

## TFT COLOR LCD MODULE

### NL10276BC13-01C

## LAMP HOLDER SET REPLACEMENT MANUAL

(1st edition)

**This manual applies replacement of lamp holder set.**

### Contents

1. PRECAUTIONS.....	2
1.1 MEANING OF CAUTION SIGNS .....	2
1.2 CAUTIONS.....	2
1.3 ATTENTIONS .....	2
2. REPLACEMENT PROCEDURE .....	3
2.1 PREPARATION .....	3
2.2 REGARDING THE LAMP HOLDER SET ....	3
2.3 REPLACEMENT.....	4
3. AND SO FORTH .....	4

### ***Precautions to be observed by the customers***

NEC LCD Technologies, Ltd.(hereinafter called “NEC”) recommends that the customer returns the LCD module through the original purchase path to NEC, when replacement of the lamp holder is required.



Customer should consider the followings before replacing the lamp holder.

- (1) This work can cause a lowering of the quality (performance). Even if the replacement work is performed in accordance with this manual, NEC is unable to guarantee the lowering of the quality, which is caused by customer's replacement work.
- (2) Customer's replacing the lamp holder do so at their own risk. NEC will not assume any liability for the LCD module, and will not warrant any LCD module, which have been modified by the customer, including replacement of the lamp holder, even when the attached procedure is used. If it is necessary to return the LCD module to NEC after an attempted repair, NEC will charge the cost of the repairs to the customer.

## 1. PRECAUTIONS

### 1.1 MEANING OF CAUTION SIGNS

The following caution signs have very important meaning. **Be sure to read '1.2 CAUTIONS' and '1.3 ATTENTIONS', after understanding these contents!**

	This sign has the meaning that customer will be injured by himself, if customer has wrong operations.
	This sign has the meaning that customer will be injured by himself or the product will sustain a damage, if customer has wrong operations.

### 1.2 CAUTIONS

- (1) Be sure to wait some time after turning power OFF before starting replacement work. There is a danger of burn injury, because the lamp holders are hot after working.
- (2) Take care not to injure yourself while treating the metal frame of the lamp holder.
- (3) Do not shock and press the LCD panel and the lamp holder. There is a danger of breaking, because they are made of glass.

### 1.3 ATTENTIONS

- (1) Do not press or rub on the sensitive LCD panel surface of the LCD module. When cleaning the LCD panel surface, use of the cloth with ethanolic liquid such as screen cleaner for LCD is recommended.
- (2) When handling the product, take the measures of electrostatic discharge with such as earth band, ionic shower and so on, because the LCD module may be damaged by electrostatic.
- (3) Properly connect the lamp cable (FPC) to socket without incomplete connection. After connecting, be careful not to hook the lamp cables because incomplete connection may occur by hooking the lamp cables. This incomplete connection may cause abnormal operation.
- (4) If dirt or dust gets on the luminous portion of LED in the lamp holder, display mura might occur. Therefore, NEC recommends using a clean room or clean bench (the class "D" level).

## 2. REPLACEMENT PROCEDURE

### 2.1 PREPARATION

The following facilities and tools are required.

- (1) Finger stalls (glove)
- (2) Grounding band (earth band)
- (3) Workbench which is covered with conductive mat (workbench equipped to be prevent static charges can be used)
- (4) Replacing parts

LCD Module	Lamp holder set
NL10276BC13-01C	65LHS13

### 2.2 REGARDING THE LAMP HOLDER SET

- (1) One set consists of two holders, one is for upper side and another is for lower side.  
Confirm the upper side and the lower side of the lamp holders by referring to lamp holder specification in advance.
- (2) Don't put the upper holder in lower side or the lower holder in upper side and put in by force.
- (3) To prevent the luminance un-uniformity, replace the both sides of the lamp holder. The replacement of the one side causes the luminance un-uniformity.

