

CCFL Inverter

Model:ZX-0101



Description

This is a DC/AC inverter for 1 backlight LCD lamp.

Feature

The high efficiency with low waste of energy, work normally in a wide temperature range.

Range of application

This inverter is used in 4.2-15" LCD display or other CCFL equipment.

Matching load

15" less or 1 tube LCD.

Maximum working environment

Working temperature	0°C — 50°C
Storage temperature	20°C — 60°C
Work humidity	10% -- 80RH
Storage humidity	10% -- 90RH

Input electrical parameter

No.	Item		Min	Typical value	Max	Unit
1	Input voltage	Vin	8	12	15	V
2	Input current	Iin	----	0.35	0.5	A
3	Input power	Pin	----	3.6	----	W
4	Switch voltage	Enable Von=5V Disable Voff=0V				

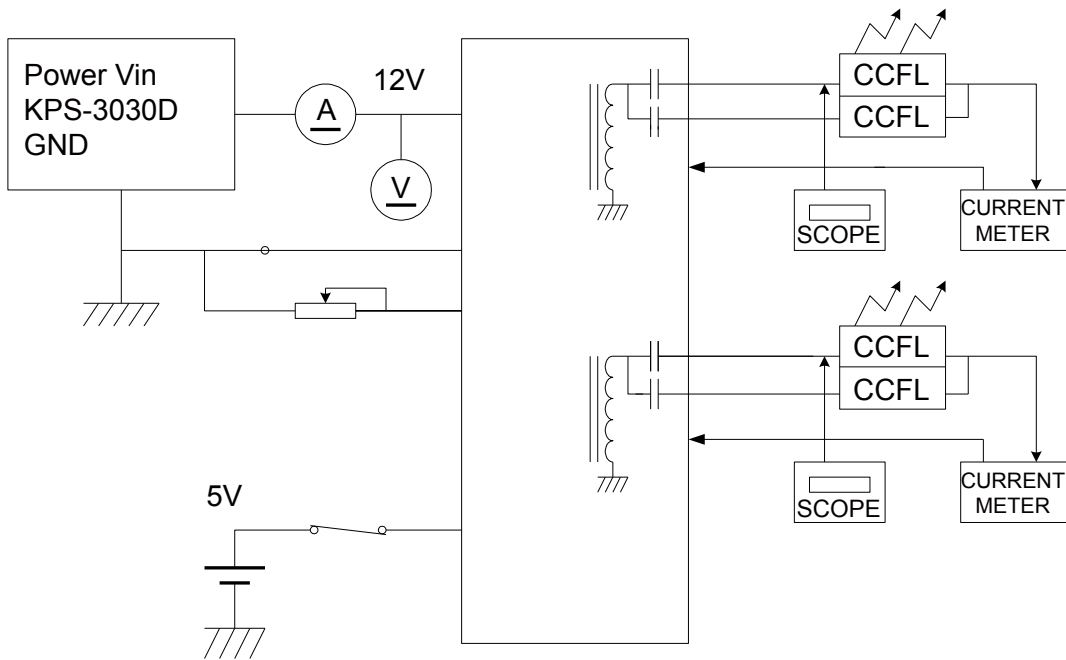
Output electric parameters

Parameter	Item	Test environment	Min	Typical value	Max	Unit
Current	Iout	Vin=12V Von=0V	6.2	6.5	7.2	MA
Voltage	Vout	Vin=12V Von=0V		650		Vrms
Starting voltage	Vig2	Vin=12V Von=0V 0°C	---	1180	---	Vrms
Frequency	Fpwm	Vin=12V Von=0V	40	50	80	KHZ
Efficiency	η	Vin=12V Von=0V	---	89	---	%

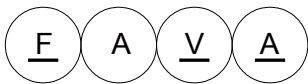
Pin Assignments

Input: JP1			
Stitc	Item	Description	Voltage
1	Input voltage	Supply voltage	8---15V
5	Switch voltage	Standby/start	On=5V Off=0V
2	Earth	GND	
3	Adjustable light	Adjustable light voltage input	0-5V(0V The brightest)
Output:JP2; JP3 ; JP4 ; JP5			
Stitc	Stitc	Stitc	Stitc
1	H-V	High voltage	650Vrms
2	L-V	Low voltage	18Vrms

