

To : KII



Engineering Change Notice (T-51750GD065J-LW-BGN)

2022/03/25
KYOCERA Corporation
Corporate Display Group
Display Engineering Division
Product Engineering Department

Approved	Checked	Prepared
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Control No. : EDPM2-2110-A0-943

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Thank you for your continued support.

For the following reasons, we will apply for a change in the materials used in our products that are currently being mass-produced.

We apologize for the inconvenience, and thank you for your understanding.

1. Applicable Product

T-51750GD065J-LW-BGN

2. Background

The supply of materials used in this product continues to be tight due to extremely strong demand, especially electronic components.

Under such circumstances, we have decided to change those components in order to continue stable supply in the future.

Details will be explained on the following pages.

3. Schedule

Sample shipment	:	April, 2022
Approval request	:	June, 2022
Planned change in	:	Notify applicable lot separately

Comparison of the specifications



For the 6.5inch VGA [T-51750GD065J-LW-BGN] for your company, we will explain the specifications of the Renewal product that we are proposing this time below.

Specification comparison list		T-51750GD065J-LW-BGN [Current product]	C0650VG65199-BN-AB [New Product]
TFT	Supplier	Kyocera in-house	Outsourcing
	Location	Japan	Taiwan
Polarizer		A	B
Driver IC		C	D
PCB	Board	E	F
	Assembly	G	Kyocera China factory
	Mounting components	For stable supply in the future, we will downsize capacitors and resistors, and change parts that have an old release time and are uncertain about supply to the latest parts.	
FPC		H	I
Backlight		J	K

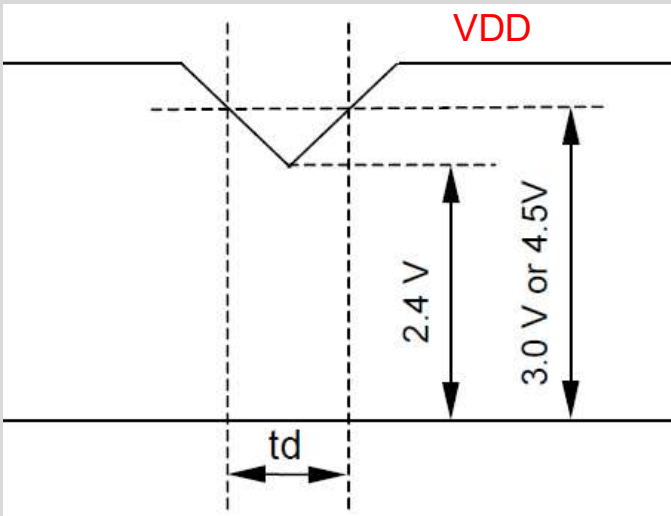
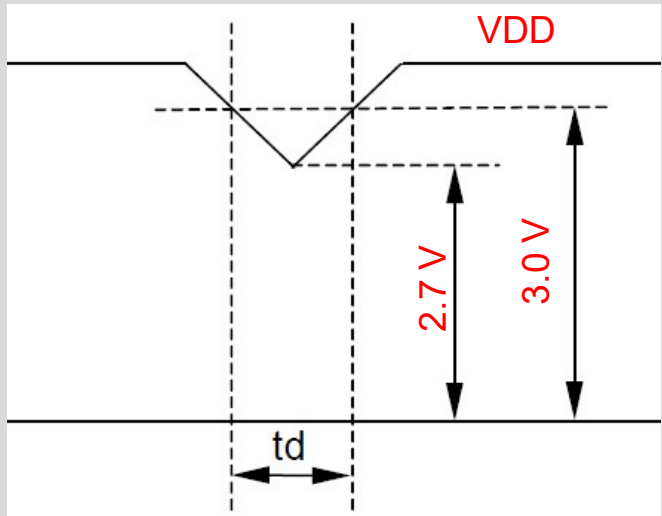
Comparison of the specifications



Specification comparison list		T-51750GD065J-LW-BGN [Current product]	TBD [New product]
Product Specifications	Polarizer	AG Coating	←
	Interface	CMOS	←
	Outline dimensions	158.0(W)x120.36(H)x10.75(D) mm Projection not included.	←
	Base color	Normally White	←
	Operating temperature	-20~70℃ (Panel Surface)	←
	Storage temperature	-20~70℃ (Panel Surface)	←
	Supply voltage (LCD)	Typ. 3.3V (3.3V system) Typ. 5.0V (5.0V system)	Typ. 3.3V (3.3V system only)
	Current consumption (LCD)	Typ. 240mA (3.3V system) Typ. 180mA (5.0V system)	TBD
	LED Forward current	35mA/Line	←
	LED Forward voltage	Typ. 26.4V/Line (IF=35mA, Ta=25℃)	Typ. 22.4V/Line (IF=35mA, Ta=25℃)
	Operating life time	—	Typ. 70,000hr (IF=35mA, Ta=25℃)

Comparison of the specifications



Specification comparison list		T-51750GD065J-LW-BGN [Current product]	TBD [New product]
Electrical Specifications	LCD Supply voltage Dip Conditions		