## 2.3 REPLACEMENT

- (1) Put on the fingerstalls and the grounding band.
- (2) Turn the ionizer switch on.
- (3) The LCD module should be kept turned off, and wait the lamp holder gets cool down enough.
- (4) Replacement of the upper side lamp holder. (Fig.1, Part A)

### (a) Removing the lamp holder

- Unlock the connector and then remove the lamp cable (FPC) from the connector. (Fig.2)
- Remove the lamp cable from the cable clamp.
- As depressing the stopper (Fig.3), pull off the lamp holder with the lamp cable (FPC) along by the sheath slowly, gently and straightforward. Be careful to pull out the lamp holder. (Fig.4)

Note1: Don't depress the stopper strongly more than enough to unlock the stopper.

Note2: If pinch the metallic part of the lamp holder, pull out carefully without hurting yourself

### (b) Set up of the replacement lamp holder

- As depressing the stopper, put in the new lamp holder slowly, gently and straightforward along by the sheath to the original position.
- Put back the stopper.
- Fix the lamp cable (FPC) into the cable clamp.
- Put in the lamp cable (FPC) into the connector and then lock the connector.

Note1: If pinch the metallic part of the lamp holder, pull in carefully without hurting yourself

Note2: Take care not to damage the lamp cable (FPC).

Note3: Properly connect the lamp cable (FPC) to socket without incomplete connection. After connecting, be careful not to hook the lamp cables because incomplete connection may occur by hooking the lamp cables. This incomplete connection may cause abnormal operation.

- (5) Replace the lower side lamp holder (Fig.1, Part B) same as upper side.

## 3. AND SO FORTH

Do not reuse the replaced lamp holder set.

