



- ▶ HIGH CONTRAST
- ▶ SUPER HIGH BRIGHTNESS
- ▶ UNLIMITED VIEWING ANGLE
- ▶ LONGTERM AVAILABILITY

Kyocera Standard TFT Modules



The innovative TFT-LCD displays allow bright colours to be seen clearly even in intense sunlight – making them ideal for industrial applications including medical, aerospace, marine, test and measurement, and factory automation equipment for Industry 4.0.

FEATURES

- ▶ High brightness
- ▶ Wide viewing angle
- ▶ Long LED lifetime
- ▶ Wide temperature range
- ▶ Mechanical robustness
- ▶ Longterm availability
- ▶ PCAP optional
- ▶ Customisation upon request

SIZE	MODE	RESOLUTION	PART NUMBER	INTERFACE	MODULE SIZE W × H × D [mm]	CONTRAST RATIO	BRIGHTNESS [cd/m ²]	VIEWING ANGLE [U/D/L/R]	OPERATING TEMPERATURE [°C]	LED LIFETIME [Kh]
3.5"	Mono	QVGA	TG035QVLQAANN-GN00	CMOS+SPI	76.9 × 63.9 × 4.9	1000:1	1200	70/60/80/80	-20~70	60 Kh
	TN	QVGA	TCG035QVLPAAANN-AN00	CMOS+SPI	76.9 × 63.9 × 4.9	1000:1	400	80/60/80/80	-20~70	60 Kh
	TN	QVGA	TCG035QVLPDANN-GN50	CMOS+SPI	76.9 × 63.9 × 4.9	1000:1	1000	80/60/80/80	-20~70	50 Kh
4.3"	TN	QVGA	TCG035QVLPDANN-GN50-S	CMOS+SPI	76.9 × 63.9 × 4.9	1000:1	1000	80/60/80/80	-20~70	40 Kh
	TN	WQVGA	TCG043WQLBAANN-GN00	CMOS	105.5 × 67.2 × 5.9	350:1	450	60/65/70/70	-20~70	100 Kh
	TN	WQVGA	TCG043WQLBAANN-GN50	CMOS	105.5 × 67.2 × 5.9	350:1	800	60/65/70/70	-20~70	100 Kh
5.7"	Mono	QVGA	TG057QVLGA-G00	CMOS	134.5 × 103.4 × 8	500:1	400	80/80/80/80	-20~70	70 Kh
	Mono	QVGA	TG057QVLGF-G00	CMOS	134.5 × 103.4 × 8	500:1	1000	80/80/80/80	-20~70	70 Kh
	TN	QVGA	TCG057QVLBA-G20	CMOS	127.2 × 100.4 × 5.7	500:1	300	80/80/80/80	-20~70	40 Kh
	TN	QVGA	TCG057QVLBA-H30	CMOS	127.2 × 100.4 × 5.7	500:1	420	80/80/80/80	-20~70	37 Kh
	TN	QVGA	TCG057QVLCA-G00	CMOS	144 × 104.8 × 13	500:1	350	60/80/80/80	-20~70	50 Kh
