

# OPTREX

To whom may concern.

Issued on February 13 2009

## Product Change Notification

Thank you for your support of our TFT-LCD.

Nowadays, the demand of high image quality is essential for industrial LCD fields. To meet the demands, we will release new models for 8.4VGA to get better image quality. The new products have NCM\* function, wider viewing angle, Higher contrast ratio and higher response time compared with current models.

This letter is to inform you that we are changing our 8.4VGA product in order to achieve technical advancements.

\*) NCM: Natural Color Matrix function is our original color reproduction technology.

Issue Date	Last Buy Date	Notification No.	Last Ship Date
Feb-13-2009	August 31 <sup>st</sup> 2009	ECN004	TBD

Product:

New model	Current model	Note
T-55399D084J-FW-A-ABN	T-51638D084J-FW-A-AB	Anti-glare model
T-55399D084J-FW-A-ACN	T-51638D084J-FW-A-AC	Anti-reflection model

New models are ready for production and shipment under 90 days lead time after your PO.

Description of Change:

- MP: now
- Replacement target date: September, 2009

Effect of Change:

There is no effect on quality, i.e. performance, reliability, mechanical, electrically, and RoHS compliance.

No part number or specification change.

Schedule:

- New Sample: per request
- MP schedule: June 2009

Should you have any questions, please contact your Optrex sales representative.

T. Sakai

Items	Current	New
	T-51638D084J-FW-A-AB/AC	T-55399D084J-FW-A-ABN/ACN
<b>(a) Overview</b>		
Viewing Angle (CR $\geq$ 10)	-65~65°(H) -60~50°(V)	-80~80°(H) -60~80°(V)
Module Mass	360	350
NCM	No	Yes
<b>(b) Absolute Maximum Ratings</b>		
Operation Temperature (Panel) [T <sub>op</sub> ]	Min: -20°C, Max: 70°C	Min: -30°C, Max: 80°C
Operation Temperature (Ambient) [T <sub>op</sub> ]	Min: -20°C, Max: 70°C	Min: -30°C, Max: 80°C
Storage Temperature [T <sub>stg</sub> ]	Min: -20°C, Max: 80°C	Min: -30°C, Max: 80°C
<b>(c) Electrical Characteristics</b>		
Power Supply Current for LCD [ICC]	Typ: 240, Max: 400	Typ: 320, Max: 500
Lamp Voltage [VL]	Typ: 450	Typ: 400
Lamp Current [IL]	Max: 7.0	Max: 7.5
Lamp Frequency [FL]	Max: 60	Max: 70
Starting Lamp Voltage [VS]	1000V: Ta=25°C 1200V: Ta=0°C 1350V: Ta=-20°C	850V: Ta=25°C 1190V: Ta=0°C 1450V: Ta=-30°C
<b>(d) Interface Pin Connection</b>		
Pin No. 3 [HD]	Yes	N/A
Pin No. 4 [VD]	Yes	N/A
<b>(e) Interface Timing(*1)</b>		
DENA	Front porch & Back porch are defined.	Blanking time, Frequency & Period are defined.
HD & VD	Yes	N/A
<b>(f) Optical Characteristics</b>		
Contrast Ratio [CR]	Min: 300, Typ: 500	Min: 390, Typ: 600
Brightness (IL=6.5mA) [Lw]	Min: 350	Min: 380
Response Time [tr]	Typ: 6	Typ: 4
Response Time [tf]	Typ: 19	Typ: 12
Viewing Angle (CR $\geq$ 10)	Typ: -65~65°(H) -60~50°(V)	Typ: -80~80°(H) -60~80°(V)
Red	Rx: 0.558 $\pm$ 0.03, Ry: 0.327 $\pm$ 0.03	Rx: 0.560 $\pm$ 0.03, Ry: 0.321 $\pm$ 0.03
Green	Gx: 0.318 $\pm$ 0.03, Gy: 0.524 $\pm$ 0.03	Gx: 0.313 $\pm$ 0.03, Gy: 0.529 $\pm$ 0.03
Blue	Bx: 0.155 $\pm$ 0.03, By: 0.138 $\pm$ 0.03	Bx: 0.155 $\pm$ 0.03, By: 0.143 $\pm$ 0.03
<b>(g) Reliability Test Condition</b>		
High Temperature Operation	70°C, 240h	80°C, 240h
Low Temperature Operation	-20°C, 240h	-30°C, 240h
Low Temperature Storage	-20°C, 240h	-30°C, 240h