



Display Division
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Product Change Notification

Date: Feb. 9th, 2015

Dear Valued Customer,

Thank you for choosing KYOCERA as your LCD solution provider. We appreciate the opportunity to support your business. This letter is to inform you a touch screen component change on below products.

1. **Product:**

TCG035QVLPAANN-AN00

2. **Detail of Change:**

The LED supplier informed us about the LED change as their technology improvement. Our internal testing and evaluation shows the outline dimensions is the same, and characteristics is better than current model. With that we accept the new LED. We will keep the LCD Part number and specification remains the same.

3. **Schedule:**

- We will treat this as a running change, when current LED stock gets depleted, we will start using the new LEDs. Based on current data, we estimated will start around March 2015.

Thank you in advance for your understanding and your cooperation. If you have any questions, please contact your KYOCERA sales representative.

Sincerely yours,

KYOCERA Industrial Ceramics Inc
Display Division



LED Change / Reliability Test Result

<Product>

TCG035QLPAANN-AN00 (LED Changed Parts) * tested by representative product
IF=15mA

Test Item	Specs	Test Condition	N	Judgment
High Temp. Atmosphere	70°C, 500h	85°C, 500h	3	Pass
Low Temp. Atmosphere	-30°C, 240h	-40°C, 500h	3	Pass
High Temp. Humidity Atmosphere	40°C, 90%RH, 240h	60°C, 90%RH, 500h	3	Pass
High Temp. Operation	-30°C, 0.5h RT, 0.5h 80°C, 0.5h 10 [∞]	-35°C, 0.5h 85°C, 0.5h 20 [∞]	3	Pass

Test Item	Confirmed Item	
	Functions	Lighted Condition
High Temp. Atmosphere	●(No Defect)	●(No Defect)
Low Temp. Atmosphere	●(No Defect)	●(No Defect)
High Temp. Humidity Atmosphere	●(No Defect)	●(No Defect)
High Temp. Operation	●(No Defect)	●(No Defect)

Test Result of Optical Performance by LED change

<Part Number>

TCG035QLPAANN-AN00

Item	Symbol	Condition	Spec Value			Actual Value				Unit	
						Alternative			Current		
			Min.	Typ.	Max.	①	②	③	1		
Brightness	L	IF=15mA/Line	280	400	—	510	499	483	387	cd/m ²	
Chromaticity	R	$\theta=\varphi=0^\circ$	x	0.550	0.600	0.650	0.594	0.593	0.595	0.597	—
			y	0.300	0.350	0.400	0.350	0.350	0.350	0.352	
	G	$\theta=\varphi=0^\circ$	x	0.295	0.345	0.395	0.332	0.331	0.331	0.334	
			y	0.530	0.580	0.630	0.560	0.560	0.560	0.566	
	B	$\theta=\varphi=0^\circ$	x	0.110	0.160	0.210	0.155	0.154	0.154	0.154	
			y	0.070	0.120	0.170	0.102	0.100	0.102	0.112	
	W	$\theta=\varphi=0^\circ$	x	0.265	0.315	0.365	0.291	0.289	0.292	0.299	
			y	0.280	0.330	0.380	0.294	0.292	0.297	0.310	

There will be no change in LCD Spec value by the LED change.