Test circuit diagram



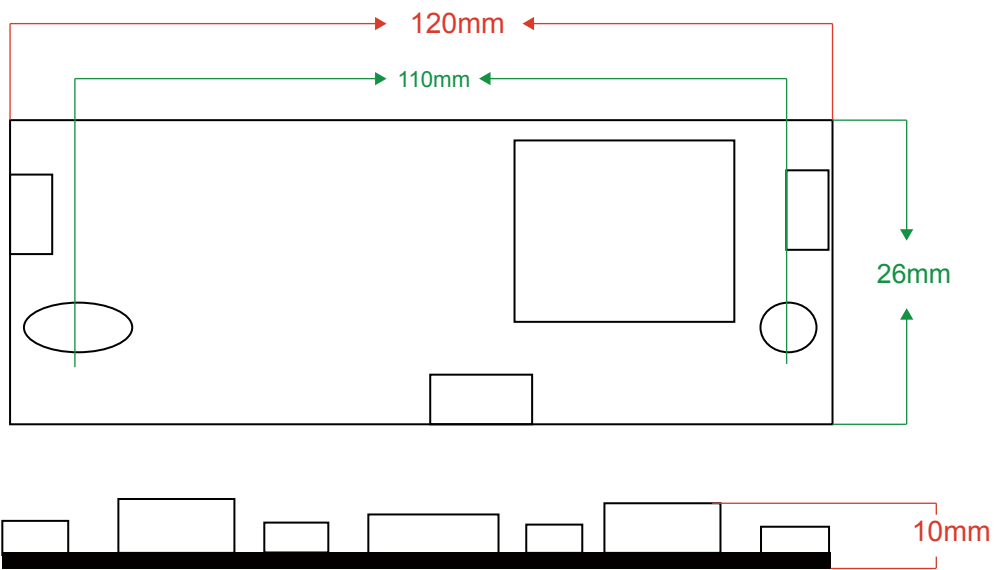
MEASUREMENT EQUIPMENT



SCOPE :TDS210
:TDS5040

CURRENT METER :FLUKE 45

Size

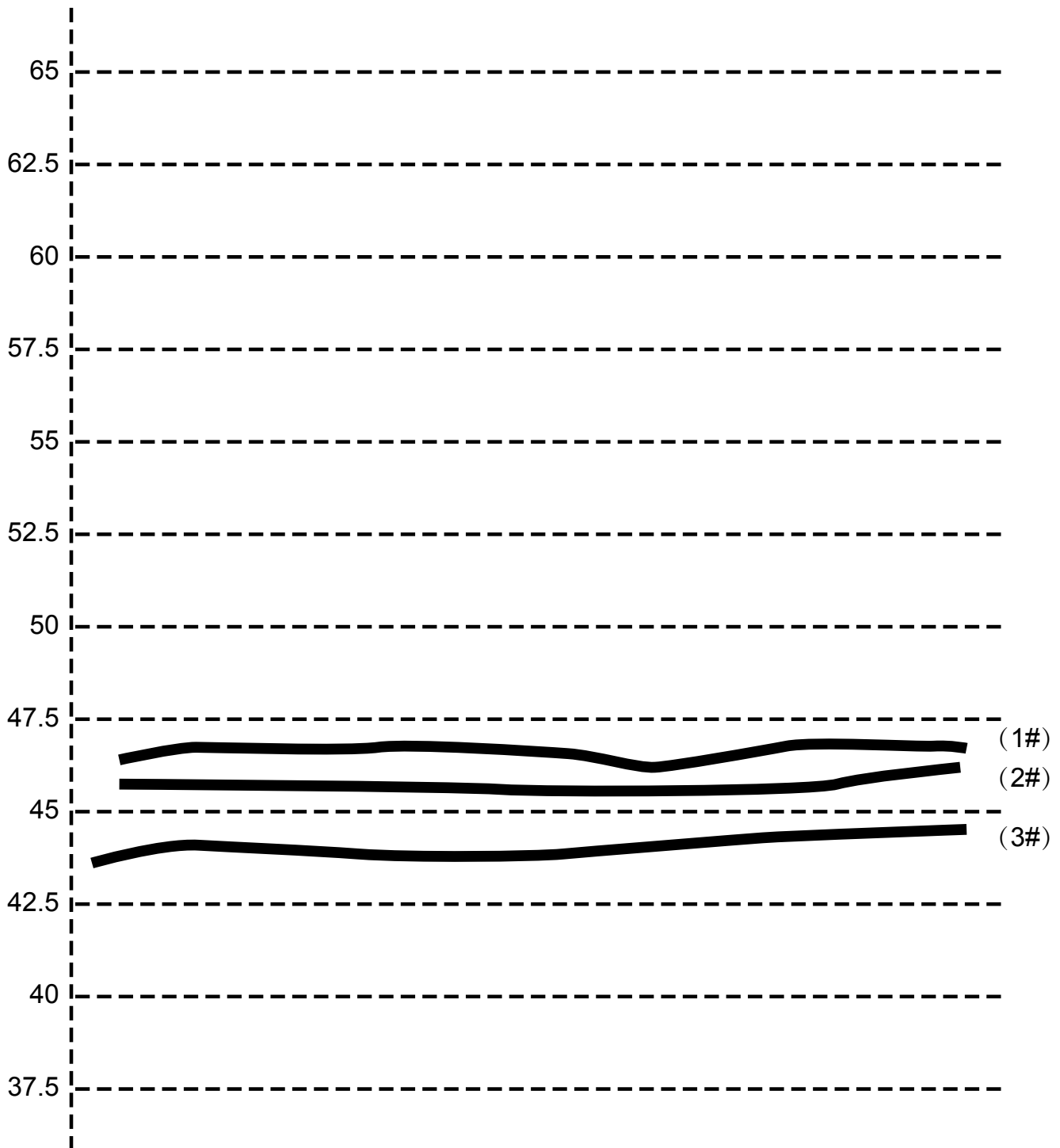


Quality test report

Sample test record						
Inverter test data		Test tools	PS-305D / TDS1002B GDM-8145			
Specifications	ZX-0101		TEST DATA			
Testing project	Test conditions	Environment temperature	SAMPLE 1		SAMPLE 2	
			JP1		JP1	
Input current I _{in} (A)	V _{in} =12V ON/OFF=5V	0°C	0.34			
		26°C	0.32			
		50°C	0.30			
Output voltage V _o (V _{rms})	V _{in} =12V ON/OFF=5V	0°C	630	630	628	628
		26°C	652	652	650	650
		50°C	645	645	642	642
Output current I _o (mA)	V _{in} =12V ON/OFF=5V	0°C	6.52	6.58	6.57	6.54
		26°C	6.56	6.56	6.55	6.51
		50°C	6.54	6.54	6.53	6.57
Output frequency f _L (KHZ)	V _{in} =12V ON/OFF=5V	0°C	50.9	50.9	52.4	52.4
		26°C	50.9	50.9	52.4	52.4
		50°C	50.9	50.9	52.4	52.4

Temperature test report

Needle number	1	2	3	4	5	6	7	8
Be point	T1	U1	Q5					
Temperature	37.2	28.6	44					
Temperature Rise	14.2	5.6	21					



Note: the temperature test the temperature box in the maximum brightness for listed temperature are stable value, tester for JK - 2 multichannel temperature tester.

CCFL Inverter

Model:ZX-0205



Description

This is a DC/AC inverter for 2 backlight LCD lamp.

Feature

The high efficiency with low waste of energy, work normally in a wide temperature range.

Range of application

This inverter is used in 8-19" LCD display or other CCFL equipment.

Matching load

2 tubes LCD.

Maximum working environment

Working temperature	0°C — 50°C
Storage temperature	20°C — 60°C
Work humidity	10% -- 80RH
Storage humidity	10% -- 90RH

Input electrical parameter

No.	Item		Min	Typical value	Max	Unit
1	Input voltage	Vin	10.8	12	13.2	V
2	Input current	Iin	----	0.8	1.0	A
3	Input power	Pin	----	9.6	----	W
4	Switch voltage	Enable Von=5V Disable Voff=0V				

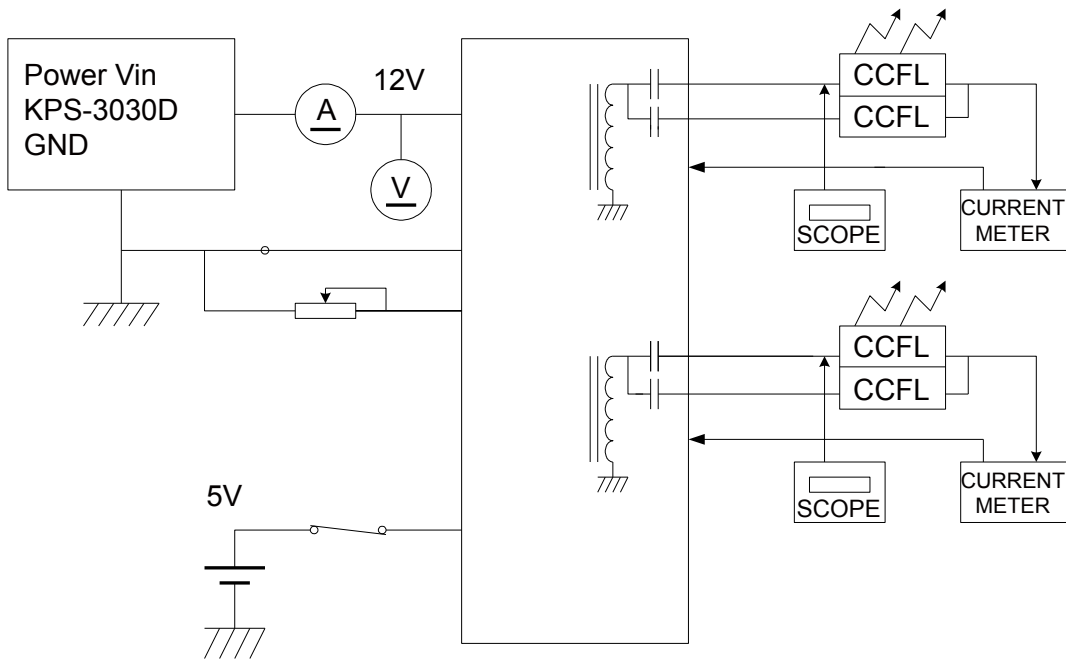
Output electric parameters

Parameter	Item	Test environment	Min	Typical value	Max	Unit
Current	Iout	Vin=12V Von=5V	6.3	6.8	7.5	MA
Voltage	Vout	Vin=12V Von=5V		580		Vrms
Starting voltage	Vig2	Vin=12V Von=5V 0°C	---	1580	---	Vrms
Frequency	Fpwm	Vin=12V Von=5V	40	50	80	KHZ
Efficiency	η	Vin=12V Von=5V	---	89	---	%

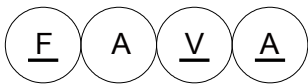
Pin Assignments

Input: JP1			
Stitc	Item	Description	Voltage
1	Input voltage	Supply voltage	10.8---13.2V
5	Switch voltage	Standby/start	On=5V Off=0V
3	NC		
2,4	Earth	Joint negative voltage	
Output:JP2;JP3			
Stitc	Stitc	Stitc	Stitc
1	H-V	High voltage	580Vrms
2	L-V	Low voltage	0Vrms

