### **VNR10C209-INV**

PRODUCT INFORMATION

All information is subject to change without notice. Please read bottom notes.

# **TENTATIVE**

#### **MECHANICAL SPECIFICATIONS**

Item	Specifications
Dimensional Outline	32.5(W)×126.5(H)×12.0max.(D) (mm)
Applicable TFT Module	LTM10C209A, LTM10C209H, LTM10C273
Weight	38g(max.)

## ABSOLUTE MAXIMUM RATINGS \*1

Item	Symbol	Min.	Max.	Unit
Supply Voltage	$V_{IN}$	0	20.0	V
Input Voltage	V <sub>ON/OFF</sub>	-1	V <sub>IN</sub> +1	V
Storage Temp. *2	$T_{ m stg}$	-20	60	°C
Operating Temp. *2	$T_{op}$	0	50	°C
Humidity <sup>2</sup>	Н	10	90	%(RH)

<sup>\*1 :</sup> Do not exceed the maximum rating values under the worst probable conditions taking into account the supply voltage variation, input voltage variation, variation in part constants, ambiemt temperature and so on. Otherwise the inverter unit may be damaged.

#### **ELECTRICAL SPECIFICATION\*3**

Item		Symbol	Min.	Тур.	Max.	Unit
Supply Voltage		$V_{IN}$	9.0	12.0	19.0	V
Input Current (V <sub>IN</sub> =12V)		<i>I</i> <sub>IN</sub>	570	670	770	mA
Open Output Voltage		$V_{OPEN}$	1500	ı	1	V(0-p)
Frequency		f	25	30	35	kHz
Rush Current (V <sub>IN</sub> =12V)		<b>I</b> RUSH	1	1	8.0	A(o-p)
Leak Current (V <sub>IN</sub> =12V)		<b>I</b> LEAK	-	-	10	μΑ
Output Current	Volume Max.	<u></u>	5.5	6.0	6.5	mA(rms)
Output Current	Volume Min.	<i>l</i> <sub>FL</sub>	2.0	2.5	3.0	
V <sub>ON/OFF</sub> Signal Voltage (V <sub>IN</sub> =12V)		$V_{ON}$	-0.8	ı	0.6	V
		V <sub>OFF</sub>	$V_{\text{IN}}$ -0.3	-	V <sub>IN</sub> +0.8	V
				open		

<sup>\*3 :</sup> The characteristics without remarks are measured on condition with  $V_{\rm IN}$ =12V and VR-VR60:short.

<sup>\*2 :</sup> Wet bulb temperature should be 39 °C max.,and no condensation of water.

<sup>\*</sup>The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by Toshiba Matsushita Display Technology or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Toshiba Matsushita Display Technology or others.

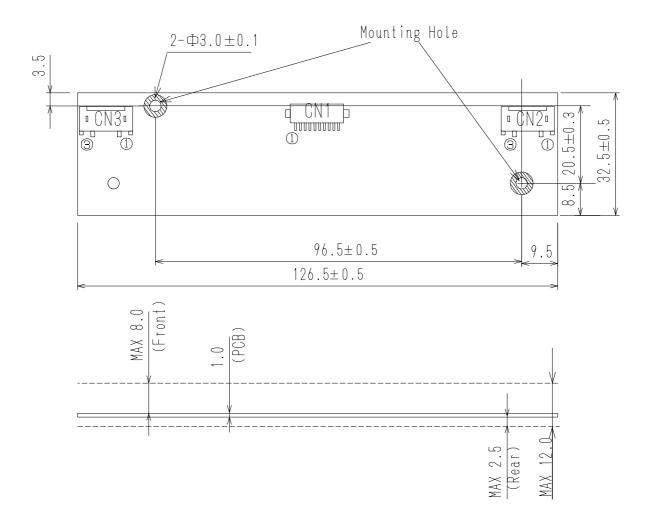
<sup>\*</sup>The information contained herein may be changed without prior notice. It is therefore advisable to contact Toshiba Matsushita Display Technology before proceeding with the design of equipment incorporating this product.

#### **DIMENSIONAL OUTLINE**

Unit: mm

Standard tolerance: 0.5

CN2,3 Pin No.1 High Voltage 3 Low Voltage

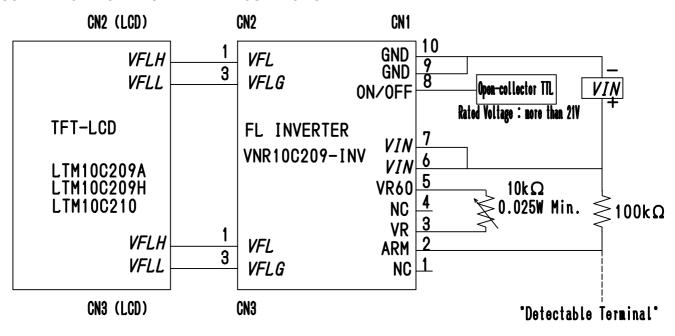


<sup>\*4 :</sup> Recommended screw for mounting is M2.5.

<sup>\*5 :</sup> Dimension without tolerance are reference purpose only.

<sup>\*6 :</sup> When fixing this inverter, do not use any holes other than the mounting holes shown above.

#### SCHEMATIC DIAGRAM OF INVERTER CONNECTION



#### **CONNECTOR PIN ASSIGNMENT FOR INTERFACE**

CN1: DF13-10P-1.25 (HIROSE ELECTRIC CO.,LTD.)

[Mating Connector : DF13-10S-1.25C (HIROSE ELECTRIC CO.,LTD.)]

Pin No.	Symbol	Function	
1*7	NC	No Connection	
2 *8	ALM	Alarm signal(output) 0 to 0.4V :Normal operation	
		High impedance : Non operation	
3 <sup>*9</sup>	VR	Connect the Potentiometer(10kΩ) between VR and VR60	
4 *7	NC	No Connection	
5 <sup>*9</sup>	VR60	Connect the Potentiometer(10kΩ) between VR and VR60	
6	VIN	Supply Voltage: 12V (9~19V)	
7	VIN	Supply Voltage: 12V (9~19V)	
8	ON/OFF	"L": FL ON, "H" or "Open": FL OFF	
9	GND	OV	
10	GND	OV	

- \*7 : Don't connect anything to the terminal of "NC".
  - If something connect to "NC" during operation, inverter may be damaged.
- \*8 : This signal is an Alarm signal. Please connect resistor( $100k\Omega$ ) between this signal line and VIN. So if FL stops operation by any trouble or its lifeend, this output signal becomes high impedance.
- \*9 : Connect the Potentiometer( $10k\Omega$ ) for Luminunce adjustment between "VR" and "VR60" terminal. 0  $\Omega$  : Luminance MAX.

10kΩ: Luminance MIN.

In case, electrical circuit or toggle switch adjust the luminance instead of potentiometer, please avoid VR-VR60 to open.

If VR-VR60 is open for any period of time, it is possible that inverter is not work normally.

CN2. CN3: SM02(8.0)B-BHS-1 (JAPAN SOLDERLESS TERMINAL MFG CO.,LTD.)

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Pin No.	Symbol	Function	
1	$V_{FL}$	Output Power Supply for FL (High Voltage)	
2	NC	No Connection	
3	$V_{FLG}$	Output Power Supply for FL (Low Voltage)	