

DC-AC INVERTER UNIT

CXA-0359(R) (8 W DUAL OUTPUTS WITH DIMMING FUNCTION)

(PRELIMINARY INFORMATION)

DESCRIPTION :

This low profile DC to AC Inverter is developed for Dual lamps.

NL10276BC24-13 (NEC)

NL8060BC31-27 (NEC)

NL8060BC31-28D (NEC)



APPLICABLE LCD:

6.4 to 15 inches Dual lamp type

Lamp Voltage 600 Vrms

Lamp Current 5.0 mArms

Lamp Start Up Voltage 1.800 Vrms (Vin : 12 Vdc)

FEATURES :

Dimming function

Remote ON/OFF

Open Lamp Detection

RoHS compliant (R)

Boost mode

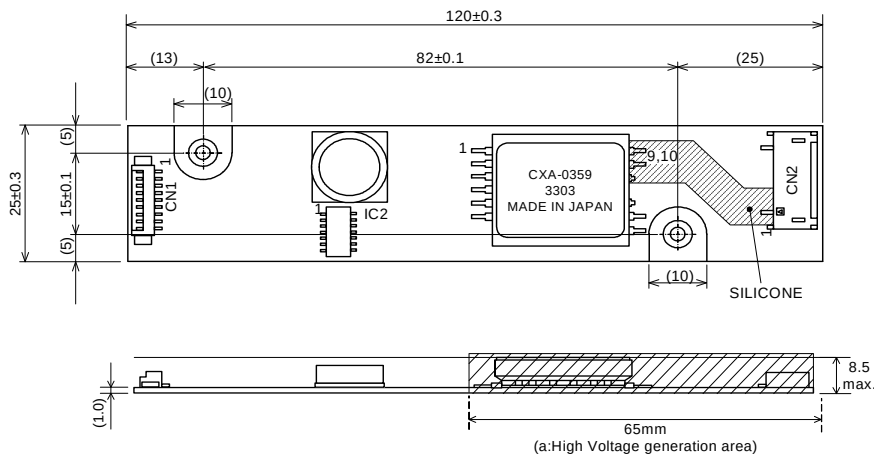
TEMPERATURE & HUMIDITY :

Operating Temperature Range -10°C ~ +70°C

Storage Temperature Range -30°C ~ +85°C

Humidity 95 %RH max

DIMENSIONS : L x W x H 120 x 25 x 8.5 mm



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

Unit : mm

Weight :23 (g) typ.

Components

No.	Part Description	Qty.	Material	Note
1	PCB	1	UL94V-0 (FR-4 or CEM-3)	t=1mm
2	Connector CN1	1	53261-0990	Molex or equal
3	Connector CN2	1	SM03(7-D1)B-BHS-1-TB	JST or equal

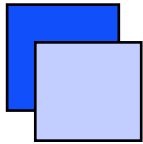
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Input side CN1:

Pin No.	Symbols	Ratings
CN 1-1+2	Vin	11.4 ~ 12.6 Vdc
CN 1-3+4	GND	-
CN 1-5	Vrmt	0 ~ 0.4 = OFF / 2.5 ~ Vin = ON
CN 1-6	Vbr / Rbr1	0 ~ 2.5 Vdc / 0 + 10 kΩ
CN 1-7	Rbr2	0 ~ 10 kΩ
CN 1-8	Vst	0 / 5 Vdc
CN 1-9	H/L	(0 to 0.4V : Low-mode 2.5 to Vin : High-mode Open : Low-mode)

Output side CN2:

Pin No.	Symbols	Ratings
CN 2-1	Vhigh	600 Vrms (5.0 mArms)
CN 2-2	Vhigh	600 Vrms (5.0 mArms)
CN 2-3	N.C.	-
CN 2-4	Vlow	(GND)

ELECTRICAL CHARACTERISTICS :**Low-mode**

Parameters	Symbols	Conditions				Specification			Unit	Note
		Vin (V)	Vrmt (V)	Vbr (V)	Tu (°C)	Min.	Typ.	Max.		
Output Current	Iout	12±0.6	5±0.25	2.5	-10 ~ +70	4.5	5.0	5.5	mArms	Max
Output Current	Iout	12±0.6	5±0.25	0	-10 ~ +70	1.5	2.2	2.9	mArms	Min
Input Current	Iin1	12±0.6	5±0.25	2.5	-10 ~ +70	-	0.6	0.8	Adc	
Input Current	Iin2	12±0.6	5±0.25	2.5	-10 ~ +70	-	-	1	mAdc	Remote off
Frequency	F1	12±0.6	5±0.25	2.5	-10 ~ +70	58	63	68	kHz	
Frequency (Duty)	F2	12±0.6	5±0.25	0	-10 ~ +70	310	340	370	Hz	
Open Circuit Voltage	Vopen	11.4	5±0.25	2.5	-10 ~ +70	1600	-	1800	Vrms	
Alarm Signal	Vst	12±0.6	5±0.25	2.5	-10 ~ +70	4.5	5.0	5.5	Vdc	RL1 Open
		12±0.6	5±0.25	2.5	-10 ~ +70	4.5	5.0	5.5	Vdc	RL2 Open
		12±0.6	5±0.25	2.5	-10 ~ +70	-	0	0.5	Vdc	Normal

