programming at a low level
- drastically reduced time-to-market
- high flexibility thanks to powerful commands and a variety of interfaces (RS-232, I2C, SPI)
- extremely compact design
- price advantage compared to customized solutions

eDIP

The first intelligent graphic displays:
- 128x64, 160x104, 240x128, 320x240 dots monochrome

no time-consuming graphics programming, powerful commands and a variety of interfaces (RS-232, I₂C, SPI), extremely compact construction, clear price advantage compared to individualized solutions

eDIP TFT

TFT display with 7", 4.3" and 3.2", which are immediately running and it provides from the first minute the full functionality. The display does require a single supply 5V= and an interface RS-232, I2C or SPI only.

All character sets and control /graphic functions for the display and the touch panel are immediately available.

DIP

Because of their design, DIP modules are extremely compact: there is no PCB overhang, no drilled holes for assembly and no contact pads for connectors or cables. The viewing area is optimally sized and the large font makes reading easier.

DIP modules are simply inserted in the PCB and soldered in place. No screws, distance sleeves or cables are required

Series are compatible both in terms of pins and dimensions. It is therefore a simple matter to use both a text display (e.g. 2 x 16) and a graphics display (e.g. 122 x 32) within a series without the need for any mechanical or hardware modifications.

KIT

The EA KITfamily graphics kits are a fully assembled control and operating units with a variety of integrated functions. As well as offering excellent super-twist contrast, the compact display can be put into operation immediately. It is controlled via the standard RS-232 or RS-422 interface. In addition to complete graphics routines for display output, the graphics kit also contains a wide variety of fonts.

DOG

This new display series was specially developed for low-power hand-held applications. For the first time it is possible to operate a standard display at 3.3V
- 128x64 large 3.0..3.3V, SPI
- 132x32 large 2.4..3.3V, SPI
- 102x64 dots running from 2.5V with SPI
- 160x104 dots with SPI and I2C bus
- flat at 2.0(2.8) mm without backlighting and 5.8(6.4) mm with backlighting
- can be soldered directly into the PCB without any further assembly
- 4-bit, 8-bit and SPI interface
- many different designs which can be implemented as of 1 unit

Six different colors are available as backlighting.

OLED

In our offer we have alphanumerical displays series EAW from Electronic Assembly. They provide a contrast ratio of minimum 2000:1, thanks to their real black background and active technology.

ELECTRONIC ASSEMBLY GmbH
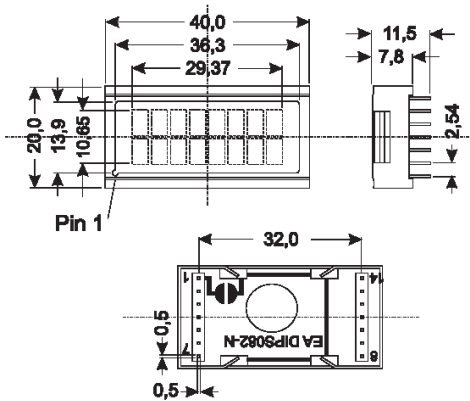
EA DIP Alphanumeric Modules

Because of their unique design, DIP modules are extremely compact: there is no PCB overhang, no drilled holes for assembly and no contact pads for connectors or cables. The viewing area is optimally sized and the large font makes reading easier. DIP modules are simply inserted in the PCB and soldered in place. No screws, distance sleeves or cables are required.

The displays forming and series are compatible both in terms of pins and dimensions. It is therefore and simple matter to use both and text display (e.g. 2 x 16) and and graphics display (e.g. 122 x 32) within and series without the need for any mechanical or hardware modifications.