	TN	QVGA	TCG057QVLCS-H50	CMOS	144 × 104.8 × 13	500:1	1000	80/80/80/80	-20~70	50 Kh
	TN	QVGA	TCG057QVLGA-G00	CMOS	134.5 × 103.4 × 8	500:1	500	80/80/80/80	-20~70	100 Kh
	TN	QVGA	TCG057QVLHA-G50	CMOS	134.5 × 103.4 × 8	500:1	1000	80/80/80/80	-20~70	50 Kh
	TN	QVGA	TCG057QVLPEANN-GN00	CMOS	134.5 × 103.4 × 8	500:1	500	80/80/80/80	-20~70	100 Kh
	TN	QVGA	TCG057QVLPEANN-GN00-SA	CMOS	134.5 × 103.4 × 8	500:1	500	80/80/80/80	-20~70	50 Kh
	TN	VGA	TCG057VGLBA-G20	CMOS	127.2 × 100.4 × 5.7	500:1	500	80/80/80/80	-20~70	40 Kh
	TN	VGA	TCG057VGLCA-G00	CMOS	144 × 104.8 × 13	500:1	300	80/80/80/80	-20~70	50 Kh
	TN	VGA	TCG057VGLGA-G00	CMOS	134.5 × 103.4 × 8	500:1	500	80/80/80/80	-20~70	100 Kh
	TN	VGA	TCG057VGLCS-H50	CMOS	144 × 104.8 × 13	500:1	800	80/80/80/80	-20~70	100 Kh
	TN	VGA	TCG057VGLCS-H50-SA	CMOS	144 × 104.8 × 13	500:1	800	80/80/80/80	-20~70	50 Kh
6.2"	TN	HVGA	TCG062HVLDA-G20	CMOS	173 × 70 × 6.7	500:1	300	80/80/80/80	-20~70	40 Kh
	AWV	HVGA	TCG062HVLQAVNN-GN20	LVDS	173 × 70 × 6.7	500:1	500	85/85/85/85	-20~70	40 Kh
7"	TN	WVGA	TCG070WVLPAAANN-AN00	CMOS	165 × 104.4 × 8.2	1000:1	350	60/80/80/80	-20~70	70 Kh
	TN	WVGA	TCG070WVLPACANN-AN00	CMOS	165 × 104.4 × 8.2	500:1	350	60/80/80/80	-20~70	100 Kh
	TN	WVGA	TCG070WVLPACANN-AN00-SA	CMOS	165 × 104.4 × 8.2	500:1	450	60/80/80/80	-20~70	50 Kh
	TN	WVGA	TCG070WVLPACANN-GN01	CMOS	165 × 104.4 × 8.2	1000:1	200	60/80/80/80	-20~70	70 Kh
	TN	WVGA	TCG070WVLPACANN-GN01-SA	CMOS	165 × 104.4 × 8.2	1000:1	200	60/80/80/80	-20~70	50 Kh
	TN	WVGA	TCG070WVLPAAANN-AN50	CMOS	165 × 104.4 × 8.2	500:1	700	60/80/80/80	-20~70	100 Kh
	TN	WVGA	TCG070WVLPAAANN-AN50-SA	CMOS	165 × 104.4 × 8.2	500:1	700	60/80/80/80	-20~70	50 Kh
	TN	WVGA	TCG070WVLPPEANN-AN20	LVDS	165 × 104.4 × 8.6	500:1	350	60/80/80/80	-20~70	100 Kh
TN	WVGA	TCG070WVLPPEANN-AN30	LVDS	165 × 104.4 × 8.6	500:1	700	60/80/80/80	-20~70	100 Kh	