High-mode

Parameters	Symbols	Conditions				Specification			Unit	Note
		Vin (V)	Vrmt (V)	Vbr (V)	Tu (°C)	Min.	Typ.	Max.		
Output Current	Iout	12±0.6	5±0.25	2.5	-10 ~ +70	6.5	7.0	7.5	mArms	Max
Output Current	Iout	12±0.6	5±0.25	0	-10 ~ +70	2.6	3.5	4.0	mArms	Min
Input Current	Iin1	12±0.6	5±0.25	2.5	-10 ~ +70	-	0.8	1.0	Adc	
Input Current	Iin2	12±0.6	5±0.25	2.5	-10 ~ +70	-	-	1	mAdc	Remote off
Frequency	F1	12±0.6	5±0.25	2.5	-10 ~ +70	58	63	68	kHz	
Frequency (Duty)	F2	12±0.6	5±0.25	0	-10 ~ +70	310	340	370	Hz	
Open Circuit Voltage	Vopen	11.4	5±0.25	2.5	-10 ~ +70	1800	-	2000	Vrms	
Alarm Signal	Vst	12±0.6	5±0.25	2.5	-10 ~ +70	4.5	5.0	5.5	Vdc	RL1 Open
		12±0.6	5±0.25	2.5	-10 ~ +70	4.5	5.0	5.5	Vdc	RL2 Open
		12±0.6	5±0.25	2.5	-10 ~ +70	-	0	0.5	Vdc	Normal

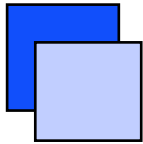
Note 1 : Please keep minimum of 2mm clearance (all directions) between inverter high voltage area as marked on mechanical drawing and any conductors.

Note 2 : Two stages of dimming range of a Hi mode and a Low mode is selectable.

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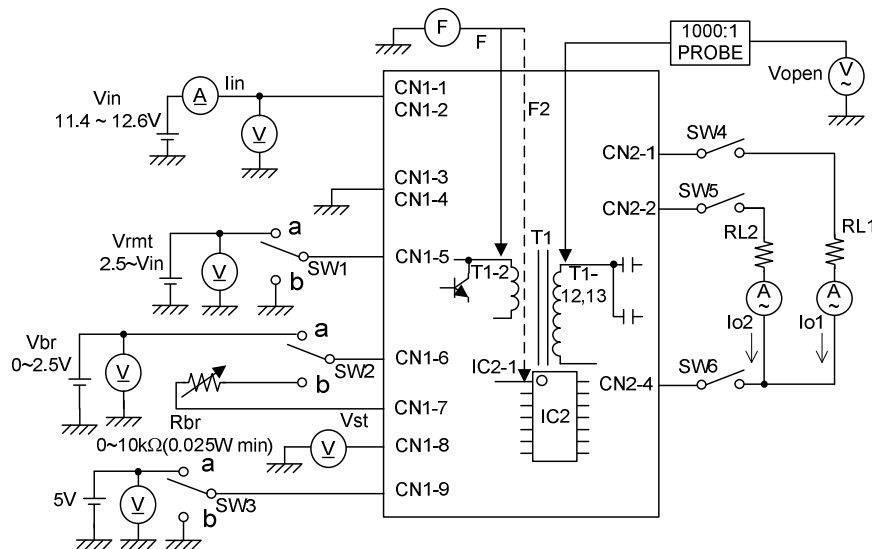
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(PRELIMINARY INFORMATION)

TEST CIRCUIT :

SW1	Operation of unit
a	Operation
b	Non operation
Open	Operation

SW2	Unit operation
a	Voltage dimming $V_{br} = 0 \sim 2.5V$ ($V_{br}=0V$: Max Brightness)
b	Variable resistance dimming $R_{br} = 0 \sim 10k\Omega$ ($R_{br}=0\Omega$: Max Brightness)

SW3	Unit operation
a	High-mode (Lamp current 7mA rms/Lamp)
b	Low-mode (Lamp current 5mA rms/Lamp)
Open	Low-mode (Lamp current 5mA rms/Lamp)

Load condition	Alarm output (CN1-8)*1	Shut-down function*2
Normal condition	0.5V max.	Does not shut down
When one load (lamp) is run-out	$5 \pm 0.5V$	Does not shut down
When 2 loads (lamps) is run-out	$5 \pm 0.5V$	Shut down

*1: In the case of low mode, and more than one of SW4 – SW6 in the connection diagram was open, alarm signal will output 5V. (Please make CN1-8 opening in a high mode)

*2 : When all lamps were opened, this inverter has included protective function to stop operation in about 10 seconds

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