2x8 Characters

Alphanumeric LCD Modules
2x8 characters
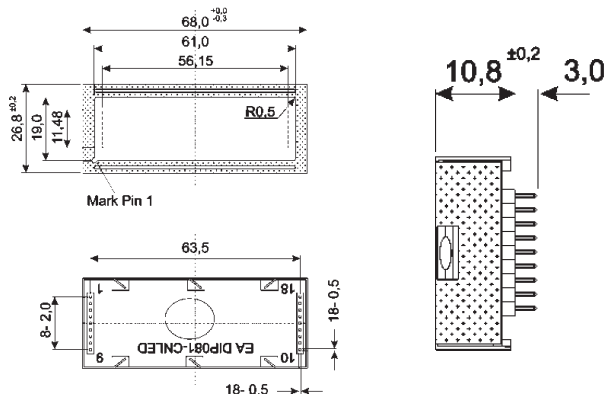yellow-green LED backlight (besides EA DIPS082-HN)

Type	Module Size (mm)	Viewing Area (mm)	Character or Dot size (mm)	Temperature Range
EA DIPS082-HN	40x20x8	36x14	5,55x2,95	-20°C to +70°C
EA DIPS082-HNLED	40x20x11	36x14	5,55x2,95	-20°C to +70°C

4x20 Characters

Alphanumeric LCD Modules
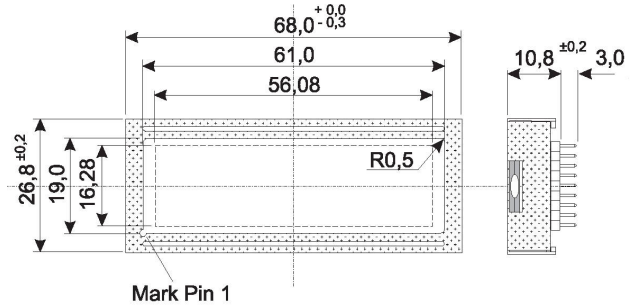4x20 characters DIP204B4NLW is blue with white backlight, other models are with yellow-green LED backlight.

Type	Module Size (mm)	Viewing Area (mm)	Character or Dot Size (mm)	Temperature Range
EA DIP204-4NLED	68x27x11	61x19	3,72x2,31	0°C to +50°C
EA DIP204B-4NLW	75x27x11	61x19	3,72x2,31	-20°C to +70°C

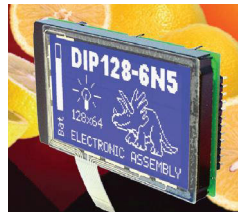## EA DIP Graphic Modules

122x32 Dots

LCD Graphic Modules with 122x32 dots. Model EA DIPB-5NLW is with blue-white backlight, other models are with yellow-green or amber LED backlight.
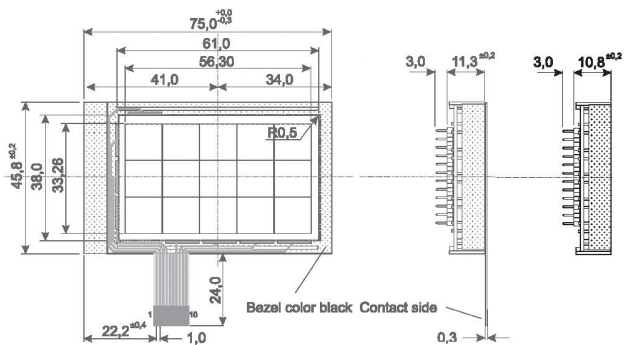
Type	Module Size (mm)	Viewing Area (mm)	Character or Dot Size (mm)	Temperature Range
EA DIP122-5HNLED	68x27	61x19	0,47x0,42	-20°C to +70°
EA DIP122B-5NLW	75x27	61x19	0,47x0,42	-20°C to +70°
EA DIP122J-5NLA	75x27	61x19	0,47x0,42	-20°C to +70°

128x64 Dots

LCD Graphic Modules with 128x64 dots. Model EA DIP128J-6N5LWTP is with black-white backlight, other models are with blue-white LED backlight.
Temperature range: -20°C to 70°C
Note: Touch panel, 5x3 buttons for TP models.