SIZE	MODE	RESOLUTION	PART NUMBER	INTERFACE	MODULE SIZE W × H × D [mm]	CONTRAST RATIO	BRIGHTNESS [cd/m ²]	VIEWING ANGLE [U/D/L/R]	OPERATING TEMPERATURE [°C]	LED LIFETIME [Kh]
7.5"	AWV	WVGA	TCG070WWLQAPNN-AN00	CMOS	165 × 104.4 × 8.2	500:1	350	85/85/85/85	-20~70	100 Kh
	AWV	WVGA	TCG070WWLQEPNN-AN20	LVDS	165 × 104.4 × 8.6	500:1	350	85/85/85/85	-20~70	100 Kh
	AWV	WVGA	TCG070WWLQGPNN-AN40	LVDS	169.8 × 109.7 × 9.7	500:1	1000	85/85/85/85	-30~80	70 Kh
	AWV	WVGA	TCG070WVLSJPPA-GD20	LVDS	169.8 × 109.7 × 9.2	650:1	500	85/85/85/85	-20~70	70 Kh
	AWV	WVGA	TCG070WVLSJPPB-GA20	LVDS	169.8 × 109.7 × 10.25	650:1	500	85/85/85/85	-20~70	70 Kh
	TN	VGA	TCG075VGLCE-G00	CMOS	184 × 139.8 × 12.7	500:1	280	80/80/80/80	-20~70	50 Kh
	TN	VGA	TCG075VGLEAANN-GN00-SA	CMOS	184 × 139.8 × 12.7	500:1	450	80/80/80/80	-20~70	50 Kh
	TN	VGA	TCG075VGLDA-G20	CMOS	173 × 133 × 6.35	500:1	250	80/80/80/80	-20~70	40 Kh
	TN	VGA	TCG075VGLDH-G20	LVDS	173 × 133 × 4.4	500:1	250	80/80/80/80	-20~70	40 Kh
	TN	VGA	TCG075VGLEAANN-GN00	CMOS	184 × 139.8 × 12.7	500:1	400	80/80/80/80	-20~70	50 Kh
8.4"	TN	VGA	TCG084VGLACANN-AN00	CMOS	199.5 × 147.4 × 9	500:1	550	60/70/70/70	-20~70	100 Kh
	TN	VGA	TCG084VGLACANN-AN00-SA	CMOS	199.5 × 147.4 × 9	500:1	600	60/70/70/70	-20~70	50 Kh
	TN	VGA	TCG084VGLAAANN-AN00	CMOS	199.5 × 147.4 × 9	500:1	450	60/65/65/65	-20~70	100 Kh
	TN	VGA	TCG084VGLAAANN-AN50	CMOS	199.5 × 147.4 × 9	500:1	850	60/70/70/70	-20~70	70 Kh
	TN	SVGA	TCG084SVLPAANN-AN20	LVDS	199.5 × 147.4 × 9	800:1	400	80/60/80/80	-20~70	100 Kh
	TN	SVGA	TCG084SVLPAANN-AN20-SA	LVDS	199.5 × 147.4 × 9	800:1	400	80/60/80/80	-20~70	50 Kh
	TN	SVGA	TCG084SVLPAANN-AN30	LVDS	199.5 × 147.4 × 9	800:1	750	80/60/80/80	-20~70	100 Kh
	AWV	SVGA	TCG084SVLQAPNN-AN20	LVDS	199.5 × 147.4 × 9	800:1	400	85/85/85/85	-20~70	100 Kh
	AWV	SVGA	TCG084SVLQAPNN-AN20-SA	LVDS	199.5 × 147.4 × 9	800:1	400	85/85/85/85	-20~70	50 Kh
	AWV	VGA	TCG085WVLPDPNN-GN00	C-MOS	210 × 134 × 8.8	500:1	400	85/85/85/85	-20~70	70 Kh
10.1"	TN	WXGA	TCG101WXLPAANN-AN20-SA	LVDS	236 × 156.8 × 9.4	800:1	500	80/80/80/80	-20~70	50 Kh
10.4"	TN	VGA	TCG104VGLAAANN-AN20-ZA	CMOS	240.7 × 180.2 × 9	500:1	400	60/70/70/70	-20~70	70 Kh
	TN	VGA	TCG104VGLABANN-AN30	CMOS	240.7 × 180.2 × 9	500:1	800	60/70/70/70	-20~70	70 Kh
	TN	VGA	TCG104VGLPEANN-AN60-ZA	LVDS	240.7 × 180.2 × 9	500:1	450	60/70/70/70	-20~80	50 Kh
	TN	SVGA	TCG104SVLPAANN-AN20-ZA	LVDS	240.7 × 180.2 × 9	900:1	450	80/60/80/80	-20~70	100 Kh
	TN	SVGA	TCG104SVLPAANN-AN20-SA	LVDS	240.7 × 180.2 × 9	900:1	500	80/60/80/80	-20~70	50 Kh
	TN	SVGA	TCG104SVLPEANN-AN30-ZA	LVDS	240.7 × 180.2 × 9	900:1	700	80/60/80/80	-20~70	100 Kh
	AWV	SVGA	TCG104SVLQAPNN-AN20	LVDS	240.7 × 180.2 × 9	500:1	400	85/85/85/85	-20~70	100 Kh
	AWV	SVGA	TCG104SVLQJPNN-AN40	LVDS	230 × 180.2 × 10.8	750:1	1200	85/85/85/85	-30~80	70 Kh
