

DC-AC INVERTER UNIT

CXA-0345 (8W Automotive LCD)

(PRELIMINARY INFORMATION)

DESCRIPTION :

TDK designed a new DC to AC Inverter CXA-0345 which is designed for automotive LCD use. The architecture includes automatic brightness control with NTC thermister included in the LCD for wide operate temperature as -30 to 85 deg C. The CXA-0345 will distribute 6.5mA rms. under the normal condition and 9mA rms between -30 to 50 deg C. (Reference LCD is LQ065T9DR51 made by Sharp) A complete dimming interface with minimum and maximum settings provide a approximately 5% to 100% flexibility. Wide input voltage is available from 8V to 18V and protection circuit will cover up to 25V and reverse input or surge.



Lamp Voltage 600~800V
Lamp Current 9.0mA max

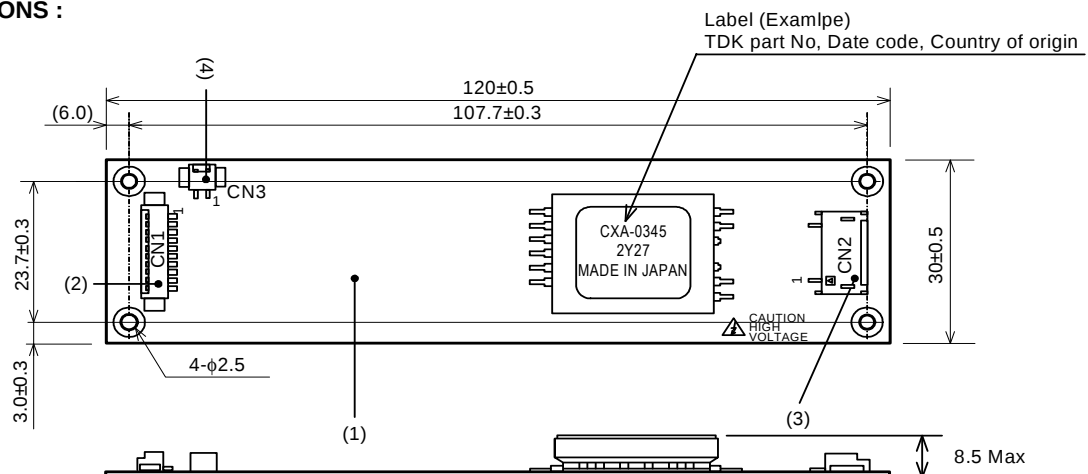
FEATURES :

- Wide Input Voltage
- Wide Dimming Range (By Internal PWM Control Circuit)
- Low noise with voltage resonant circuit
- No High Voltage Pattern on Bottom Side
- High Efficiency
- 8mm Low Profile.
- Fuse Protection

TEMPERATURE & HUMDITY :

Operating Temperature Range	-30 deg° C ~ +85 deg° C
Storage Temperature Range	-40 deg° C ~ +85 deg° C
Humidity	95 %RH max
	(A maximum wet ball temperature is 38 deg° C)

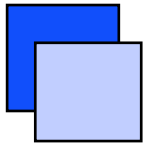
DIMENSIONS :



Power Systems – The Power Solution

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No.	Part Description	Qty.	Note		
1	PCB	1	UL94V-0(FR-4 or CEM3)	t=1mm	
2	Connector CN1	1	53261-1071	(MOLEX)	Input Connector
3	Connector CN2	1	SM02(8.0)B-BHS-1	(JST)	Output Connector
4	Connector CN3	1	53261-0271	(MOLEX)	Output Connector

Pin	Symbols	Ratings	Function	Notes
CN1-1	VIN	8 V to 16 V	Power source	
CN1-2	VIN			
CN1-3	GND	0 V	Ground	
CN1-4	GND			
CN1-5	VRMT	0/5 V	Remote function	High Active
CN1-6	VBR-INT	0 V to 3 V	Dimming signal input terminal when the internal oscillator is used	
CN1-7	VBR-EXT	TBD	Dimming signal input terminal for external control	this function is not available now.
CN1-8	BOOST	0/5 V	Output current change signal input terminal	High : Output current is 8.5 mArms (TYP.) Low : Output current is (6.5) mArms
CN1-9	FRQ-EXT	0/5 V ON-DUTY 10 %	External signal input terminal for synchronized drive frequency.	If you do not use , this PIN(CN1-9) please make open.
CN1-10	FRQ-SW	0/5 V	Drive frequency change signal input terminal.	High : Frequency is 75kHz Low : Frequency is 60kHz as default

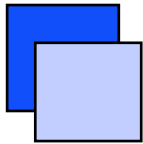
Pin	Symbols	Note
CN2-1	VHIGH	700VMS9.0mAms
CN2-2	N.C.	
CN2-3	VLOW	(0.6V)

Pin	Symbols	Note
CN3-1	TH	GND
CN3-2	TH2	(5V)

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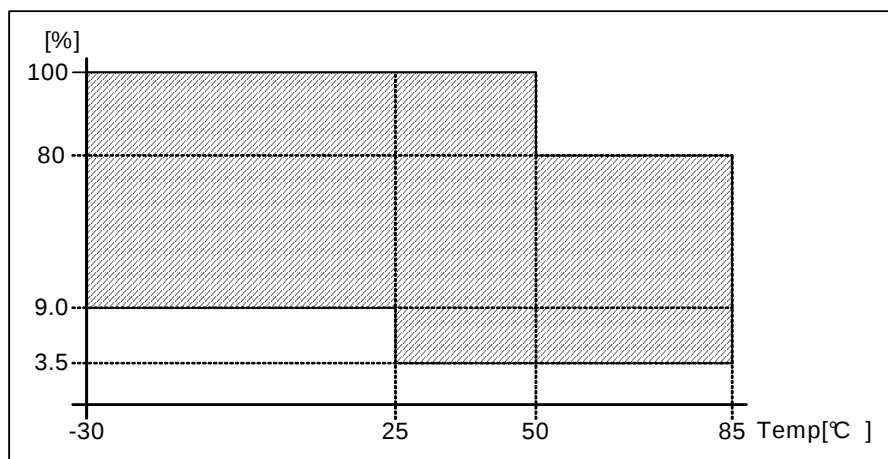
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ELECTRICAL CHARACTERISTICS :

Paramerters	Symbol	Conditions				Specifications			Unit	Note	
		Vin (V)	Vbr (V)	Vrmt (V)	Ta (°C)	RL1.2 (kΩ)	min.	typ.			max.
Output Current	Iout (MAX)	8.0 to 16.0	3.0		-30 to +50		7.0	8.0	9.0		Max. Brightness
					50 to +85	100±2	5.5	6.5	7.5	mArms	
	Iout (MIN)	12±0.05	0	5±0.25			0.5	1.0	2.0		Min. Brightness
Input Current	Iin				25		-	0.6	0.8	Adc	
Frequency	F1		3.0				50	60	70	kHz	
	F2 (Duty)						120	150	180	Hz	
Open Voltage	Vopen	8±0.05			-30 to +85	∞	1800	2000	2200	Vrms	



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