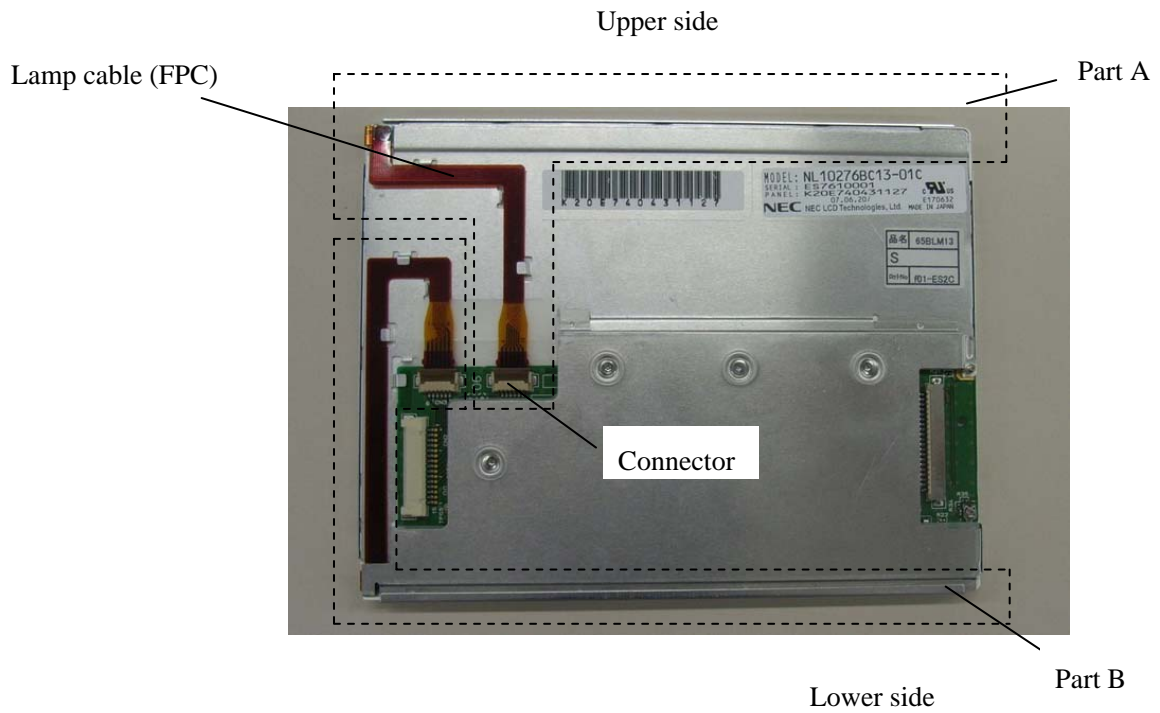


Fig.1: Rear side of the LCD module rear side

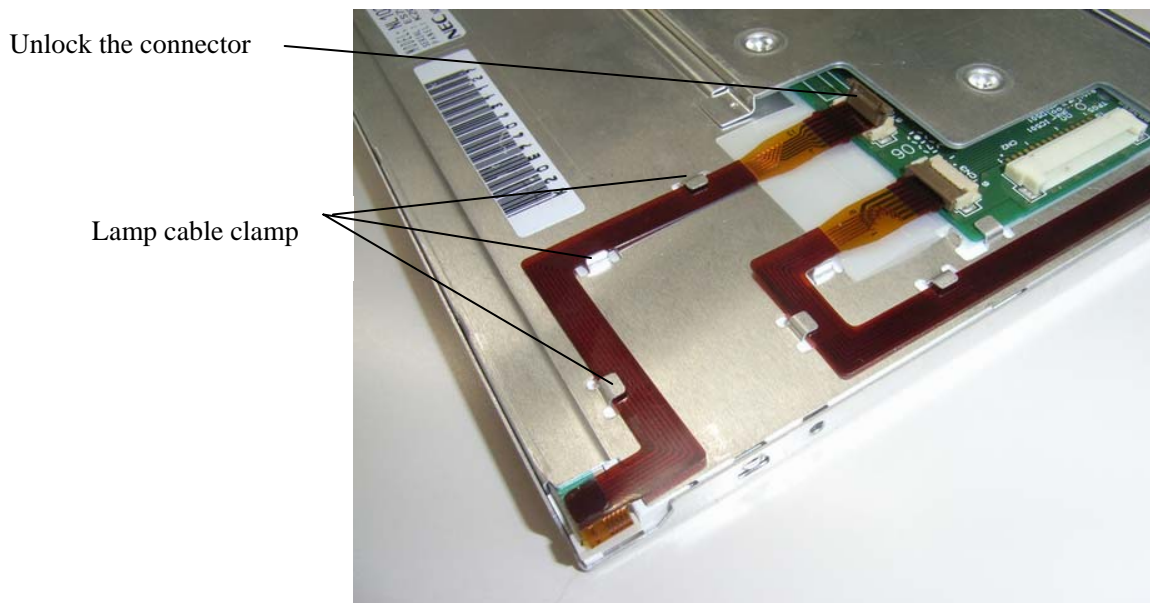


Fig.2

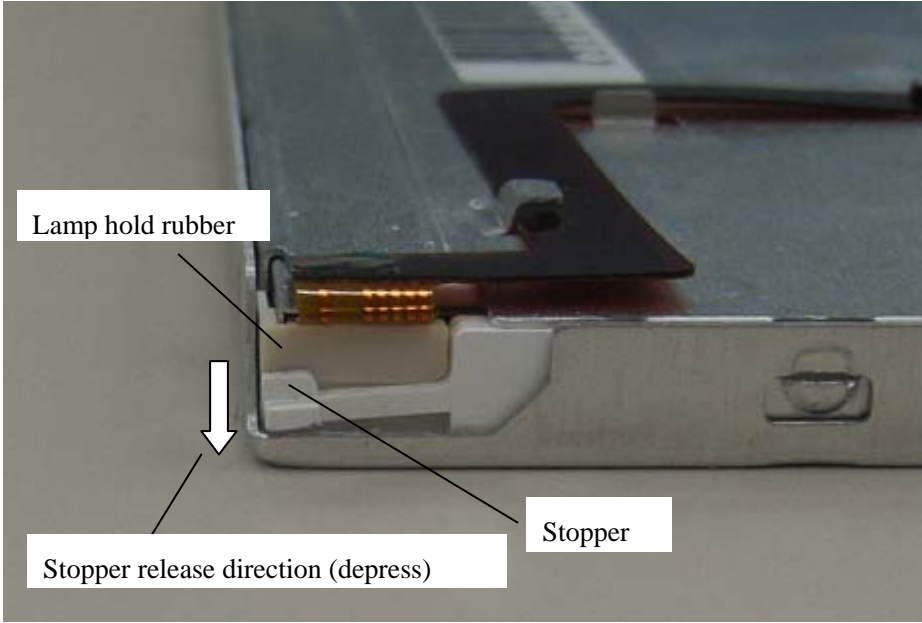


Fig.3

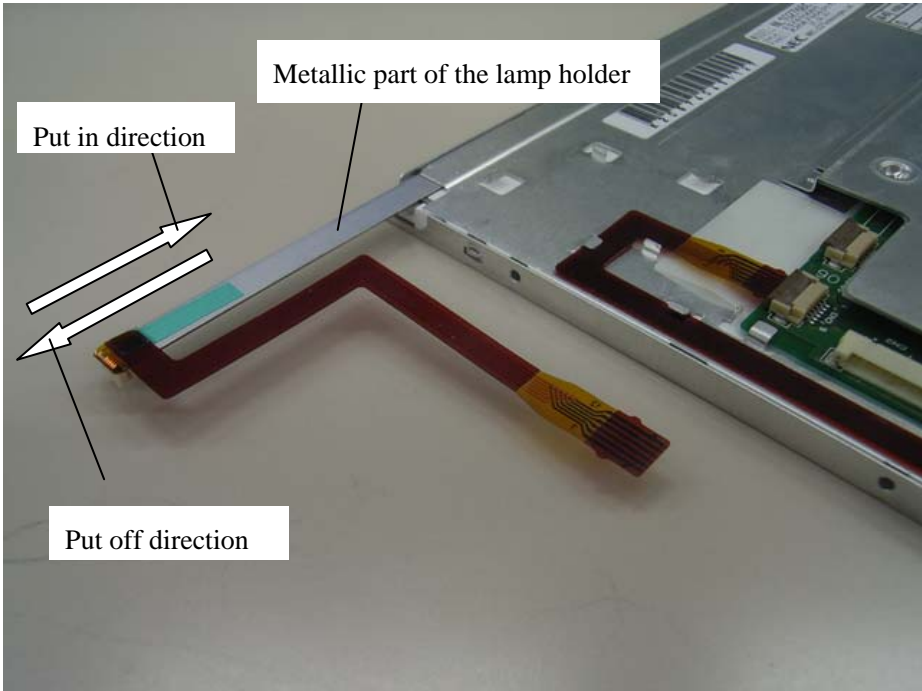


Fig.4

Edition	Document number	Issued date	Revision contents and signature									
1st edition	DOD-PP-0404	Dec. 18, 2007	<p><b>Revision contents</b></p> <p>New issue.</p> <p><b>Signature of writer</b></p> <table data-bbox="571 461 1439 573"> <tr> <td data-bbox="571 461 839 495"><i>Approved by</i></td> <td data-bbox="890 461 1120 495"><i>Checked by</i></td> <td data-bbox="1177 461 1439 495"><i>Prepared by</i></td> </tr> <tr> <td data-bbox="571 495 839 539"><i>T. Ogawa</i></td> <td data-bbox="890 495 1120 539">_____</td> <td data-bbox="1177 495 1439 539"><i>A. Kumano</i></td> </tr> <tr> <td data-bbox="571 539 839 573">T. OGAWA</td> <td data-bbox="890 539 1120 573">_____</td> <td data-bbox="1177 539 1439 573">A. KUMANO</td> </tr> </table>	<i>Approved by</i>	<i>Checked by</i>	<i>Prepared by</i>	<i>T. Ogawa</i>	_____	<i>A. Kumano</i>	T. OGAWA	_____	A. KUMANO
<i>Approved by</i>	<i>Checked by</i>	<i>Prepared by</i>										
<i>T. Ogawa</i>	_____	<i>A. Kumano</i>										
T. OGAWA	_____	A. KUMANO										