Type	Module Size (mm)	Viewing Area (mm)	Character or Dot Size (mm)
EA DIP128-6N5LWTP	75,0x45,8x11,3	61x36	0,50x0,42
EA DIP128J-6N5LWTP	75,0x45,8x11,3	61x36	0,50x0,42
EA DIP128J-6N5LETP	75,0x45,8x11,3	61x36	0,50x0,42
EA DIP128J-6N5LATP	75,0x45,8x11,3	61x36	0,50x0,42

Optocouplers and Optosensors   LED Diodes and Displays   LCD, TFT, OLED Displays and Modules   Electroacoustic Components

EA eDIP Modules

Serial graphic displays with built-in Intelligence. Efficient operation with extensive drawing functions and fonts.
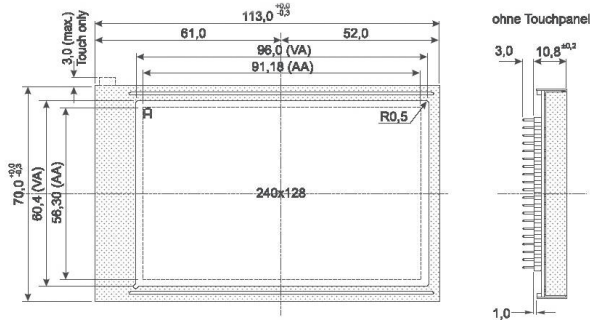
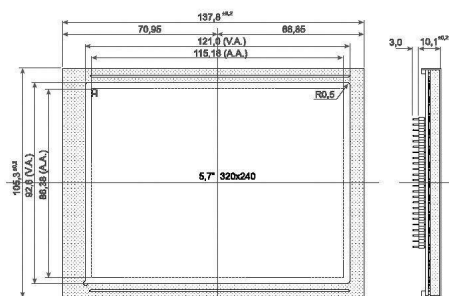| Type	Module Size (mm)	Colour	Backlight	Temperature range
EAeDIP240J-7LWTP	113x70	FSTN, positive	LED, white	-20°C to +70°
EA eDIP240B-7LW	113x70	blue, negative	LED, white	-20°C to +70°
EA eDIP240J-7LW	113x70	FSTN, positive	LED, white	-20°C to +70°
EA eDIP240J-7LA	113x70	FSTN, positive	LED, orange	-20°C to +70°
EA eDIP240J-7LATP	113x70	FSTN, positive	LED, orange	-20°C to +70°

Development kits are available for every display module.

320x240 Dots

Type	Module Size (mm)	Colour	Backlight	Temperature Range
EA eDIP320B-8LW	138x105	blue, negative	LED, white	-20°C to +70°
EA eDIP320B-8LWTP	138x105	blue, negative	LED, white	-20°C to +70°

EA eDIP TFT Modules

Serial TFT graphic displays with built-in Intelligence. Efficient operation with extensive drawing functions and fonts. RS232, I2C, SPI interfaces.

NEW!

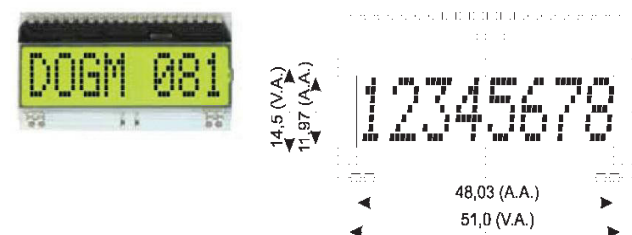| Type	Module Size (mm)	Backlight	Temperature Range	Note
EA eDIPTFT32-A	82x61x12	LED, white	-20°C to +70°	
EA eDIPTFT43-ATP	107x71	LED, white	-20°C to +70°	touch panel
EA eDIPTFT70-A	170x112x14	LED, white	-20°C to +70°	

Also available black anodized aluminium bezels.

EA DOG Alphanumerical Modules

With its EA DOG series, ELECTRONIC ASSEMBLY presents the world's first display series which will run on 3.3 V systems without auxiliary power. They can, of course be used on traditional 5 V systems. Unlike normal LCD modules, you order the display and the corresponding backlight separately. This gives you a wealth of possible combinations. Designed for compact hand-held devices, this modern LCD range provides a number of real benefits with or without backlight:
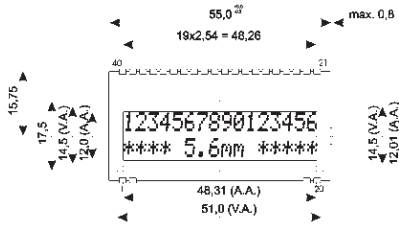
- extremely compact at 55 x 31 mm at the standard font size of 5.57 mm (2 x 16)
- ultra-flat at 2.0 mm without backlight or 5.8 mm including LED backlight
- 4-bit, 8-bit and SPI interface (4-wire)
- typical power consumption of only 250µA in full operation (LED white backlight as of 3mA)
- easy installation by simply soldering into the board
- A whole range of design variants (63) can be supplied as of single units
- Changing background color