Test circuit diagram



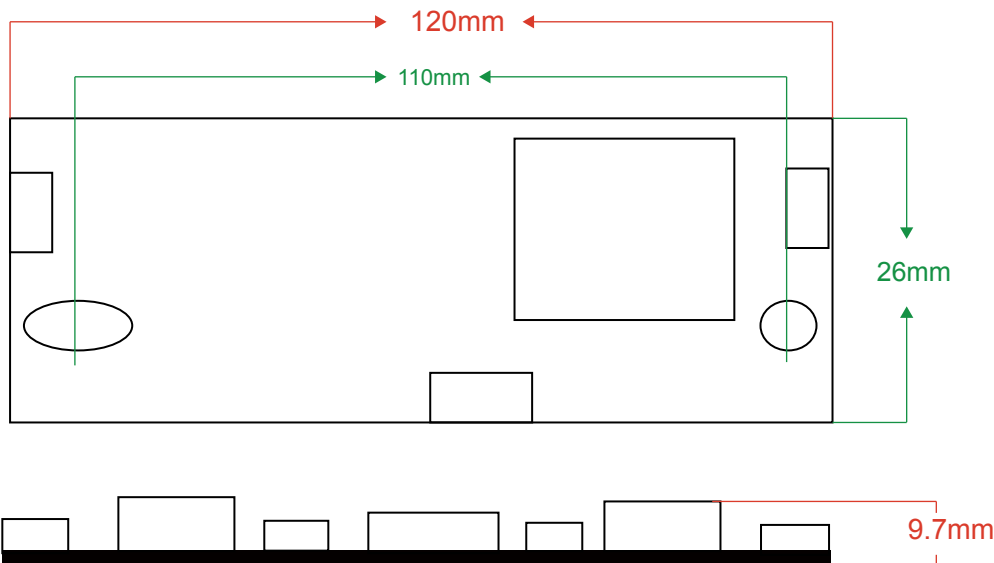
MEASUREMENT EQUIPMENT



SCOPE :TDS210
:TDS5040

CURRENT METER :FLUKE 45

Size

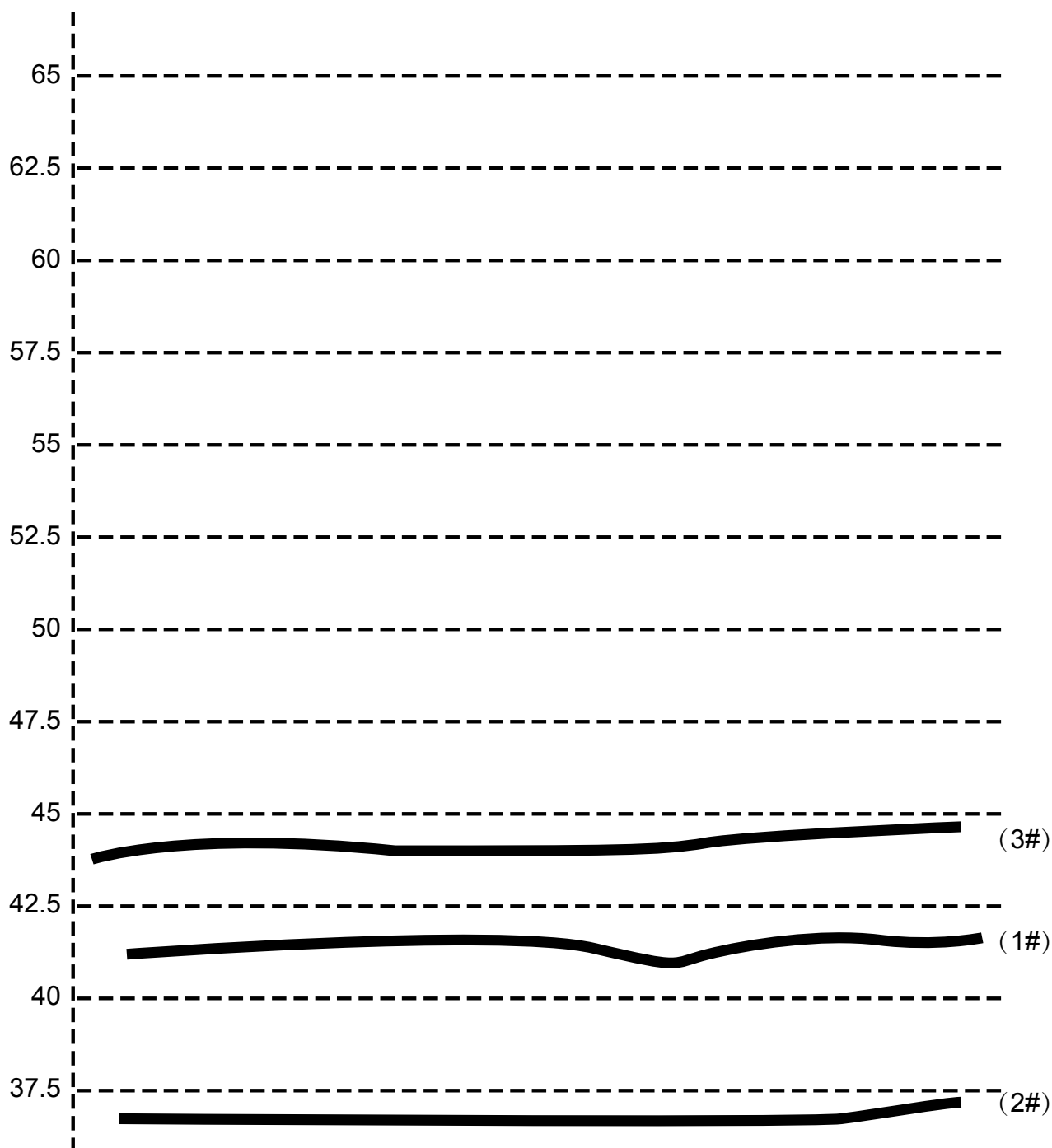


Quality test report

Sample test record						
Inverter test data		Test tools	PS-305D / TDS1002B GDM-8145			
Specifications	ZX0205		TEST DATA			
Testing project	Test conditions	Environment temperature	SAMPLE 1		SAMPLE 2	
			JP1		JP1	
Input current I _{in} (A)	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	0.78			
		26°C	0.76			
		50°C	0.73			
Output voltage V _o (V _{rms})	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	570		568	
		26°C	562		560	
		50°C	575		582	
Output current I _o (mA)	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	6.75		6.91	
		26°C	6.72		6.89	
		50°C	6.70		6.87	
Output frequency f _L (KHZ)	V _{in} =12V ON/OFF=5V	0°C	47.0	47.0	48.4	48.4
		26°C	47.0	47.0	48.4	48.4
		50°C	47.0	47.0	48.4	48.4

Temperature test report

Needle number	1	2	3	4	5	6	7	8
Be point	T1	U1	U2					
Temperature	37.2	33.6	44					
Temperature Rise	14.2	10.3	21					



Note: the temperature test the temperature box in the maximum brightness for listed temperature are stable value, tester for JK - 2 multichannel temperature tester.

CCFL Inverter

Model:ZX-0401



Description

This is a DC/AC inverter for 4 backlight LCD lamp.

Feature

The high efficiency with low waste of energy, work normally in a wide temperature range.

Range of application

This inverter is used in 15-22" LCD display , LCD TV , Advertising machine, digital photo frame

Matching load

4 tubes LCD.