Comparison of the specifications



Specification comparison list

T-51750GD065J-LW-BGN
[Current product]

TBD
[New product]

Electrical Specifications

AC
Characteristic

Parameter (項目)		Symbol (記号)	Min.	Typ.	Max.	Units (単位)
DCLK	Frequency (周波数)	f _{CLK}	20	25	30	MHz
	Period (周期)	t _{CLK}	33.3	40	50	ns
	Low Width (パルス幅(Low))	t _{WCL}	10	—	—	ns
	High Width (パルス幅(High))	t _{WCH}	10	—	—	ns
DATA (R,G,B,DENA, HD, VD)	Set up time (セットアップ時間)	t _{DS}	5	—	—	ns
	Hold time (保持時間)	t _{DH}	5	—	—	ns
DENA	Horizontal Active Time (水平表示時間)	t _{HA}	640	640	640	t _{CLK}
	Horizontal Front Porch (水平フロントポーチ)	t _{HFP}	0	—	—	t _{CLK}
	Horizontal Back Porch (水平バックポーチ)	t _{HBP}	7	—	—	t _{CLK}
	Vertical Active Time (垂直表示時間)	t _{VA}	480	480	480	t _H
	Vertical Front Porch (垂直フロントポーチ)	t _{VFP}	1	20	—	t _H
	Vertical Back Porch (垂直バックポーチ)	t _{VBP}	8	20	—	t _H
HD	Frequency (周波数)	f _H	27	31.5	38	kHz
	Period (周期)	t _H	26.3	31.7	37.0	μs
	Low Width (パルス幅(Low))	t _{WHL}	5	—	—	t _{CLK}
VD	Frequency (周波数)	f _V	55	60	70	Hz
	Period (周期)	t _V	14.3	16.7	18.2	ms
	Low Width (パルス幅(Low))	t _{WVL}	3	—	—	t _H

←

Comparison of the specifications



Specification comparison list			T-51750GD065J-LW-BGN [Current product]	TBD [New product]
Optical specifications (Typ.)	Response time	Rise	15ms	TBD
		Down	16ms	TBD
	Brightness (Center of display)		1,000cd/m ²	←
	Contrast ratio		800	←
	Viewing angle range CR>10	Upper	50deg	←
		Lower	70deg	←
		Left	80deg	←
		Right	80deg	←
	Optimal viewing angle		6 o'clock	←
	Chromaticity coordinates	Red	0.600, 0.350	TBD
		Green	0.330, 0.590	TBD
		Blue	0.160, 0.130	TBD
		White	0.320, 0.350	TBD

