TAIYO YUDEN

LCD Backlight Driver

Model

LS530-RH

12 Volt Input

Dual Tube CCFT Inverter

Brightness Control

RoHS COMPLIANT

Physical Specifications

Dimensions:	20mm x 130mm x 14mm (0.787" x 5.12" x 0.551")
Weight:	36g (1.28 oz.)
Operating Temp:	0 to 60°C, convection cooling
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)	12 Vdc 9.6 Vdc - 14.4 Vdc 9.6 Vdc - 14.4 Vdc
Input Current	V_{IN} = 12.0 Vdc, V_{BR} = 0 V Luminance @ Max.	0.65 A
Rush Current	V_{IN} = 14.4 Vdc Luminance @ Max.	5.0 Azero-p/20 µS or less
Max. Input Power	V_{IN} = 12.0 Vdc, V_{BR} = 0 V Luminance @ Max.	8 W
On/Off Input Current	On/Off L = 0.0 - 0.4 Vdc V_{IN} = 14.4 Vdc On/Off H = Open or V_{IN}	I_{LOW} = -0.45 mA or more (Lamp Lighting) — (Lamp Off)

*Above Specifications Occur @ 25 ± 5°C

Output Specifications*

Item	Condition	Standard MIN	TYP	MAX
Output Voltage (Vrms)	V_{IN} = 9.6 Vdc, V_{BR} = 0 V	1500	—	—
Tube Current (mArms)	Luminance @ Max.(V_{IN} = 12.0 V, V_{BR} = 0 V) Luminance @ Min. (V_{IN} = 12.0 V, V_{BR} = 2.5 V)	— —	7.0 3.0	— —
Max. Power Output (W)	V_{IN} = 12 Vdc/Luminance @ Max.	—	—	4.0
Ignition Frequency (kHz)	Luminance @ Max.	—	60	—

*Above specifications occur @ 25 ± 5°C & V_{IN} = 9.6 - 15 Vdc.

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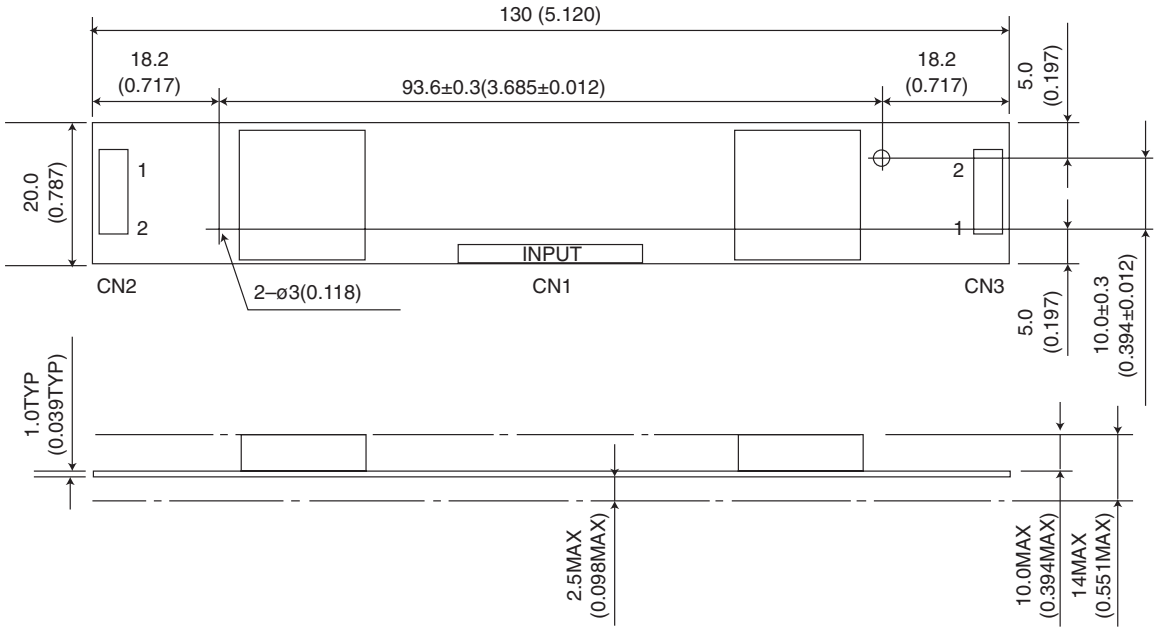
Insulating Withstand Voltage

Item	Rating Description	
Insulating Withstand Voltage	Primary - Secondary	2.0 kVA Impulse
Insulating Resistance	Primary - Secondary Winding - Core	500 Vdc More than 100 MΩ

* Apply voltage to pin 6.

Luminance Variance

Item	Condition	Applied Voltage	Output Current
Luminance @ Max.	Btwn. pin 6 & 7	Vbr = 0.0 V	7.0 mA
Luminance @ Min.	Btwn. pin 6 & 7	Vbr = 2.5 V	3.0 mA



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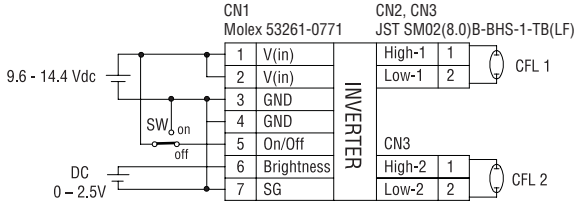
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Tech Notes

Connection Diagram

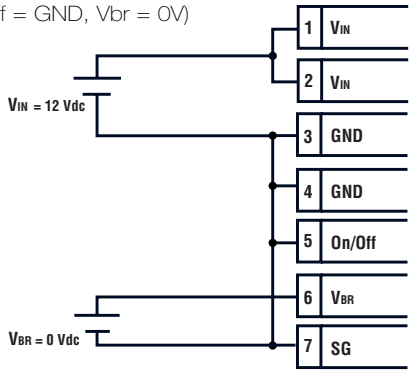
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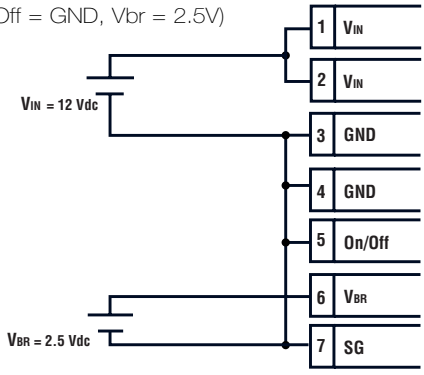
DC Brightness Control Method*

Maximum output current can be adjusted by applying bias voltage or using a variable resistor as shown below.

Iout = 7mA (Vin = 12V, On/Off = GND, Vbr = 0V)



Iout = 3mA (Vin = 12V, On/Off = GND, Vbr = 2.5V)



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