Maximum working environment

Working temperature	0°C — 50°C
Storage temperature	20°C — 60°C
Work humidity	10% -- 80RH
Storage humidity	10% -- 90RH

Input electrical parameter

No.	Item		Min	Typical value	Max	Unit
1	Input voltage	Vin	10.8	12	13.2	V
2	Input current	Iin	----	1.7	2.2	A
3	Input power	Pin	----	20.4	----	W
4	Switch voltage	Enable Von=5V Disable Voff=0V				

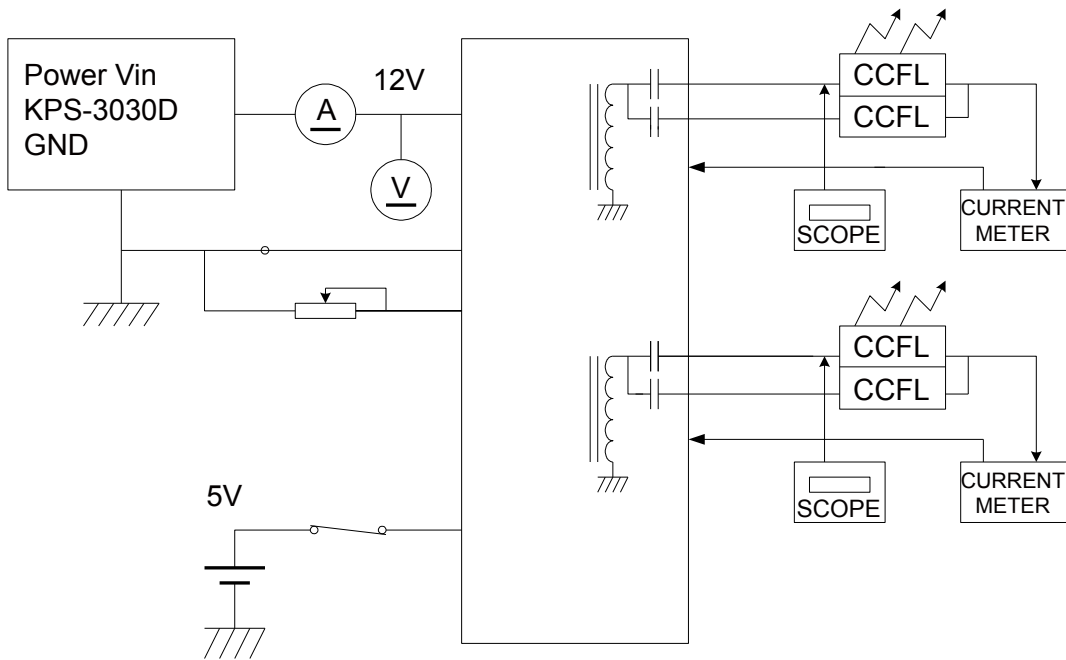
Output electric parameters

Parameter	Item	Test environment	Min	Typical value	Max	Unit
Current	Iout	Vin=12V Von=5V Vbri=0V	6.0	6.8	7.5	MA
Current	Iout	Vin=12V Von=5V Vbri=5V	2.8	3.3	3.8	MA
Voltage	Vout	Vin=12V Von=5V Vbri=0V	---	710		Vrms
Starting voltage	Vig2	Vin=12V Von=5V 0°C	---	1280	---	Vrms
Frequency	Fpwm	Vin=12V Von=5V	40	50	80	KHZ
Efficiency	η	Vin=12V Von=5V	---	89	---	%

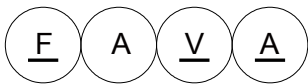
Pin Assignments

Input: JP1			
Stitc	Item	Description	Voltage
1, 2	Input voltage	Supply voltage	10.8---13.2V
3	Switch voltage	Standby/start	On=5V Off=0V
4	Adjustable light	0-5V	0V is the brightest, 5V is the dark
5, 6	Earth	Joint negative voltage	
Output:JP2;JP3			
Stitc	Stitc	Stitc	Stitc
1	H-V	High voltage	650Vrms
2	L-V	Low voltage	18Vrms

