

PREPARED BY :    DATE	<p style="text-align: center;"><b>SHARP</b></p> <p style="text-align: center;">LIQUID CRYSTAL DISPLAY GROUP SHARP CORPORATION</p> <p style="text-align: center;"><b>SPECIFICATION</b></p>	SPEC No. LD - 8706
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DEVICE SPECIFICATION FOR

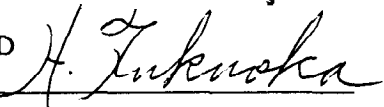
**BACKLIGHT UNIT**

MODEL No.            **LQ0B152**

CUSTOMER'S APPROVAL

DATE \_\_\_\_\_

BY \_\_\_\_\_

PRESENTED BY 

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## (1) Subject

LQ0B152 : Literature on backlight unit for 35cm(13.8") TFT-LCD module.

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## (2) Introduction

This backlight unit is a service part for 35cm TFT-LCD module (LQ14X01) whose backlight is designed to be replaceable.

## (3) Construction and Outline

The unit is composed of cold cathode fluorescent tubes, rubber cushions, I/O wires (including connectors), and lamp holders.

\* Outline drawing of backlight unit : See Fig. 1.

## (4) Input / Output terminals

### 4-1) I/O terminal order

Table 1

Pin No.	Symbol	i/o	Description
1	V <sub>HIGH</sub>	i	Power supply for lamp (High voltage side)
2	NC	-	No connection
3	V <sub>LOW</sub>	i	Power supply for lamp (Low voltage side)

### 4-2) I/O connector

- 1) Installed socket housing : BHR-03VS-1
- 2) Applicable connector housing: SM02(8.0)B-BHS-1  
( produced by Japan Solderless Terminal )

## (5) Electrical characteristics

Table 2

Ta=25°C

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Remarks
Lamp current	I <sub>L</sub>	2.0	5.5	6.0	mArms	(just for reference)
Lamp voltage	V <sub>L</sub>	-	650	-	Vrms	【Note 1】
Power consumption	W <sub>L</sub>	-	3.6	-	W	【Note 2】
Frequency	F <sub>L</sub>	20	35	60	kHz	
Kick-off voltage	V <sub>s</sub>	-	-	1,250	Vrms	Ta=25°C
	V <sub>s</sub>	-	-	1,400	Vrms	Ta=0°C
Start up time	T <sub>s</sub>	-	-	1.0	sec	
Lamp life	L <sub>L</sub>	10,000			hours	【Note 3】

【Note 1】 Available current range considering light-adjustment.

【Note 2】 Calculated value for reference (I<sub>L</sub> × V<sub>L</sub>)

【Note 3】 Lamp life terminates when the luminance under the rated power reached 50% of the initial value after the continuous operation under rated power and the room temperature.

## (6) Optical characteristics

Table 3

Ta=25°C

Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Remarks
Luminance	Y <sub>L</sub>		26,000		cd/m <sup>2</sup>	(just for reference)
Chromaticity	X	0.261	0.291	0.321		【Note 3】
	Y	0.241	0.271	0.301		

【Note 3】 The measurement shall be executed 15~20 minutes after lighting attracted power.

The value measured at the center of the cold cathode fluorescent tube at a viewing cone 0.1° by TOPCON luminance meter BM-7.

## (7) Environmental condition

- 7-1) Operating temperature range 0 ~ +50 °C
- 7-2) Storage temperature range -25 ~ +60 °C

## (8) Procedure to exchange backlight unit

Fig. 2 shows the procedure to exchange backlight unit.

Please follow the below instructions to exchange the backlight unit for TFT-LCD module .

\* When handling the module , please be careful not to scratch on the LCD panel surface or not to make it dirty.