Comparison of the specifications



LCD Interface

Specification comparison list		T-51750GD065J-LW-BGN [Current product]	TBD [New product]																																																																																															
	Connector	DF9B-31P-1V (HIROSE)	←																																																																																															
	Pin assignment	<table><tr><th>No.</th><th>Symbol(記号)</th><th>Functional Description (機能説明)</th></tr><tr><td>1</td><td>GND</td><td>Power Supply (0V, GND) (電源 (0V, GND))</td></tr><tr><td>2</td><td>DCLK</td><td>Clock signal for sampling catch data signal (クロック信号)</td></tr><tr><td>3</td><td>HD</td><td>Horizontal sync signal (水平同期信号)</td></tr><tr><td>4</td><td>VD</td><td>Vertical sync signal (垂直同期信号)</td></tr><tr><td>5</td><td>GND</td><td>Power Supply (0V, GND) (電源 (0V, GND))</td></tr><tr><td>6</td><td>R0</td><td>Red data signal(LSB) (赤データ信号)</td></tr><tr><td>7</td><td>R1</td><td>Red data signal (赤データ信号)</td></tr><tr><td>8</td><td>R2</td><td>Red data signal (赤データ信号)</td></tr><tr><td>9</td><td>R3</td><td>Red data signal (赤データ信号)</td></tr><tr><td>10</td><td>R4</td><td>Red data signal (赤データ信号)</td></tr><tr><td>11</td><td>R5</td><td>Red data signal(MSB) (赤データ信号)</td></tr><tr><td>12</td><td>GND</td><td>Power Supply (0V, GND) (電源 (0V, GND))</td></tr><tr><td>13</td><td>G0</td><td>Green data signal(LSB) (緑データ信号)</td></tr><tr><td>14</td><td>G1</td><td>Green data signal (緑データ信号)</td></tr><tr><td>15</td><td>G2</td><td>Green data signal (緑データ信号)</td></tr><tr><td>16</td><td>G3</td><td>Green data signal (緑データ信号)</td></tr><tr><td>17</td><td>G4</td><td>Green data signal (緑データ信号)</td></tr><tr><td>18</td><td>G5</td><td>Green data signal(MSB) (緑データ信号)</td></tr><tr><td>19</td><td>GND</td><td>Power Supply (0V, GND) (電源 (0V, GND))</td></tr><tr><td>20</td><td>B0</td><td>Blue data signal(LSB) (青データ信号)</td></tr><tr><td>21</td><td>B1</td><td>Blue data signal (青データ信号)</td></tr><tr><td>22</td><td>B2</td><td>Blue data signal (青データ信号)</td></tr><tr><td>23</td><td>B3</td><td>Blue data signal (青データ信号)</td></tr><tr><td>24</td><td>B4</td><td>Blue data signal (青データ信号)</td></tr><tr><td>25</td><td>B5</td><td>Blue data signal(MSB) (青データ信号)</td></tr><tr><td>26</td><td>GND</td><td>Power Supply (0V, GND) (電源 (0V, GND))</td></tr><tr><td>27</td><td>DENA</td><td>Data enable signal(to settle the viewing area) (データイネーブル (データ期間表示信号))</td></tr><tr><td>28</td><td>VCC</td><td>Power Supply (電源)(DC 3.3V or 5V)</td></tr><tr><td>29</td><td>VCC</td><td>Power Supply (電源)(DC 3.3V or 5V)</td></tr><tr><td>30</td><td>TEST</td><td>This pin should be open. Test signal output for only internal test use. (テスト信号出力端子 (システム側でオープンにしてください))</td></tr><tr><td>31</td><td>REV</td><td>Reverse scans control. L = Normal, H = Reverse (表示方向切換え。L=通常走査、H=逆走査)</td></tr></table>	No.	Symbol(記号)	Functional Description (機能説明)	1	GND	Power Supply (0V, GND) (電源 (0V, GND))	2	DCLK	Clock signal for sampling catch data signal (クロック信号)	3	HD	Horizontal sync signal (水平同期信号)	4	VD	Vertical sync signal (垂直同期信号)	5	GND	Power Supply (0V, GND) (電源 (0V, GND))	6	R0	Red data signal(LSB) (赤データ信号)	7	R1	Red data signal (赤データ信号)	8	R2	Red data signal (赤データ信号)	9	R3	Red data signal (赤データ信号)	10	R4	Red data signal (赤データ信号)	11	R5	Red data signal(MSB) (赤データ信号)	12	GND	Power Supply (0V, GND) (電源 (0V, GND))	13	G0	Green data signal(LSB) (緑データ信号)	14	G1	Green data signal (緑データ信号)	15	G2	Green data signal (緑データ信号)	16	G3	Green data signal (緑データ信号)	17	G4	Green data signal (緑データ信号)	18	G5	Green data signal(MSB) (緑データ信号)	19	GND	Power Supply (0V, GND) (電源 (0V, GND))	20	B0	Blue data signal(LSB) (青データ信号)	21	B1	Blue data signal (青データ信号)	22	B2	Blue data signal (青データ信号)	23	B3	Blue data signal (青データ信号)	24	B4	Blue data signal (青データ信号)	25	B5	Blue data signal(MSB) (青データ信号)	26	GND	Power Supply (0V, GND) (電源 (0V, GND))	27	DENA	Data enable signal(to settle the viewing area) (データイネーブル (データ期間表示信号))	28	VCC	Power Supply (電源)(DC 3.3V or 5V)	29	VCC	Power Supply (電源)(DC 3.3V or 5V)	30	TEST	This pin should be open. Test signal output for only internal test use. (テスト信号出力端子 (システム側でオープンにしてください))	31	REV	Reverse scans control. L = Normal, H = Reverse (表示方向切換え。L=通常走査、H=逆走査)
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Comparison of the specifications



Specification comparison list		T-51750GD065J-LW-BGN [Current product]	TBD [New product]																				
LED Interface	Connector	CN2 : SHLP-06V-S-B (HIROSE) CN3 : SHLP-06V-S-B (HIROSE)	←																				
	Pin assignment	CN2	←																				
		No.		Symbol(記号)	Functional Description (機 能 説 明)	1	ANODE-1(RED)	LED Anode Terminal (LED アノード端子)	2	ANODE-2(RED)	LED Anode Terminal (LED アノード端子)	3	NC	Non Connection (未使用端子)	4	NC	Non Connection (未使用端子)	5	CATHODE-1(BLACK)	LED Cathode Terminal (LED カソード端子)	6	CATHODE-2(BLACK)	LED Cathode Terminal (LED カソード端子)
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CN3																							
No.		Symbol(記号)		Functional Description (機 能 説 明)	1	ANODE-3(RED)	LED Anode Terminal (LED アノード端子)	2	ANODE-4(RED)	LED Anode Terminal (LED アノード端子)	3	NC	Non Connection (未使用端子)	4	NC	Non Connection (未使用端子)	5	CATHODE-3(BLACK)	LED Cathode Terminal (LED カソード端子)	6	CATHODE-4(BLACK)	LED Cathode Terminal (LED カソード端子)	
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6		CATHODE-4(BLACK)		LED Cathode Terminal (LED カソード端子)																			

Revision History



Rev	Mark	Name	Date	Contents
00	None	I. Kawajiri	2021/11/12	Initial release
01	①			
02	②			
03	③			

THE NEW VALUE FRONTIER



KYOCERA Corporation