Test circuit diagram



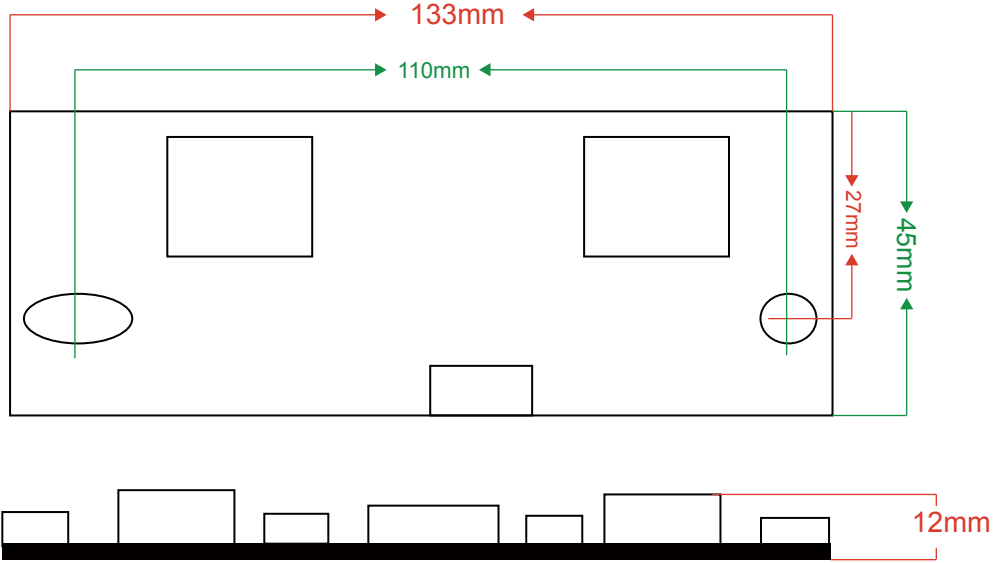
MEASUREMENT EQUIPMENT



SCOPE :TDS210
:TDS5040

CURRENT METER :FLUKE 45

Size

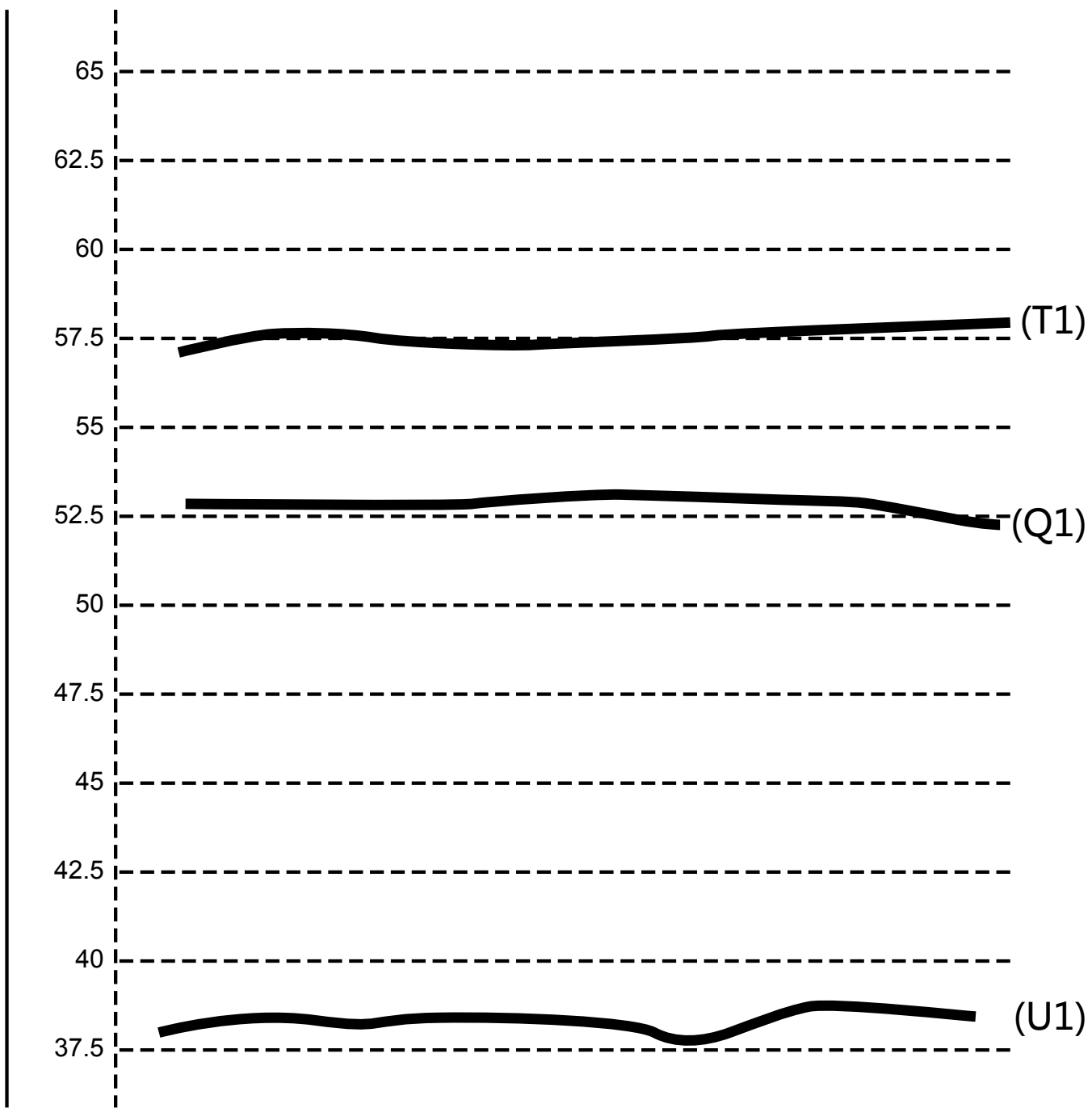


Quality test report

Sample test record						
Inverter test data		Test tools	PS-305D / TDS1002B GDM-8145			
Specifications	ZX0401		TEST DATA			
Testing project	Test conditions	Environment temperature	SAMPLE 1			
			CN2	CN3	CN4	CN5
Input current I_{in} (A)	Vin=12V ON/OFF=5V Vbrit=0V	0°C	1.68			
		26°C	1.66			
		50°C	1.63			
Output voltage V_o (Vrms)	Vin=12V ON/OFF=5V Vbrit=0V	0°C	730	730	728	728
		26°C	712	712	710	710
		50°C	715	715	712	712
Output current I_o (mA)	Vin=12V ON/OFF=5V Vbrit=0V	0°C	6.45	6.41	6.51	6.67
		26°C	6.52	6.55	6.59	6.75
		50°C	6.70	6.89	6.87	6.82
Output current I_o (mA)	Vin=12V ON/OFF=5V Vbrit=5V	0°C	3.27	3.37	3.50	3.59
		26°C	3.25	3.35	3.48	3.57
		50°C	3.23	3.33	3.46	3.55
Output frequency f_L (KHZ)	Vin=12V ON/OFF=5V	0°C	51.0	51.0	51.0	51.0
		26°C	51.0	51.0	51.0	51.0
		50°C	51.0	51.0	51.0	51.0

Temperature test report

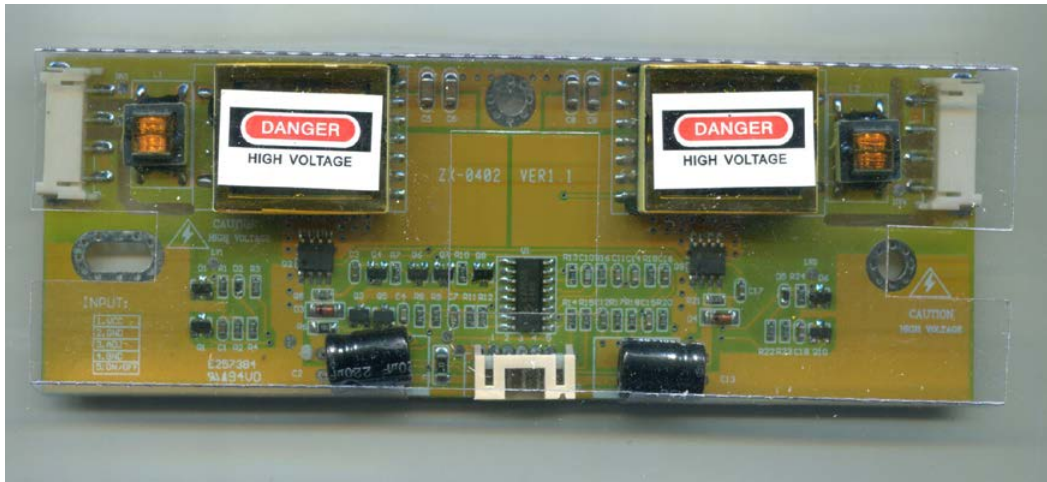
Needle number	1	2	3	4	5	6	7	8
Be point	T1	U1	Q1					
Temperature	57.2	33.6	53					
Temperature Rise	34.2	10.3	30					



Note: the temperature test the temperature box in the maximum brightness for listed temperature are stable value, tester for JK - 2 multichannel temperature tester.

CCFL Inverter

Model:ZX-0402



Description

This is a DC/AC inverter for 4 backlight LCD lamp.

Feature

The high efficiency with low waste of energy, work normally in a wide temperature range.

Range of application

This inverter is used in 7-18.5" LCD display , LCD TV , Advertising machine, digital photo frame

Matching load

4 tubes LCD.

Maximum working environment

Working temperature	0°C — 50°C
Storage temperature	20°C — 60°C
Work humidity	10% -- 80RH
Storage humidity	10% -- 90RH

Input electrical parameter

No.	Item		Min	Typical value	Max	Unit
1	Input voltage	Vin	10.8	12	13.2	V
2	Input current	Iin	----	1.56	2.2	A
3	Input power	Pin	----	18.72	----	W
4	Switch voltage	Enable Von=5V Disable Voff=0V				

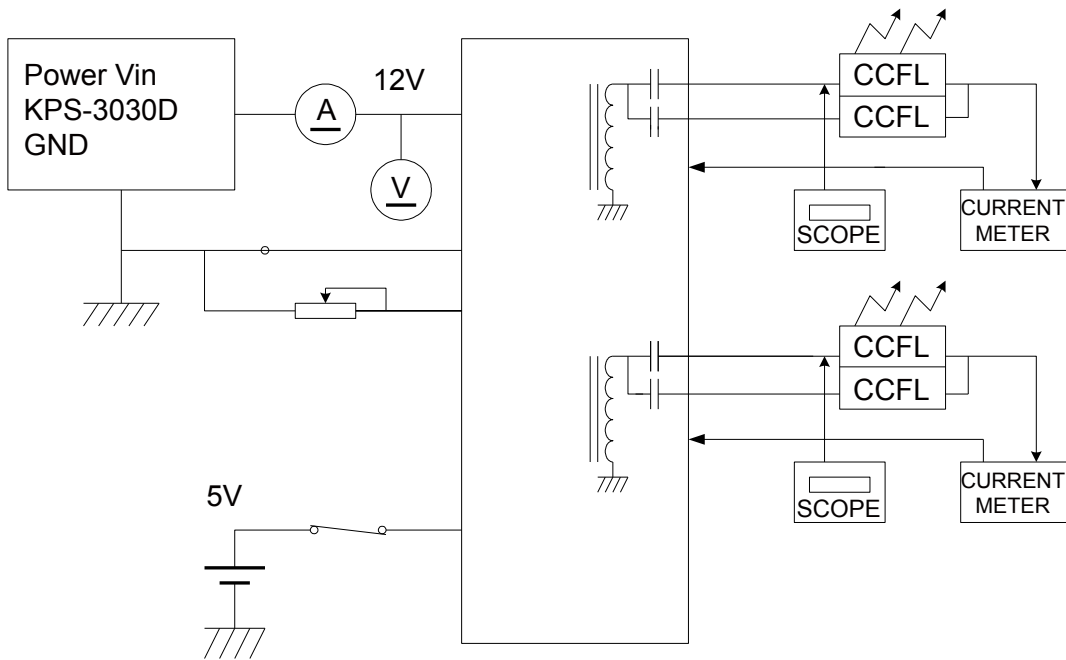
Output electric parameters

Parameter	Item	Test environment	Min	Typical value	Max	Unit
Current	Iout	Vin=12V Von=5V Vbri=0V		11.5		MA
Current	Iout	Vin=12V Von=5V Vbri=5V		5.5		MA
Voltage	Vout	Vin=12V Von=5V Vbri=0V	---	710		Vrms
Starting voltage	Vig2	Vin=12V Von=5V 0°C	---	1280	---	Vrms
Frequency	Fpwm	Vin=12V Von=5V	40	60	80	KHZ
Efficiency	η	Vin=12V Von=5V	---	89	---	%