1x8 Characters

Type	Module Size (mm)	Viewing Area (mm)	Character or Dot size (mm)	Temperature Range
EA DIPS082-HN	40x20x8	36x14	5,55x2,95	-20°C to +70°C
EA DIPS082-HNLED	40x20x11	36x14	5,55x2,95	-20°C to +70°C

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web search keywords:
electronic assembly • eaedip • eadip

ELECTRONIC ASSEMBLY

2x16 Characters

| Type	Technology
EA DOGM162B-A	STN negative blue transmissive
EA DOGM162E-A	STN positive yellow/green transmissive
EA DOGM162L-A	STN positive yellow/green reflective
EA DOGM162S-A	FSTN negative black transmissive
EA DOGM162W-A	FSTN positive transflective

3x16 Characters
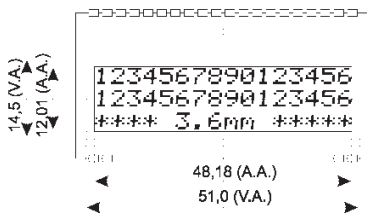
| Type	Technology
EA DOGM163B-A	STN negative blue transmissive
EA DOGM163E-A	STN positive yellow/green transmissive
EA DOGM163L-A	STN positive yellow/green reflective
EA DOGM163S-A	FSTN negative black transmissive
EA DOGM163W-A	FSTN positive transflective

EA DOG Graphic Modules

102x64 Dots

NEW!
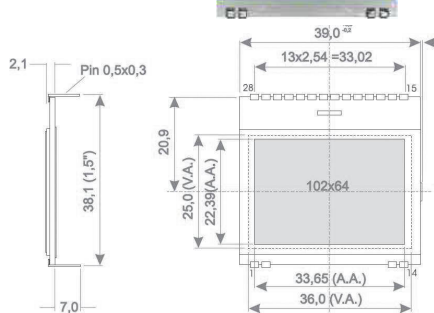
Type	Module Size (mm)	Type and colour
EA DOGS102B-6	39x38	Blue Negative Transmissive
EADOGS102N-6	39x38	White Possitive Reflective
EADOGS102W-6	39x38	White Possitive Transmissive

128x64 Dots
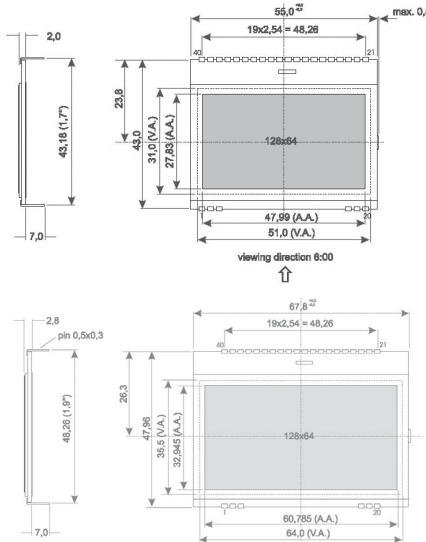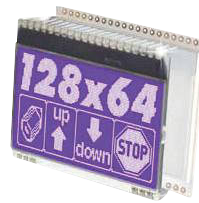
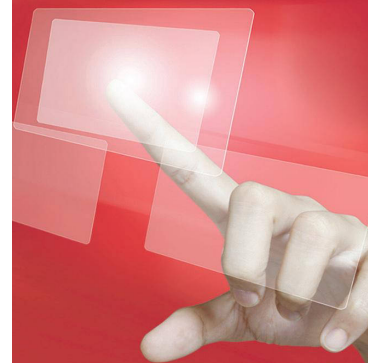| Type	Module Size (mm)	Type and colour
EA DOGM128B-6	55x46	STN negative transmissive, blue
EA DOGM128E-6	55x46	STN positive transmissive, green-yellow
EA DOGM128L-6	55x46	STN positive reflective, green-yellow
EA DOGM128S-6	55x46	FSTN negative transmissive, black
EA DOGM128W-6	55x46	FSTN positive transflective, white
EA DOGL128B-6	68x51	STN negative transmissive, blue
EA DOGL128E-6	68x51	STN positive transmissive, green-yellow
EA DOGL128L-6	68x51	STN positive reflective, green-yellow
EA DOGL128S-6	68x51	FSTN negative transmissive, black
EA DOGL128W-6	68x51	FSTN positive transflective, white