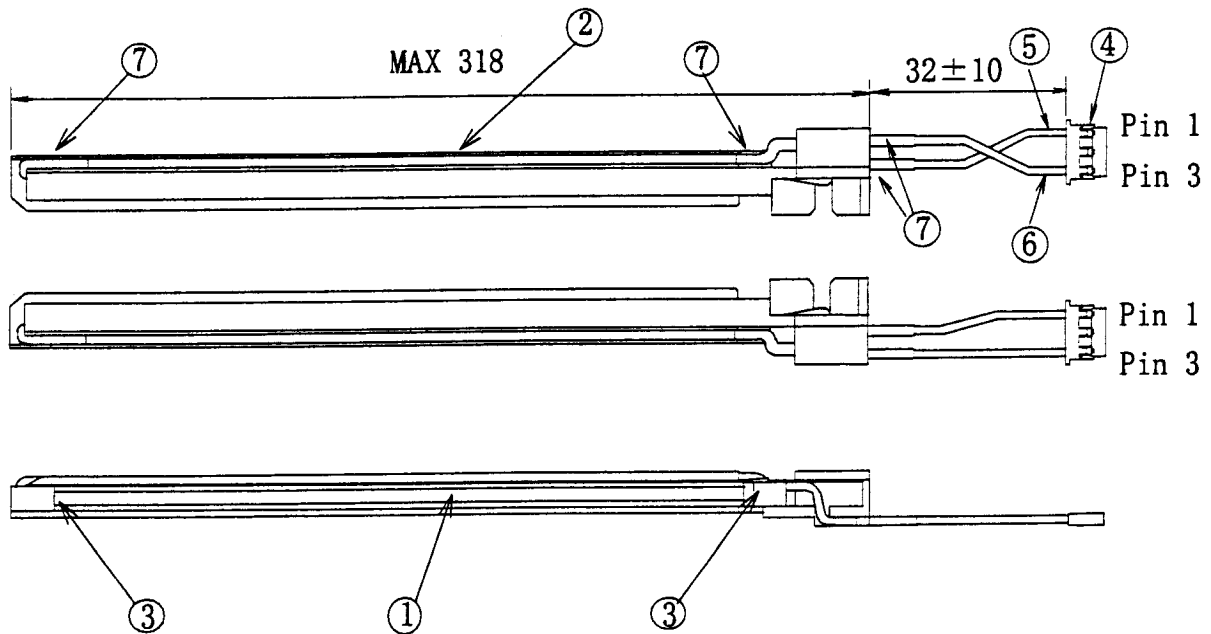
- 8-1) Work this exchange putting the module(1) rear side on the top and locate the inverter portion at the worker side. Disconnect 2 connectors between the lamp(A) and the inverter(B).  
Please be careful not to pull out the lead wire.
- 8-2) The latch for the holder can be loosened by pulling out and slightly twisting the holders. The twist direction is clockwise for the right side holder (bottom side) and counterclockwise for the left side holder (top side).  
Please draw the lamp holder slowly and not to pull out the lead wire.
- 8-3) Insert the new lamp holder(2) into the backlight slot slowly and fix the holder latching to the hooking portion.  
Please be careful not to put foreign articles into the holder.
- 8-4) Connect 2 connectors between the lamp and the inverter.

## (9) Packing form

Packing form is shown in Fig. 3.

## (10) Others

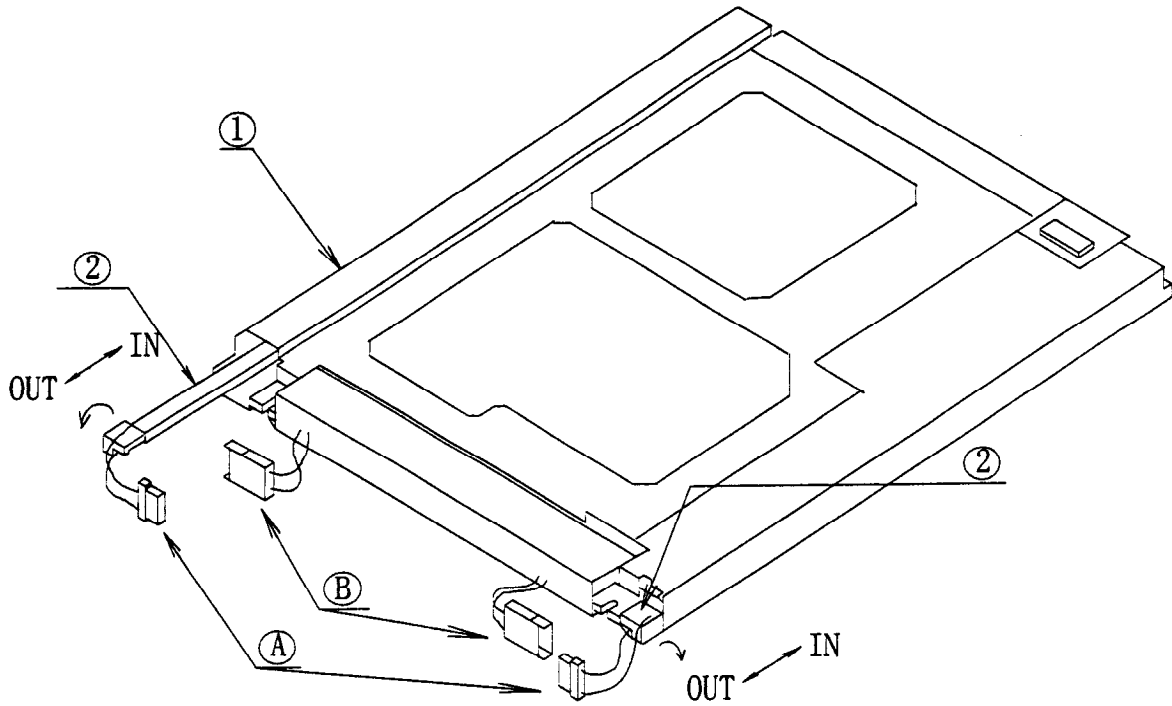
If any problem occurs in relation to the description in the present specifications or other relevant items, it shall be eliminated in all sincerity through discussion.



