

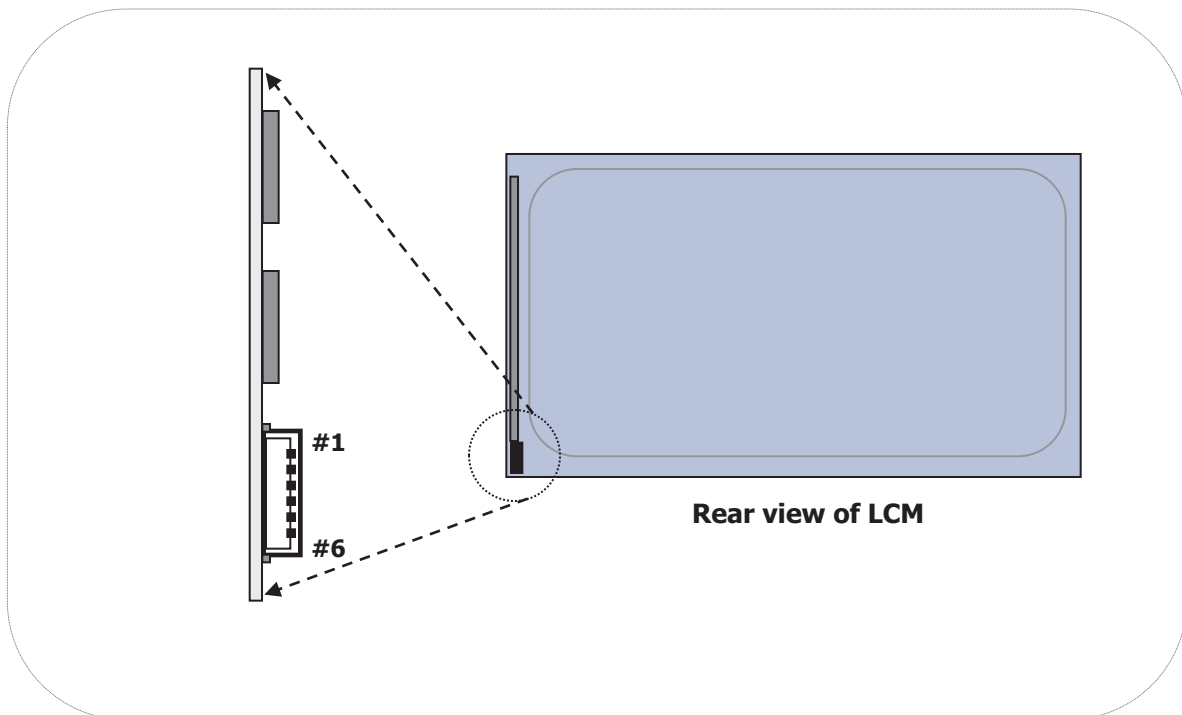
## Product Specification

### 3-2-2. BACKLIGHT CONNECTOR PIN CONFIGURATION(CN3)

The LED interface connector is a model SM06B-SHJH(HF) manufactured by JST. The mating connector is a SHJP-06V-S(HF) or SHJP-06-A-K(HF) and Equivalent. The pin configuration for the connector is shown in the table below.

**Table 5. LED connector pin configuration**

Pin	Symbol	Description	Notes
1	FB1	Channel1 Current Feedback	
2	NC	No connection	
3	VLED	LED Power Supply	
4	VLED	LED Power Supply	
5	NC	No connection	
6	FB2	Channel2 Current Feedback	



[ Figure 5 ] Backlight connector view

**Product Specification**
**Table 3. LED array ELECTRICAL CHARACTERISTICS**

Parameter	Symbol	Condition	Values			Unit	Notes
			Min.	Typ.	Max.		
LED String Current	Is		-	60	65	mA	1,2,5
LED String Voltage	Vs		41.3	44.3	47.3	V	1,5
Power Consumption	PBar		5.0	5.3	5.7	Watt	1,2,4
LED Life Time	LED_LT		30,000	-	-	Hrs	3

Notes) The LED Bar consists of 30 LED packages, 2 strings (parallel) x 15 packages (serial)

**LED driver design guide**

: The design of the LED driver must have specifications for the LED in LCD Assembly. The performance of the LED in LCM, for example life time or brightness, is extremely influenced by the characteristics of the LED driver.

So all the parameters of an LED driver should be carefully designed and output current should be Constant current control.

Please control feedback current of each string individually to compensate the current variation among the strings of LEDs.

When you design or order the LED driver, please make sure unwanted lighting caused by the mismatch of the LED and the LED driver (no lighting, flicker, etc) never occurs.

When you confirm it, the LCD module should be operated in the same condition as installed in your instrument.

**Notes :**

1. The specified values are for a single LED bar.
2. The specified current is defined as the input current for a single LED string with 100% duty cycle.
3. The LED life time is defined as the time when brightness of LED packages become 50% or less than the initial value under the conditions at  $T_a = 25 \pm 2^\circ\text{C}$  and LED string current is typical value.
4. The power consumption shown above does not include loss of external driver.  
 The typical power consumption is calculated as  $P_{\text{Bar}} = V_s(\text{Typ.}) \times I_s(\text{Typ.}) \times \text{No. of strings}$ .  
 The maximum power consumption is calculated as  $P_{\text{Bar}} = V_s(\text{Max.}) \times I_s(\text{Typ.}) \times \text{No. of strings}$ .
5. LED operating conditions must not exceed Max. ratings.