PHILIPS

Professional Display Solutions

Philips H-Line and **direct sunlight installation matters**

Both our high brightness displays (55" and 75") are so called “Sunlight Readable displays” which means the display’s brightness in combination with the contrast ratio enables them to be used in a bright lit environment. Even under strong (sun) light, the displays content remains visible. This makes them ideal for use in storefront windows or outdoor enclosures, but there are a few details that need to be taken in consideration: **When the display is installed in direct sunlight it is required to install additional protective matters.**

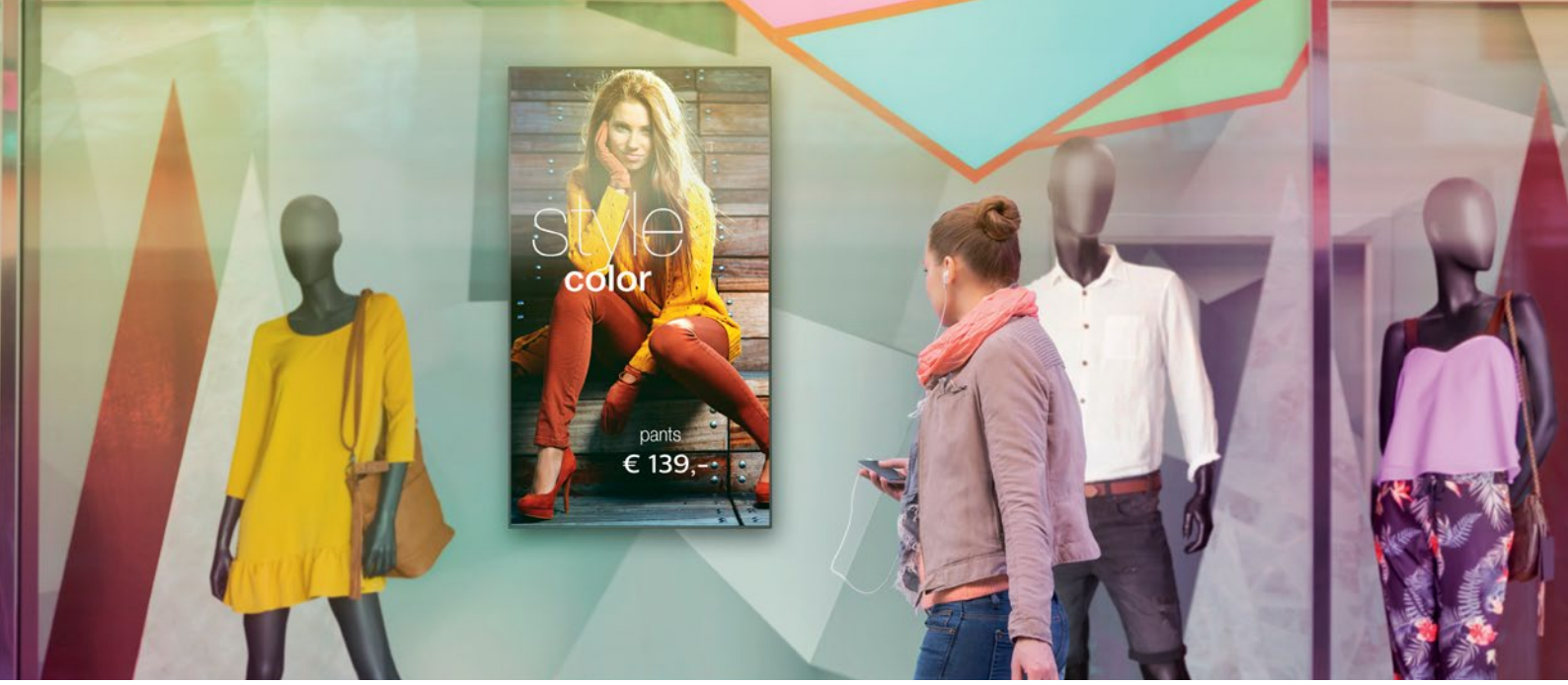
Adding an air-conditioning unit alone is not enough: Imagine the surface temperature of the dashboard in your car in direct sunlight. The air-conditioning of the car creates a nice atmosphere but the dashboard becomes extremely hot. The air-conditioning does not influence the temperature of the dashboard very much.

Below you will find a overview which needs to be considered before installation:

Shopping Window
When the High Brightness display is installed in a Shopping Window we recommend you to install the display leaving at least 20mm distance between the store front glass and the display. The sides, top and bottom of the display needs at least 100mm space from nearby products / walls so a natural airflow can flow around the display.

The ambient temperature where the display is installed should always be between 0 – 40 degrees Celsius. Outside of these temperatures, the display cannot get rid of internal generated heat and can get damaged. Active ventilation / cooling airflow is always recommended.

In any case, the temperature of the LCD panel should never be higher than 65 degrees Celsius. Even on small spots this is not allowed, as the LCD panel and the light source inside the panel can get damaged. We recommend to keep the temperature of the LCD panel close to 25 degrees for the best (luminance) performance.