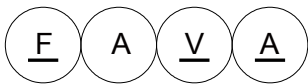
Pin Assignments

Input: CN2			
Stitc	Item	Description	Voltage
1	Input voltage	Supply voltage	10.8---13.2V
5	Switch voltage	Standby/start	On=5V Off=0V
3	Adjustable light	0-5V	0V is the brightest , 5V is the dark
2,4	Earth	Joint negative voltage	
Output:CN1, CN3			
Stitc	Stitc	Stitc	Stitc
1	H-V	High voltage	650Vrms
2	L-V	Low voltage	18Vrms

Test circuit diagram



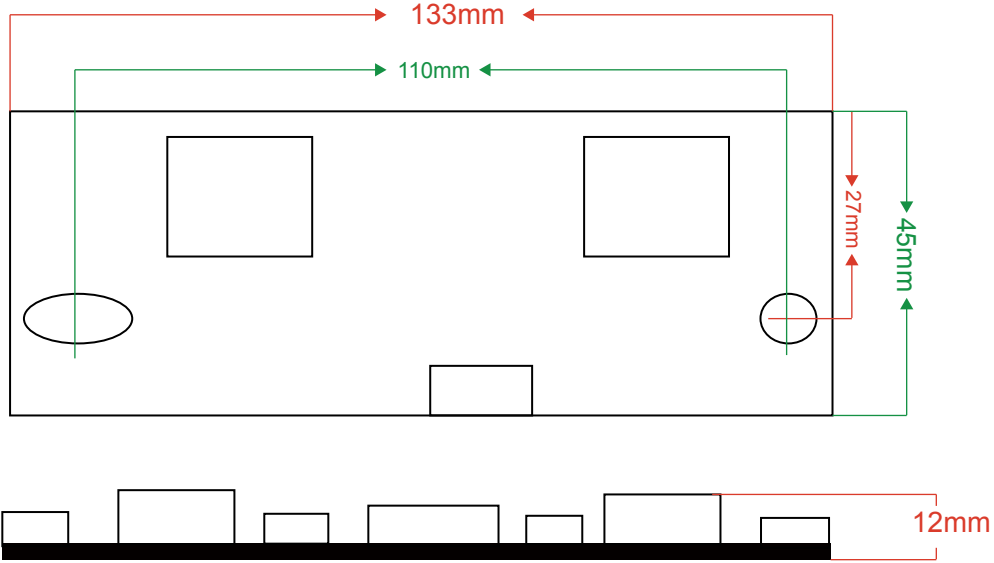
MEASUREMENT EQUIPMENT



SCOPE :TDS5040

CURRENT METER :FLUKE 45

Size

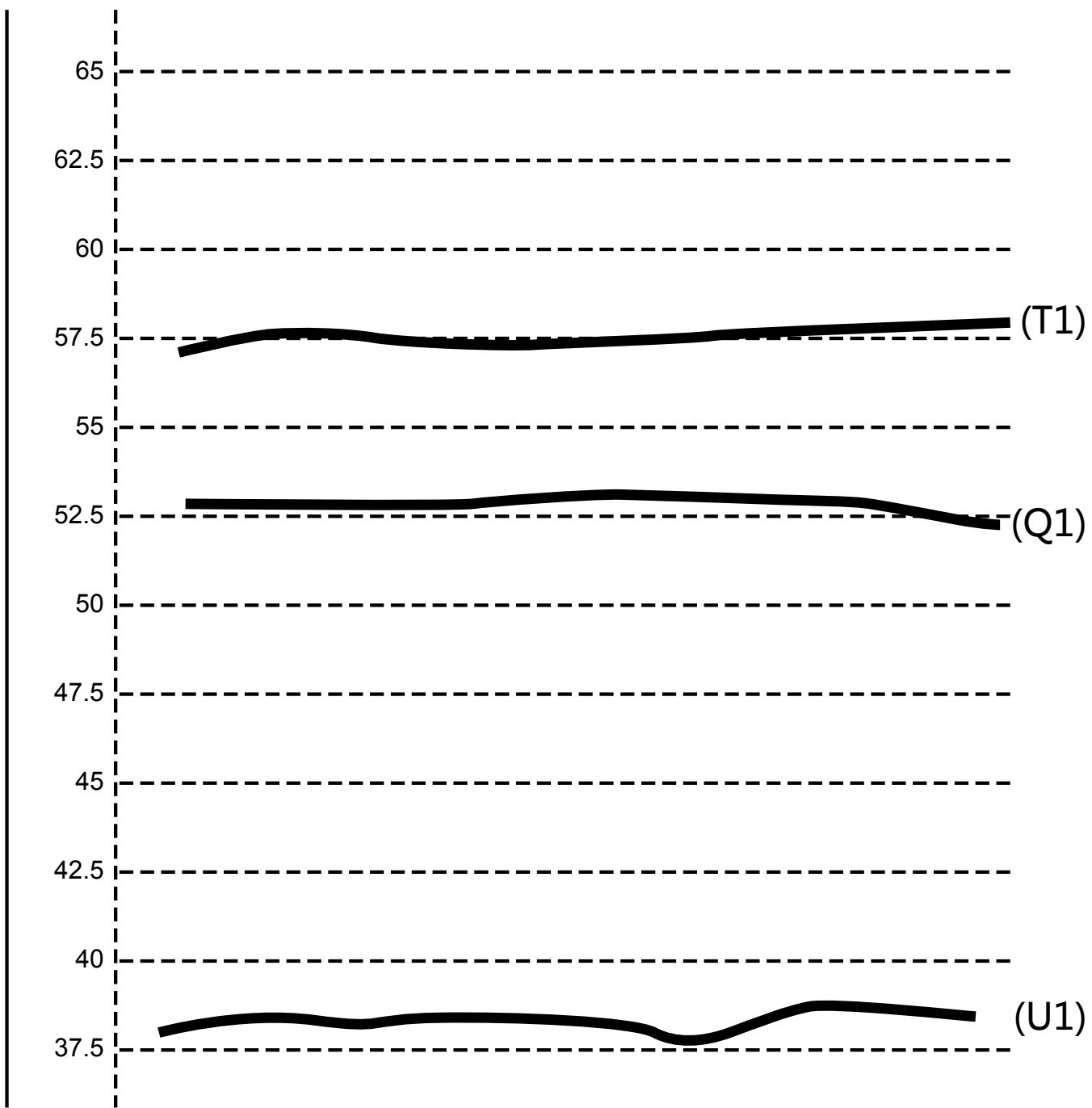


Quality test report

Sample test record				
Inverter test data		Test tools	PS-305D / TDS1002B GDM-8145	
Specifications	ZX0402		Test load: 17 " 4 lamps LCD screen	
Testing project	Test conditions	Environment temperature	SAMPLE 1	
			CN1	CN3
Input current I_{in} (A)	Vin=12V ON/OFF=5V Vbrit=0V			
		26°C	1.56	
Output voltage V_o (Vrms)	Vin=12V ON/OFF=5V Vbrit=0V			
		26°C	712	712
Output current I_o (mA)	Vin=12V ON/OFF=5V Vbrit=0V	0°C		
		26°C	11.50	11.79
		50°C		
Output current I_o (mA)	Vin=12V ON/OFF=5V Vbrit=5V	0°C		
		26°C	5.25	5.35
		50°C		
Output frequency f_L (KHZ)	Vin=12V ON/OFF=5V	0°C		
		26°C	60.0	60.0
		50°C		