	AWV	XGA	TCG104XGLPAPNN-AN30	LVDS	230 × 180.2 × 10.5	700:1	600	85/85/85/85	-30~80	70 Kh
	AWV	XGA	TCG104XGLPAPNN-AN30-SA	LVDS	230 × 180.2 × 10.5	700:1	600	85/85/85/85	-30~80	50 Kh
12.1"	AWV	XGA	TCG104XGLPAPNN-AN31	LVDS	230 × 180.2 × 10.5	700:1	600	85/85/85/85	-30~80	50 Kh
	AWV	XGA	TCG104XGLPAPNN-AN40	LVDS	230 × 180.2 × 10.5	700:1	1300	85/85/85/85	-30~80	70 Kh
	TN	SVGA	TCG121SVLPAANN-AN20	LVDS	278.3 × 207.5 × 9.5	1000:1	500	80/80/80/80	-20~70	100 Kh
	TN	SVGA	TCG121SVLPAANN-AN20-SA	LVDS	278.3 × 207.5 × 9.5	1000:1	550	80/80/80/80	-20~70	50 Kh
	TN	SVGA	TCG121SVLPBANN-AN20	LVDS	278.3 × 207.5 × 9.5	1000:1	500	65/80/80/80	-20~70	100 Kh
	TN	SVGA	TCG121SVLQAPNN-AN20	LVDS	278.3 × 207.5 × 9.5	650:1	450	85/85/85/85	-20~70	100 Kh
	AWV	SVGA	TCG121SVLQEPNN-AN20	LVDS	265 × 207.7 × 9.6	500:1	450	85/85/85/85	-20~70	100 Kh
	AWV	XGA	TCG121XGLPAPNN-AN20-ZA	LVDS	260.5 × 203.4 × 10.3	750:1	400	85/85/85/85	-30~80	50 Kh
	AWV	XGA	TCG121XGLPBPNN-AN40-ZA	LVDS	260.5 × 203 × 10.2	750:1	1200	85/85/85/85	-30~80	70 Kh
	AWV	WXGA	TCG121WXLPAANN-AN20-SA	LVDS	277.7 × 182.5 × 9.8	750:1	500	85/85/85/85	-20~70	50 Kh
12.1"	AWV	WXGA	TCG121WXLPAANN-AN*65	LVDS	277.7 × 182.5 × 9.8	750:1	1000	85/85/85/85	-20~70	50 Kh
	AWV	WXGA	TCG121WXL*VNN-AN*35	LVDS	283 × 185.1 × 10.5	750:1	1500	85/85/85/85	-30~80	50 Kh

Highlights

Kyocera advanced displays are more than simple touch monitors. They are intelligent HMIs which support the operator. This means to recognize their users by integrated camera function, to respond on finger pressure with a Haptivity® feedback that feels like a certain button and ensure that the machine control is kept by the human user under all environmental conditions.



► HAPTIVITY® TECHNOLOGY

This is the newly patented technology for haptic force feedback of displays. It can be used in touch panel or touch pad products for a broad range of applications such as automotive, medical and industrial equipment. Ceramic piezo elements assembled in the module serve as the actuators for the movement. Due to the exact adjustment capability, the user gets a real feeling which is caused by the virtual feedback. In addition, the piezo features can measure the pressure force. This allows to pretend the feeling of touching and pressing a button.

Haptivity® is a registered trade mark of Kyocera Corporation.

► REFLECTIVE TECHNOLOGY FOR WEARABLES

Kyocera developed a Memory In Pixel (MIP) technology based on LTPS. With this technology each pixel can be addressed and keeps its data without refreshing. In combination with reflective mode, this display has an extremely low power consumption. The small borders and the high contrast fit perfectly in with applications like smart watches, outdoor watches, smart meters or data loggers. The MIP technology is available in sunlight readable monochrome and from mid-2019 in colour.

