



**THE DATASHEET OF  
SIPF-200A-RH**



# TAIYO YUDEN

## PRELIMINARY SPECIFICATIONS

LCD Backlight Driver

Model

# SIPF200A-RH

RoHS  
COMPLIANT

12 Volt Input

Industrial Grade Single Tube CCFT Inverter

Brightness Control

### Physical Specifications

Dimensions:	22.7mm x 96.5mm x 7.3mm (0.894" x 3.79" x 0.287")
Weight:	20g (0.704 oz.)
Operating Temp:	0 to 55°C, convection cooling
Relative Humidity:	20% to 90%, non-condensing
Storage:	-20 to 85°C/5-95% RH non-condensing
Impact Resistance:	50G half wave per 2 msec
Vibration Resistance:	10-55-10 Hz/min @ 1.5mm



### Input Specifications\*

Item	Condition	Standard
Input Voltage Rated Tolerance	— Continuous Operation Starting Condition (Discharge Starting Voltage)	12.0 Vdc 8.0 Vdc - 20.0 Vdc 8.0 Vdc - 20.0 Vdc
Max. Input Current	$V_{IN} = 8.0$ Vdc Luminance @ Max.	0.75 A
Input Leak Current	$V_{IN} = 20.0$ Vdc Control terminal = H( $V_{IN}$ ) On/Off	12.0 $\mu$ A (Lamp Off)
Max. Rush Current	$V_{IN} = 20.0$ Vdc Luminance @ Max.	20.0 A <sub>zero-p</sub> /15 $\mu$ S Max.
Max. Input Power	$V_{IN} = 8.0$ Vdc Luminance @ Max.	5.1 W Typical
On/Off Control Terminal Input Current	Control Terminal L = 0.0 - 0.4 Vdc $V_{IN} = 20.0$ Vdc	$I_{LOW} = -2.0$ mA (Lamp Lighting)
	Control Terminal H = Open or $V_{IN}$	— (Lamp Off)

\*Above specifications occur @ 25  $\pm$  5°C.

### Output Specifications\*

Item	Condition	Standard		
		MIN	TYP	MAX
Non-Loaded Output Voltage (Vrms)	$V_{IN} = 8.0$ Vdc	1500	—	—
Tube Current (mArms)	Luminance @ Max. Luminance @ Min.	5.5 2.5	6.0	6.5
Max. Power Output (W)	$V_{IN} = 12.0$ Vdc/Luminance @ Max.	—	—	4.0
Ignition Frequency (kHz)	Luminance @ Max.	—	50	—
DC/DC Converter Frequency (kHz)	Luminance @ Max.	—	220	—

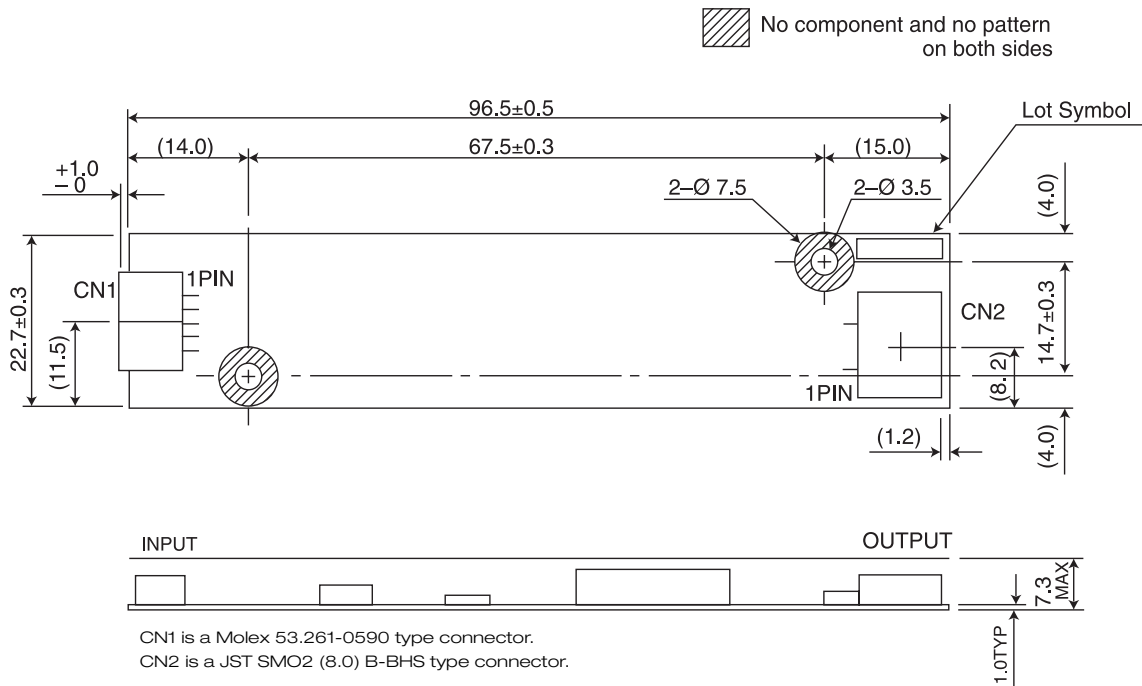
\*Above specifications occur @ 25  $\pm$  5°C &  $V_{IN} = 8.0 - 20.0$  Vdc.