Temperature test report

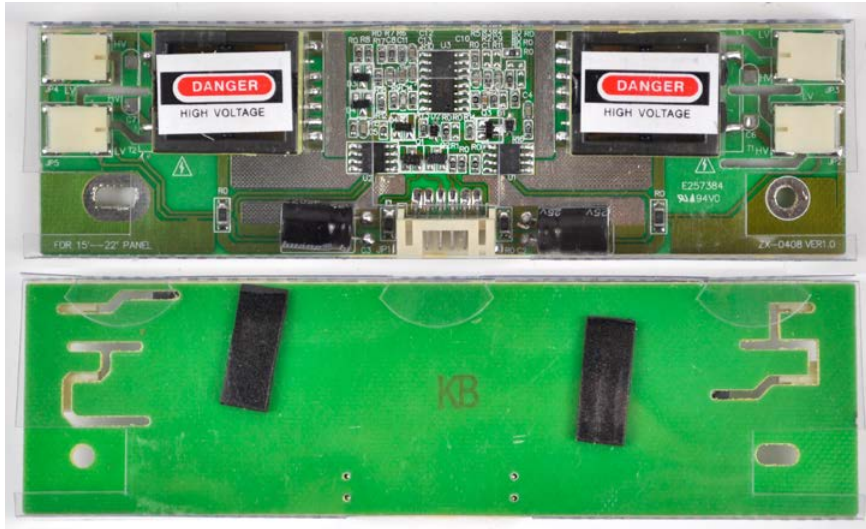
Needle number	1	2	3	4	5	6	7	8
Be point	T1	U1	Q1					
Temperature	57.2	33.6	53					
Temperature Rise	34.2	10.3	30					



Note: the temperature test the temperature box in the maximum brightness for listed temperature are stable value, tester for JK - 2 multichannel temperature tester.

CCFL Inverter

Model:ZX-0408



Description

This is a DC/AC inverter for 4 backlight LCD lamp.

Feature

The high efficiency with low waste of energy, work normally in a wide temperature range.

Range of application

This inverter is used in 15-22" LCD display , LCD TV , Advertising machine, digital photo frame

Matching load

4 tubes LCD.

Maximum working environment

Working temperature	0°C — 50°C
Storage temperature	20°C — 60°C
Work humidity	10% -- 80RH
Storage humidity	10% -- 90RH

Input electrical parameter

No.	Item		Min	Typical value	Max	Unit
1	Input voltage	Vin	10.8	12	13.2	V
2	Input current	Iin	----	1.56	2.2	A
3	Input power	Pin	----	18.72	----	W
4	Switch voltage	Enable Von=5V Disable Voff=0V				

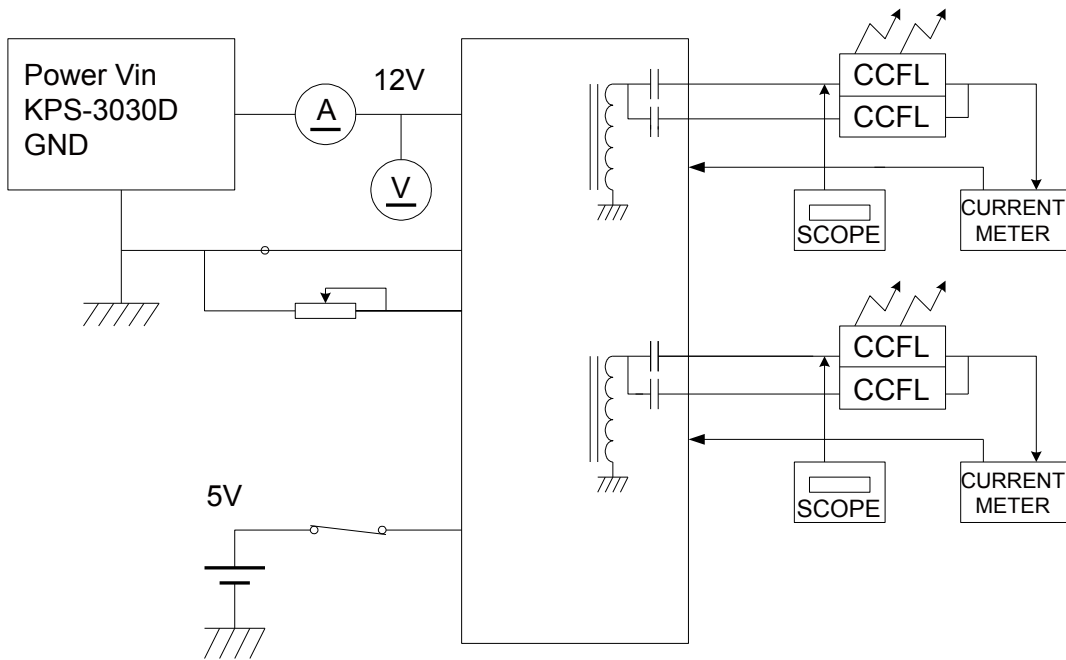
Output electric parameters

Parameter	Item	Test environment	Min	Typical value	Max	Unit
Current	Iout	Vin=12V Von=5V Vbri=NC	6.5	7.0	7.5	MA
Voltage	Vout	Vin=12V Von=5V Vbri=0V	---	710		Vrms
Starting voltage	Vig2	Vin=12V Von=5V 0°C	---	1480	---	Vrms
Frequency	Fpwm	Vin=12V Von=5V	40	50	80	KHZ
Efficiency	η	Vin=12V Von=5V	---	85	---	%

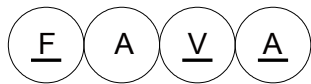
Pin Assignments

Input: JP1			
Stitc	Item	Description	Voltage
1,2	Input voltage	Supply voltage	10.8---13.2V
3	Switch voltage	Standby/start	On=5V Off=0V
4	NC		
5,6	Earth	Joint negative voltage	
Output:JP2;JP3			
Stitc	Stitc	Stitc	Stitc
1	H-V	High voltage	710Vrms
2	L-V	Low voltage	0Vrms

