

# DC-AC INVERTER UNIT

**PS-DA0143-291(S) (5 W SINGLE OUTPUT)**

(PRELIMINARY INFORMATION)

## DESCRIPTION :

This low profile DC/AC inverter is developed for single lamps.

Optimized for Kyocera: TCG057VG1AC-H50-8X-16-20, 18th Feb. 2008

## APPLICABLE LCD:

Lamp Voltage 655 Vrms  
Lamp Current : 5.0 mArms  
Lamp Start Up Voltage 2.400 Vrms (Vin : 12 Vdc)



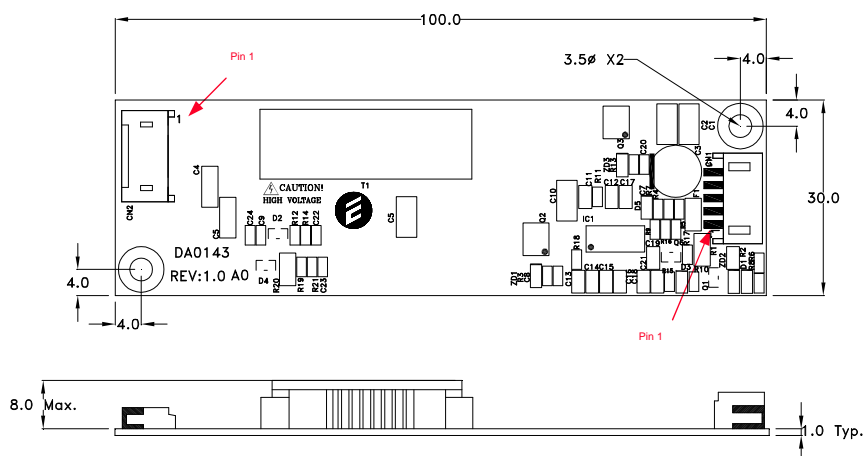
## FEATURES :

Current balance circuit  
Extra high starting Voltage  
RoHS compliant (S)  
Ext. PWM Dimming

## TEMPERATURE & HUMIDITY :

Operating Temperature Range -10°C ~ +70°C  
Storage Temperature Range -30°C ~ +85°C  
Humidity 95 %RH max

**DIMENSIONS :** L x B x H 100 x 30 x 9 mm



Unit : mm  
Weight :15 (g) typ.

Note: Please use plastic screw in case of a non-insulating mounting base!

## Components

No.	Part Description	Qty.	Material	Note
1	PCB	1	UL94V-0 (FR-4 or CEM-3)	t=1mm
2	Connector CN1	1	S5B-PH-SM3	JST or equal
3	Connector CN2	1	SM02(8.0)B-BHS-1-TB	JST or equal

## Power Systems – The Power Solution

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(PRELIMINARY INFORMATION)

**Input side CN1:**

Pin No.	Symbols	Ratings
CN 1-1	Vin	10.8~13.2 Vdc
CN 1-2	GND	-
CN 1-3	Ext. PWM	0~1 Vdc Low / 3~5 Vdc High(L active)
CN 1-4	N.C.	-
CN 1-5	Vrmt	0 ~ 0.4 = OFF / 3.0 ~ 5.5 = ON

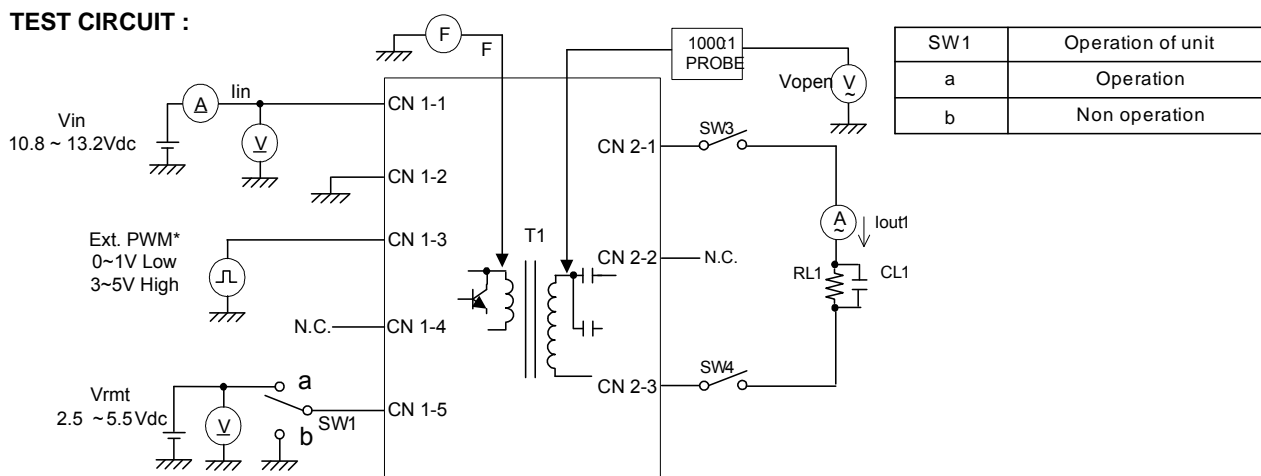
**Output side CN2**

Pin No.	Symbols	Ratings
CN 2-1	Vhigh	655Vrms (5mArms)
CN 2-2	N.C.	-
CN 2-3	Vlow	GND

**ELECTRICAL CHARACTERISTICS :**

Parameters	Symbols	Conditions			Specification			Unit	Note
		Vin (V)	Vbr (V)	Tu (°C)	Min.	Typ.	Max.		
Output Current	Iout	12±1.2	0.0	-10 ~ +70	4.5	5.0	5.5	mArms	Duty 100%
Output Current	Iout	12±0.6	5.0	-10 ~ +70	-	20	-	%	
Input Current	Iin	12±1.2	0.0	-10 ~ +70	-	0.4	0.5	Adc	
Inrush Current	Ipeak	12±1.2	0.0	-10 ~ +70			1.5	Adc	max 6msec
Frequency	F	12±1.2	0.0	-10 ~ +70	50	60	70	kHz	
Open Circuit Voltage	Vopen	11.4	0.0	-10 ~ +70	2.200	2.400	2.700	Vrms	
No Load Shutdown	Tsd	12±1.2	0.0	-10 ~ +70	-	1.0	-	sec	without load

- Note 1 : Please keep a minimum of 2mm clearance in all directions between inverter high voltage areas and any conductors as marked on mechanical drawing.
- Note 2: The external PWM-frequency should be within the range of 100 ~ 500Hz.  
For other frequencies please request. The optimum frequency is normally 250 Hz and this minimizes the interference of the vertical sync frequency.
- Note 3: Please provide Vcc before applying any control signals into inverter.  
Reverse the sequence during power off which is control signal off first then Vcc.
- Note 4: The input current could vary according to the parasitic capacities inside the panel.

**TEST CIRCUIT :****Power Systems – The Power Solution**

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