

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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LCD Backlight Driver

SIPFISO-RH



5 Volt Input

Industrial Grade Single Tube CCFT Inverter
Brightness Control

Physical Specifications

Dimensions: 22.7mm x 96.5mm x 7.3mm

 $(0.894" \times 3.79" \times 0.287")$

Weight: 18g (0.634 oz.)
Operating Temp: 0 to 55°C

Relative Humidity: 20% to 90%, non-condensing

Storage: -20 to 85°C/5-95% RH
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)	5.0 Vdc 4.5 Vdc - 7.0 Vdc 4.5 Vdc - 7.0 Vdc
Max. Input Current	V _{IN} = 4.5 Vdc Luminance @ Max.	1.3 A
Input Leak Current	$V_{IN} = 7.0 \text{ Vdc}$ Control terminal = $H(V_{IN})$ On/Off	4.0 μA (Lamp Off)
Max. Rush Current	$V_{IN} = 7.0 \text{ Vdc}$ Luminance @ Max.	6.5 A _{zero-p} /50 μS
Max. Input Power	V _{IN} = 4.5 Vdc Luminance @ Max.	5.85 W
On/Off Control Terminal Input Current	Control Terminal $L = 0.0 - 0.4 \text{ Vdc}$ $V_{IN} = 7.0 \text{ Vdc}$	I _{LOW} = 2.0 mA (Lamp Lighting)
	Control Terminal H = Open or V _{IN}	 (Lamp Off)

^{*}Above specifications occur @ 25 ± 5°C.

Output Specifications*

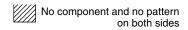
Item	Condition	Stand	Standard		
		MIN	TYP	MAX	
Output Voltage (Vrms)	$V_{IN} = 4.5 \text{ Vdc}$	1500		_	
Tube Current (mArms)	Luminance @ Max. Luminance @ Min.	5.5 2.5	6.0 —	6.5 —	
Max. Power Output (W)	$V_{IN} = 5.0 \text{ Vdc/Luminance } $ @ Max.	_	_	4.0	
Ignition Frequency (kHz)	Luminance @ Max.	<u> </u>	45	_	
DC/DC Converter Frequency (kHz)	Luminance @ Max.	_	80	_	

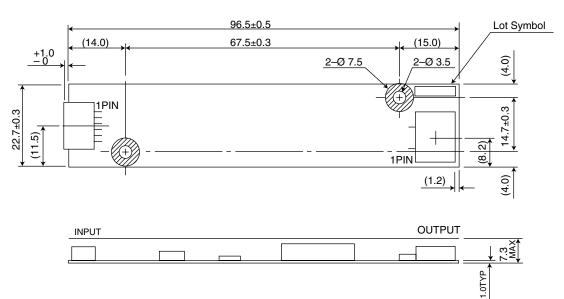
^{*}Above specifications occur @ 25 ± 5 °C & VIN = 4.5 - 7.0 Vdc.

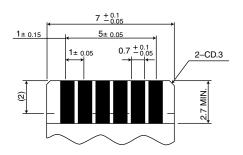


Luminance Variance

Item	Condition	Applied Voltage	Output Current
Luminance @ Max.	Btwn. pin 5 & pin 6	0.0 Vdc	6.0 mA
Luminance @ Min.	Btwn. pin 5 & pin 6	4.5 Vdc	2.5 mA







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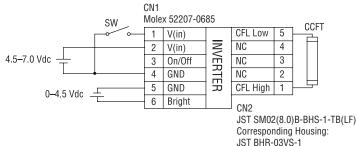




Tech Notes

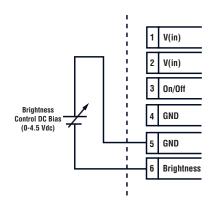
Connection Diagram

SIPF-150-RH



Output Current Optimization Method

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

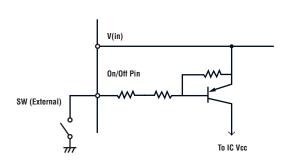


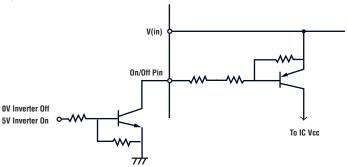
	DC Bias Voltage	Output Current	
Luminance Max.	0 Vdc	6.0 mA	
Luminance Min.	4.5 Vdc	2.5 mA	

On/Off Control

The on/off control is achieved by using the on/off pin on the input side of SIPF150. 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.
- Add TTL/CMOS switch between on/off and ground. Circuit must be closed for unit to operate (as shown above right).