Test circuit diagram



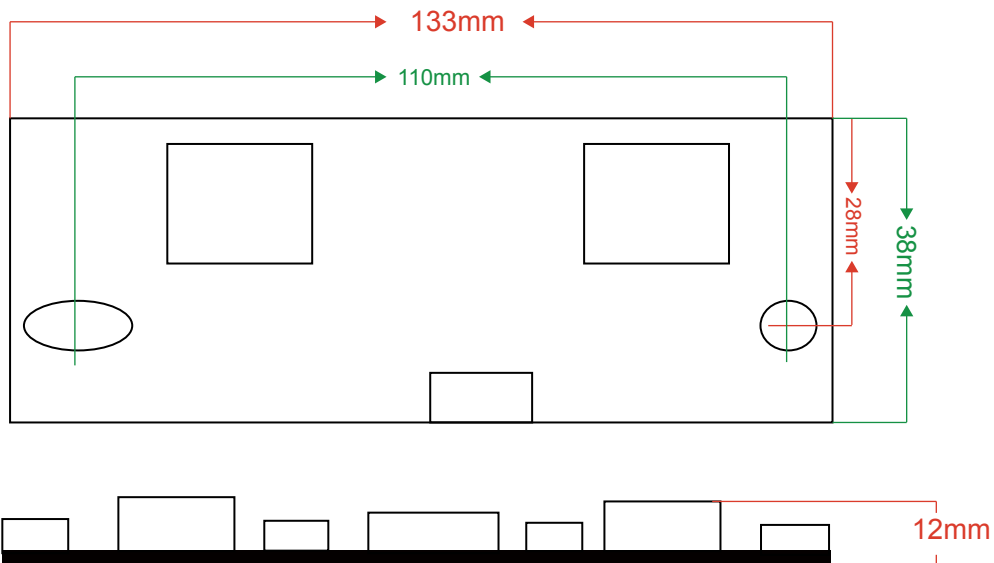
MEASUREMENT EQUIPMENT



SCOPE :TDS210
:TDS5040

CURRENT METER :FLUKE 45

Size

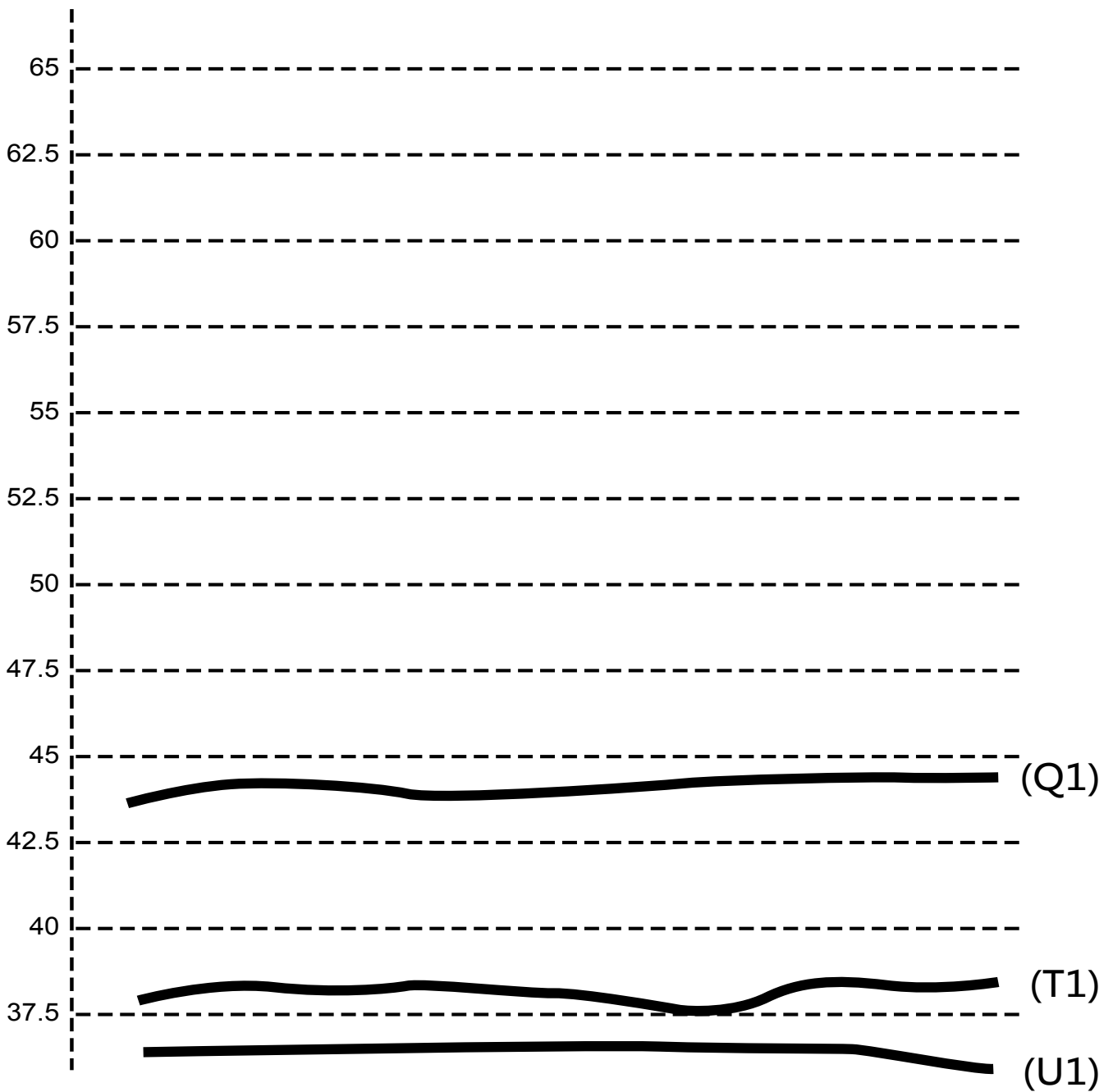


Quality test report

Sample test record						
Inverter test data		Test tools	PS-305D / TDS1002B GDM-8145			
Specifications	ZX0408		TEST DATA			
Testing project	Test conditions	Environment temperature	SAMPLE 1			
			CN2	CN3	CN4	CN5
Input current I _{in} (A)	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	1.68			
		26°C	1.66			
		50°C	1.63			
Output voltage V _o (V _{rms})	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	730	730	728	728
		26°C	702	702	705	705
		50°C	705	705	702	702
Output current I _o (mA)	V _{in} =12V ON/OFF=5V V _{brit} =0V	0°C	6.45	6.41	6.51	6.67
		26°C	6.52	6.55	6.59	6.75
		50°C	6.70	6.89	6.87	6.82
Output current I _o (mA)	V _{in} =12V ON/OFF=5V V _{brit} =5V	0°C				
		26°C				
		50°C				
Output frequency f _L (KHZ)	V _{in} =12V ON/OFF=5V	0°C	51.0	51.0	51.0	51.0
		26°C	51.0	51.0	51.0	51.0
		50°C	51.0	51.0	51.0	51.0

Temperature test report

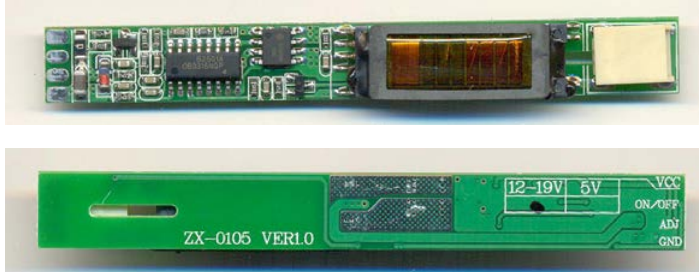
Needle number	1	2	3	4	5	6	7	8
Be point	T1	U3	U2	U1				
Temperature	52.2	33.6	53	52				
Temperature Rise	29.2	10.3	30	29				



Note: the temperature test the temperature box in the maximum brightness for listed temperature are stable value, tester for JK - 2 multichannel temperature tester.

CCFL Inverter

Model:ZX-0105 (9-20V)



NO.	Item	Symbol	Condition	Min	Tye	Max	Unit
1	Input voltage	V in		9	12.0	20	V
2	Input current	I in	V in=12V, vadj=0V		0.4		A
3	Input power	P in	V in=12V, vadj =0V	-----	5	-----	W
4	Backlight on/ off control	V on	Normal operation	2.4	-----	5.0	V
		V off	Shutdown	0	-----	0.7	V
5	Brightness adjust	V adj	0V (Max) 5V(Min)	0	-----	3.3	V
6	Output voltage	V out	Vin=12v,Iout=6.0mA		650		V rms
7	Output current (Each connector)	I out(Min)	Vin=12V, Vadj=5.0V(4 lamp) Ta=25°C	2.0	2.5	3.0	mA rms
		I out(Max)	Vin=12V, Vadj=0V(4 lamp) Ta=25°C	5.5	6.0	6.5	mA rms
8	Output frequency	Freq	Normal operation	40	50	60	KHz
9	Startup voltage	V open	No load V in=12V, Ta=0°C	1250	1650	-----	V rms
10	Striking time	T SCP	No load V in=12V, Vadj=0V	1	1.2	2	S
11	Efficiency	η	Vin=12V,Load=100KΩ	84			%