Model

# SIPF200A-RH

## Luminance Variance

Item	Condition	Applied Voltage	Output Current
Luminance @ Max.	Btwn. pin 4 & pin 5	0.0 Vdc	6.0 mA
Luminance @ Min.	Btwn. pin 4 & pin 5	4.5 Vdc	2.5 mA



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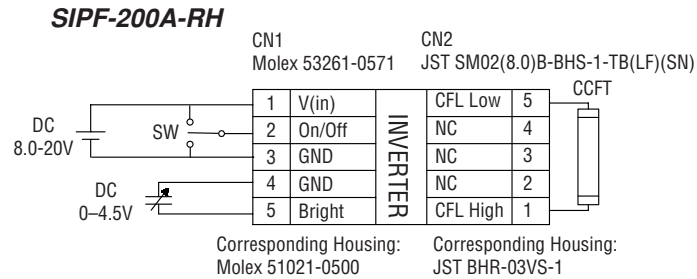
FM 32227

Model

# SIPF200A-RH

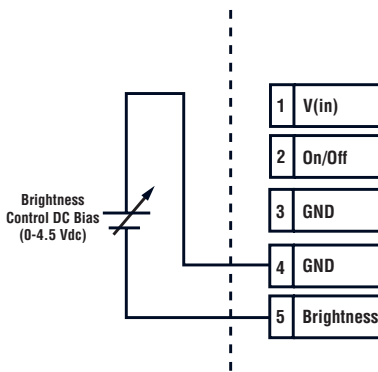
Tech Notes

## Connection Diagram



## Output Current Optimization Method

Maximum output current can be adjusted by applying bias voltage between brightness control pins as shown below.

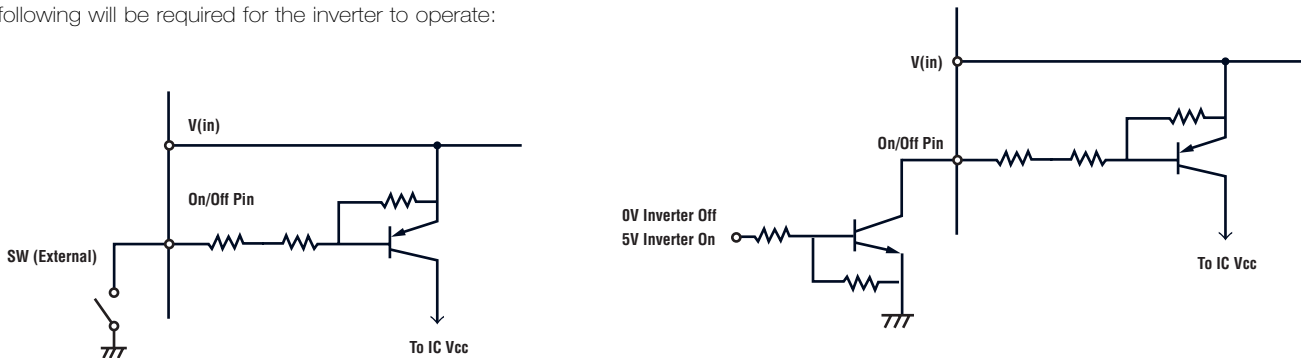


	DC Bias Voltage	Output Current
<b>Luminance Max.</b>	0 Vdc	6.0 mA
<b>Luminance Min.</b>	4.5 Vdc	2.5 mA

## On/Off Control

The on/off control is achieved by using the on/off pin on the input side of SIPF200A-RH. The circuit for the remote on/off circuitry consists of an active low TTL switch. When the circuit is open, the IC Vcc is cut off. When the circuit is closed, IC Vcc is activated. A mechanical switch or a TTL/CMOS gate needs to be placed between the remote on/off pin and ground creating a condition where the circuit is closed to activate the inverter. Either one of the following will be required for the inverter to operate:

One recommended use of logic switch for remote on/off is shown in the diagram below. Electrical specification for on/off terminal is Low 0 to 0.4V, -0.4 mA or higher when switch is closed.



1. Tie on/off pin to ground.
2. Add mechanical switch between on/off pin and ground, close switch.
3. Add TTL/CMOS switch between on/off and ground. Circuit must be closed for unit to operate (as shown above right).

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