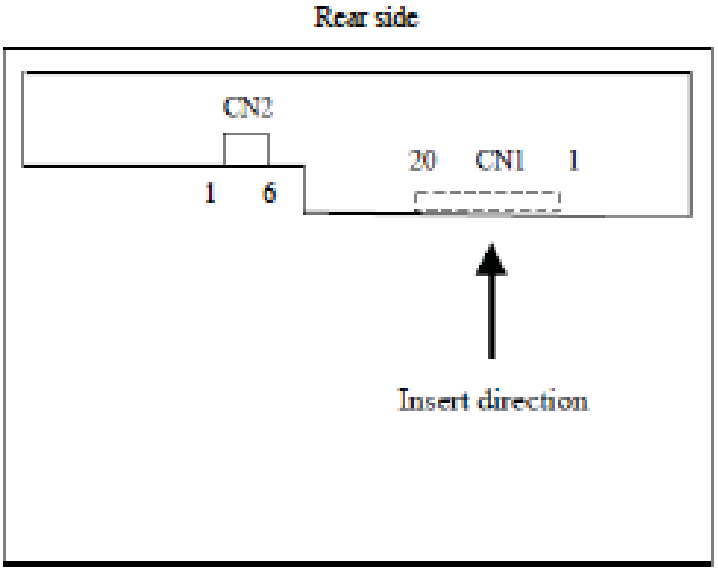
4.5.2 Backlight lamp

CN2 socket (LCD module side): MSB24038P6 (STM) or equivalent.
Adaptable plug: P24038P6 (STM) or equivalent.

Pin No.	Symbol	Signal	Remarks
1	VDD	Power supply	-
2	VDD	Power supply	-
3	GND	Ground	-
4	GND	Ground	-
5	BRTC	Back light ON/OFF control	High- On / Low- Off
6	PWM	Luminance control	PWM Dimming

4.5.3 Positions of plug and socket



4.3 ELECTRICAL CHARACTERISTICS

4.3.1 LCD panel signal processing board

(Ta= 25°C)

Parameter		Symbol	min.	typ.	max.	Unit	Remarks
Power supply voltage		VCC	3.0	3.3	3.6	V	-
Power supply current		ICC	-	400 Note1	840 Note2	mA	at VCC= 3.3V
Permissible ripple voltage		VRPC	-	-	300	mVp-p	for VCC
Differential input threshold voltage	High	VTH	-	-	+100	mV	at VCM= 1.25V Note3
	Low	VTL	-100	-	-	mV	
Terminating resistance		RT	-	100	-	Ω	-
Input voltage for MSL and FRC signals	High	VFH	1.65	-	VCC	V	-
	Low	VFL	0	-	0.40	V	
Input current for MSL and FRC signals	High	IFH	-	-	10	μA	-
	Low	IFL	-10	-	-	μA	

Note1: Checkered flag pattern [by EIAJ ED-2522]
Note2: Pattern for maximum current
Note3: Common mode voltage for LVDS receiver

4.3.2 Backlight

(Ta= 25°C)

Parameter		Symbol	min.	typ.	max.	Unit	Remarks
Power supply voltage		VDD	10.8	12.0	12.6	V	Note1
Power supply current		IDD	-	880	1,210 Note2	mA	At the maximum luminance control.
Permissible ripple voltage		VRPD	-	-	200	mVp-p	for VDD Note3
Input voltage for PWM signal	High	VDPH1	1.2	-	5.5	V	-
	Low	VDPL1	-	-	0.35	V	
Input voltage for BRTC signal	High	VDPH2	1.5	-	5.5	V	-
	Low	VDPL2	0	-	0.8	V	
PWM frequency		f_{PWM}	200	-	1k	Hz	Note4, Note5
PWM duty ratio		DR_{PWM}	1	-	100	%	Note6, Note7
PWM pulse width		tPWH	5	-	-	μs	

Note1: When designing of the power supply, take the measures for the prevention of surge voltage.
Note2: This value excludes peak current such as overshoot current.
Note3: The power supply lines (VDD and GND) may have ripple voltage during luminance control of LED. There is the possibility that the ripple voltage produces acoustic noise and signal wave noise in audio circuit and so on. Put a capacitor between the power supply lines (VDD and GND) to reduce the noise if necessary.