Pin NO.	Symbol	Color
1	V <sub>HIGH</sub>	Blue
2	NC	—
3	V <sub>LOW</sub>	White

No.	Part unit	Q'ty	Material etc.
1	Lamp	2	φ 2.6 L=297mm
2	Lamp holder	2	PC
3	Lamp rubber cushion	4	Silicon rubber
4	Connector	2	JST BHR-03VS-1
5	Wire (High voltage side)	2	UL3239#24DC3kV L= 32 ± 10 mm
6	Wire (Low voltage side)	2	UL3239#24DC3kV L= 32 ± 10 mm
7	Shrink tube	6	Sumitube

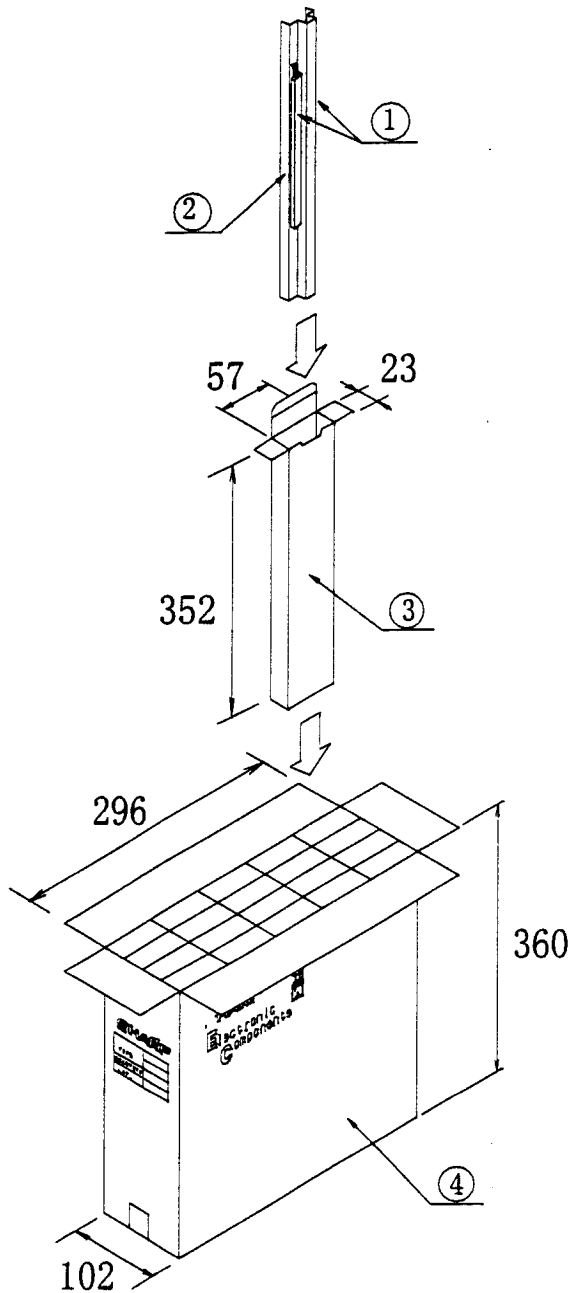
Fig. 1. Outline drawing of backlight unit



	Name	Q'ty
A	connectors between the lamp	2
B	connectors between the inverter	2

No.	Part	Q'ty
1	Module	1
2	Lamp assy	2

Fig. 2. Procedure to exchange backlight unit



No.	Part unit	Q'ty
1	Lamp Holder × 2	20set
2	Bumper	20
3	Inner Carton	20
4	Outer Carton	1

20 unit in each carton

Weight (g) : 1500 g

TYPE	LQ0B152
QUANTITY	20
LOT (DATE)	

Fig. 3. Packing form