132x32 Dots
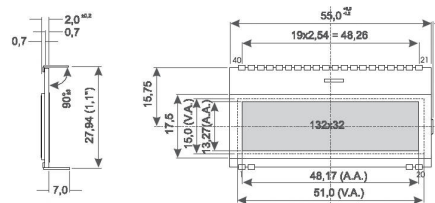
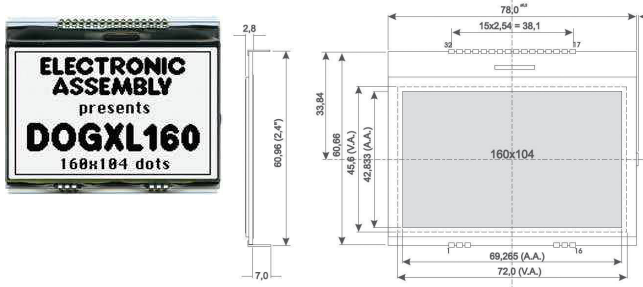| Type	Module Size (mm)	Type and colour
EA DOGM132W-5	55x31	FSTN positive transflective
EA DOGM132E-5	55x31	STN positive transmissive, green-yellow
EA DOGM132B-5	55x31	STN negative transmissive, blue
EA DOGM132S-5	55x31	FSTN negative transmissive
EA DOGM132L-5	55x31	STN positive reflective, green-yellow

ELECTRONIC ASSEMBLY
making things easy

DISPLAYS
AND
TOUCH-DISPLAYS

prev next

– Intelligent Displays
– TFT-Displays
– Chip-on-Glass Displays
– RS 232/SPI/I²C
– USB Starterkits

160x104 Dots

| Type	Module Size (mm)	Type and colour
EADOGXL160L-7	78x90,96	Yellow/Green Possitive Refflective
EADOGXL160W-7	78x90,96	White Possitive Transflective
EADOGXL160B-7	78x90,96	Blue Negative Transflective

Backlight Panels for EA DOG (ordered separately)

Simply clip the display and the backlighting unit together and you have up to 23 possible combinations. There are 2 separate LED paths available for each monochrome backlight that can be switched in parallel or in series to suit the system voltage. This means that most backlights can be run at either 3.3 V or 5 V.

red   orange   ..... yellow/green

white   blue   .... full colour (RGB)
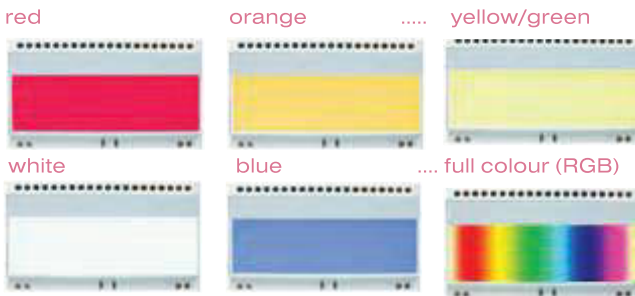
Type	Colour backlight
EA LED 39x41-W	LED B/L for DOGS, white
EA LED 39x41-A	LED B/L for DOGS, orange
EA LED55x31-A	LED B/L for DOGM, orange
EA LED55x31-B	LED B/L for DOGM, blue
EA LED55x31-G	LED B/L for DOGM, green/yellow
EA LED55x31-R	LED B/L for DOGM, red
EA LED55x31-W	LED B/L for DOGM, white
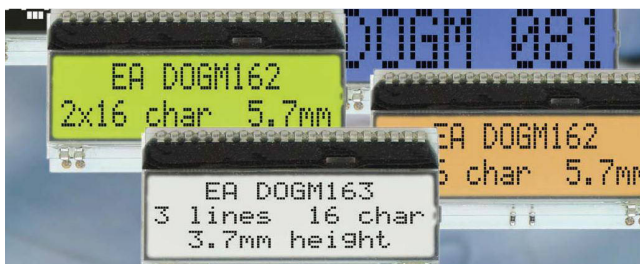
Displays with RS-232/RS-422 interface
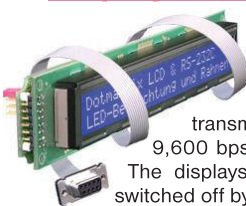
Dot-matrix LCD series that are ready for operation with a driver and a bezel or a snap-in housing. They are connected to a standard RS-232C interface (or, optionally, an RS-422). The data transmission rate can be set to 300, 1,200, 2,400 or 9,600 bps. All cursor control (line feed etc.) is automatic. The displays are equipped with LED lighting that can be switched off by software means.

