

PIXEL POLICY

I3CONNECT policy on defective pixel on LCD display

LCD Display Pixel Introduction

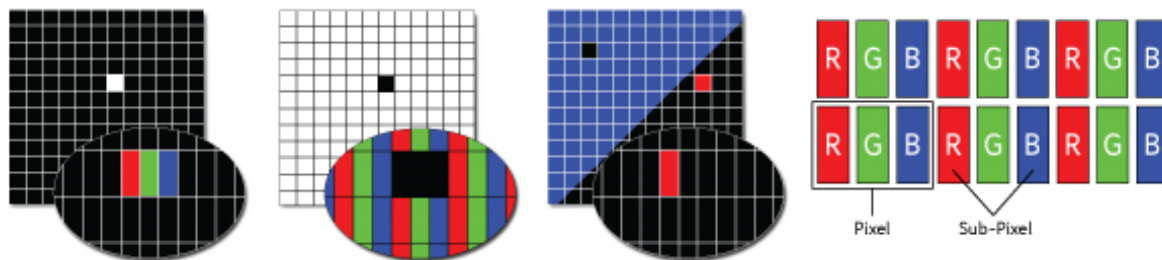
LCD displays are made up of a set number of pixels and each pixel is made from 3 sub-pixels - one Red, one Green and one Blue. Each sub-pixel has its own transistor, which makes manufacturing the glass substrate very complex.

Due to the nature of the manufacturing process, occasional defects can occur. Pixel defects or failures cannot be fixed or repaired and can happen at any stage in the LCD panel life. To regulate the acceptability of defects and to protect the end user, ISO has created a standard for manufacturers to follow. ISO-9241-302, 303, 305, 307:2008 recommends how many defaults are acceptable on a display before it should be replaced, within the terms & conditions of warranty. We as manufacturer of the brands CTOUCH, i3TOUCH and i3CONNECT devices, conform to and support the ISO-9241-307 standard.

There are three types of pixel defects covered under **ISO-9241-307**:

- Type 1 - Bright Pixel: A pixel is displayed as a small white dot on a black pattern.
- Type 2 - Dark Pixel: A pixel is displayed as a small black dot on a white pattern.
- Type 3 - Stuck on sub-Pixel: A sub-pixel (red, blue or green) is always on, always off or partially bright.

One Pixel = 3 Sub-Pixels



ISO-9241-307 Classes

The table below shows the maximum number of allowed defects for each resolution per 1 million pixels according to ISO-9241-307

Maximum number of defect allowed per million pixels.				
Class	Type 1 full bright pixel	Type 2 full dark pixel	Type 3 sub pixel	
			Bright	Dark
0	0	0	0	0
I	1	1	2	1
			1	3
			0	5
			5	0
II	2	2	4	2
			3	4
			2	6
			1	8
			0	10
III	5	15	50 allowed	

Dead Pixel Warranty Policy

The table below shows the allowable number of dead sub-pixels for the native resolution of the LCD panel. Your display can be replaced during the duration of the limited warranty period if the number of dead pixels is greater than the allowable number.

Note:

In case of any questions about this pixel policy, please contact your local distributor or dealer first. Warranty duration and product specification may vary depending on your specific model and region. More detailed information on the warranty of your product can be found at: support.ctouch.eu

Panel specific policy re-calculated according to ISO-9241-307 Class I:

Maximum number of defects allowed re-calculated based on resolution						
Model	Panel resolution	ISO-9241-307 Class	Type 1 full bright pixel	Type 2 full dark pixel	Type 3 sub pixel	
					Bright	Dark
FHD (Full HD) 16:9	1920*1080	I	2	2	4	2
					2	6
					0	10
UHD (Ultra HD) 16:9	3840*2160	I	8	8	16	8
					8	24
					0	40
UHD (Ultra HD) 21:9	5120*2160	I	11	11	22	11
					11	33
					0	55