Please be aware light spots in a shopping window pointed at a display can also cause heating up of the panel, so investigate the environment very closely to prevent heating up the display. Also sunlight-reflection from another reflecting surface (e.g. a different window) can cause local “heat pockets” and might cause damage to the display.

Due to the intensity of direct sunlight (mainly UV light) all items in the shopping window will heat up extremely fast. The temperature of the display will exceed the 65 degrees within minutes (even in off-mode), so it is required to protect the display from this UV radiation by applying a UV coating on the glass of the shopping window. (UV or IR coating is normally applied on Glass / Shopping Window to prevent discolouration of items/products in the shop window and/or heating up the room) If the coating is not applied you can use a external foil on the window. **Please check with your local glass specialist what type of foil can be used with the type of glass in your shopping window.**

Of course you can also consider a “Canopy” to prevent direct sunlight shining at the shopping window and display. Please note the display will not be covered by warranty if the maximum temperatures are exceeded. Following the above guidelines in addition to the instructions in the user manual will likely prevent this.

Building the display into a Kiosk/Totem

When the High Brightness display is installed in a Totem / Kiosk we recommend you to install the display leaving at least 20mm distance between the cover glass and the display. The sides, top and bottom of the display needs at least 100mm space from the housing or other components so a natural airflow can flow around the display.

The ambient temperature where the display is installed should always be between 0 – 40 degrees Celsius. Outside of these temperatures, the display cannot get rid of internal generated heat and can get damaged. Active ventilation / cooling is always recommended. An air-conditioning unit is highly recommended, not just for the temperature, but also for the humidity. (RH 20-80% non-condensing).
In any case, the temperature of the LCD panel should never be higher than 65 degrees Celsius. Even on small spots this is not allowed, as the LCD panel and the light source inside the panel can get damaged. We recommend to keep the temperature of the LCD panel close to 25 degrees for the best (luminance) performance.

Due to the intensity of direct sunlight (mainly UV light) anything behind the glass of the kiosk, will heat up extremely fast. The temperature of the display will exceed the 65 degrees within minutes (even in off-mode), so it is required to protect the display from this UV radiation by applying a UV coating on the cover glass of the kiosk/housing. (UV or IR coating is normally applied on kiosk cover glass to prevent the inside of the housing to heat up too much and too quickly) If the coating is not applied you can use a external foil on the glass. **Please check with your local glass specialist what type of foil can be used with the type of glass in your kiosk/housing.**

Please note the display will not be covered by warranty if the maximum temperatures are exceeded. Following the above guidelines in addition to the instructions in the user manual will likely prevent this.

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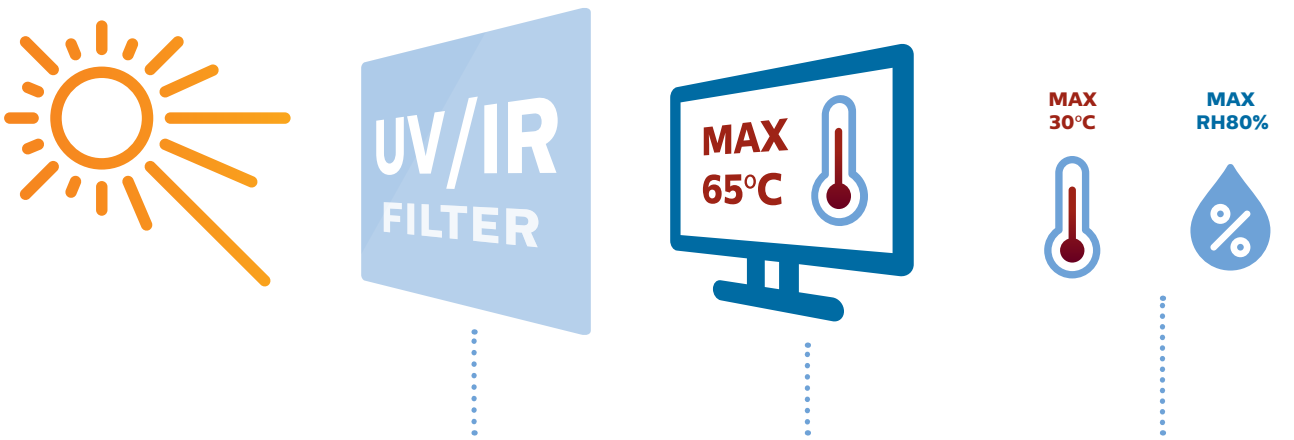
Important details for installing this display in a store front window, outdoor enclosure on any circumstances under direct sunlight:



UV/IR filter is recommended

Display surface: Max 65°C

Environment: Max 30°C / Max RH 80% (no condensation)

The display's warranty will be void if one or more of these conditions are exceeded:

Condition	Value
Max. **panel surface** temperature on any spot	**65 °C**
Max. **environmental** temperature	**40 °C**
Max. **environmental** temperature in **direct sunlight**	**30 °C**
Max. **humidity** level (no condensation)	**RH 80%**

For more extensive documentation please refer to user manual of this product.

Applying a UV filter on the window's glass is highly recommended in case of direct sunlight.