All displays except for 8- and 16-line displays are available for a 5V or 9-35V supply.

OLED Modules

Series EAW have an extremely fast 10us response time, which stays fast even at icy temperatures. Great advantage over standard LCD modules is their ability to provide a full contrast even at -40°C.

No limitation in viewing angle and no need for contrast adjustment belong to another advantages in comparison to LCD displays. EAW displays have an integrated controller (HD44780-like) and already as a standard, they provide all important characters sets: English, Japanese, European and Cyrillic. Further, up to 8 characters can be defined by user. Displays can work with 5V or 3.3V without modification. Some types are available in two versions – light green and icewhite.
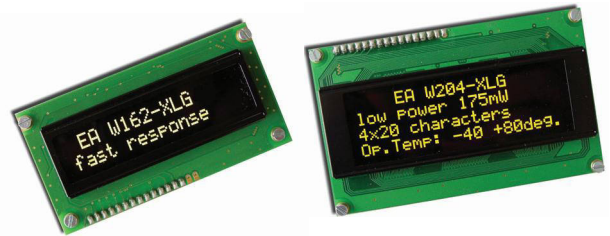
Type	Module Size (mm)	Viewing Area (mm)	Char height (mm)	Hints
EAW082-XLG	58x32x10	38x10	5.5	yellow/green
EAW162-X3LW	80x36x10	66x16	5.5	icewhite
EAW162-X3LG	80x36x10	66x16	5.5	yellow/green
EAW162-X9LG	85x36x10	66x16	5.5	yellow/green
EAW162-XLG	84x44x10	66x16	5.5	yellow/green
EAW162-XBLW	122x55x10	99x24	8.9	icewhite
EAW162-XBLG	122x55x10	99x24	8.9	yellow/green
EAW202-XLG	116x37x9.8	85x18.6	5.5	yellow/green
EAW204-XLG	98x60x10	70x25.2	5.5	yellow/green

Bezels
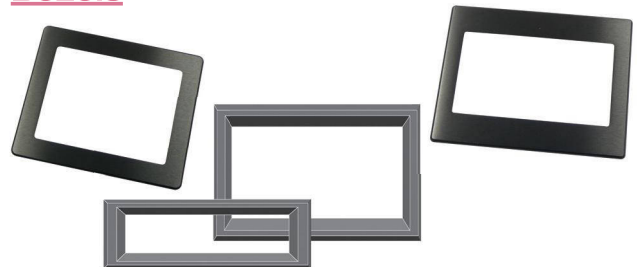
EA 017-xxU series

The bezels of the EA 017-xxU series are made of black ABS material to UL 94 V0 (up to 100°C, self-extinguishing, non-combustible) with a scratch-resistant, structured surface. They contain a snap-in mechanism for mounting a wide range of plates with a thickness of 1mm. The plates can thus be easily replaced, as required. A front plate can also be delivered with the specified bezels (clear plexiglass, anti-glare plexiglass or glass).

EA 017-xx series

The bezels of the EA 017-xx series have a matt black, coated surface and an undercut at the back for sticking on plexiglass plates with a thickness of 1-2mm. The specified bezels can be delivered optionally with or without a fitted plexiglass plate.

EA 027-xxKE series

The bezels of the EA 027-xxKE series are made of anthracite-colored ABS material. They are delivered exclusively with a replaceable, anti-glare plexiglass plate. They are delivered in packs of 10.