



財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

(Certificate No : L0245-250924)

This is to certify that

Chroma Ate Inc.

Electrical and Time and Frequency Calibration Laboratory

No. 88, Wenmao Rd., Guishan Dist., Taoyuan City , Taiwan

is accredited in respect of laboratory

Accreditation Criteria : ISO/IEC 17025:2017 ; CNS 17025:2018

Accreditation Number : 0245

Originally Accredited : November 01, 1995

Effective Period : November 01, 2025 to October 31, 2028

Accredited Scope : Calibration Field, see described in the Appendix



Scan to verify

Yi-Ling Chen

Yi-Ling Chen
President, Taiwan Accreditation Foundation
September 24, 2025

Accreditation Number : 0245
Laboratory Head : CHIANG, Ming-Yao

Electricity

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1001 DC Voltage Source (on-site calibration included)	Multimeter Agilent/3458A	In-house method: DC Voltage Calibration Procedure (Document No.: E-04-22-001)	10	mV	10	mV	(on-site calibration included)	0.19	mV/V
			100	mV	100	mV	(on-site calibration included)	25	μV/V
			1	V	1	V	(on-site calibration included)	22	μV/V
			10	V	10	V	(on-site calibration included)	10	μV/V
			100	V	100	V	(on-site calibration included)	23	μV/V
			1000	V	1000	V	(on-site calibration included)	14	μV/V
			10	mV	100	mV	(on-site calibration included)	0.19	mV/V
			>0.1	V	1	V	(on-site calibration included)	26	μV/V
			>1	V	10	V	(on-site calibration included)	23	μV/V
			>10	V	100	V	(on-site calibration included)	14	μV/V
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu			>100	V	1000	V	(on-site calibration included)	25	μV/V
KF1001 DC Voltage Meter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: DC Voltage Calibration Procedure (Document No.: E-04-22-001)	10	mV	10	mV	(on-site calibration included)	0.27	mV/V
			100	mV	100	mV	(on-site calibration included)	36	μV/V
			1	V	1	V	(on-site calibration included)	24	μV/V
			10	V	10	V	(on-site calibration included)	12	μV/V
			100	V	100	V	(on-site calibration included)	25	μV/V
			1000	V	1000	V	(on-site calibration included)	18	μV/V
			10	mV	200	mV	(on-site calibration included)	0.46	mV/V
			>0.2	V	2	V	(on-site calibration included)	0.10	mV/V
			>2	V	20	V	(on-site calibration included)	0.10	mV/V
			>20	V	200	V	(on-site calibration included)	0.10	mV/V
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu			>200	V	1000	V	(on-site calibration included)	54	μV/V



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value		units	value
KF1002 DC Current Source (on-site calibration included)	Multimeter Agilent/3458A	In-house method: DC Current Calibration Procedure (Document No.: E-04-22-003)	10	μA	10	(on-site calibration included)	88	μA/A
			100	μA	100	(on-site calibration included)	62	μA/A
			1	mA	1	(on-site calibration included)	65	μA/A
			10	mA	10	(on-site calibration included)	65	μA/A
			100	mA	100	(on-site calibration included)	74	μA/A
			1	A	1	(on-site calibration included)	0.16	mA/A
			0.01	mA	0.1	(on-site calibration included)	89	μA/A
			>0.1	mA	1	(on-site calibration included)	67	μA/A
			>1	mA	10	(on-site calibration included)	66	μA/A
			>10	mA	100	(on-site calibration included)	0.12	mA/A
			>100	mA	1	(on-site calibration included)	0.34	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu								
KF1002 DC Current Meter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: DC Current Calibration Procedure (Document No.: E-04-22-003)	10	μA	10	(on-site calibration included)	1.1	mA/A
			100	μA	100	(on-site calibration included)	0.16	mA/A
			1	mA	1	(on-site calibration included)	96	μA/A
			10	mA	10	(on-site calibration included)	95	μA/A
			100	mA	100	(on-site calibration included)	0.11	mA/A
			1	A	1	(on-site calibration included)	0.20	mA/A
			0.01	mA	0.2	(on-site calibration included)	1.1	mA/A
			>0.2	mA	2	(on-site calibration included)	0.22	mA/A
			>2	mA	20	(on-site calibration included)	0.15	mA/A
			>20	mA	200	(on-site calibration included)	0.13	mA/A
			>200	mA	1	(on-site calibration included)	0.21	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu								



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable		smallest uncertainty	
			minimum value	units	maximum value	units	explanation		value	units
KF1003 DC High Voltage Source DC High Voltage Meter	High Voltage Voltmeter VITREK/4700	In-house method: DC High Voltage Calibration Procedure (Document No.: E-04-22-073)	1	kV	20	kV			18	mV/V
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										
KF1004 DC High Current Source (on-site calibration included) DC High Current Meter (on-site calibration included)	Multimeter Agilent/3458A Current Shunt Prodigit/7550A Current Shunt Guildline/9230A	In-house method: DC High Current Calibration Procedure (Document No.: E-04-22-130)	1	A	1500	A	(on-site calibration included)		1.2	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										
KF1004 DC Current Shunt (on-site calibration included)	Multimeter Agilent/3458A Current Shunt Prodigit/7550A Current Shunt Guildline/9230A	In-house method: DC High Current Calibration Procedure (Document No.: E-04-22-130)	1	A	1000	A	On-site calibration included		1.2	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1011 AC Voltage Source (on-site calibration included)	Multimeter Agilent/3458A	In-house method: AC Voltage Calibration Procedure (Document No.: E-04-22-002)	10	V	10	V	(on-site calibration included) (@ 50 Hz)	0.93	mV/V
			100	V	100	V	(on-site calibration included) (@ 50 Hz)	0.88	mV/V
			700	V	700	V	(on-site calibration included) (@ 50 Hz)	1.2	mV/V
			10	mV	10	mV	(on-site calibration included) (@ 60 Hz)	4.0	mV/V
			100	mV	100	mV	(on-site calibration included) (@ 60 Hz)	3.6	mV/V
			1	V	1	V	(on-site calibration included) (@ 60 Hz)	0.95	mV/V
			10	V	10	V	(on-site calibration included) (@ 60 Hz)	0.88	mV/V
			100	V	100	V	(on-site calibration included) (@ 60 Hz)	0.89	mV/V
			700	V	700	V	(on-site calibration included) (@ 60 Hz)	1.2	mV/V
			10	V	700	V	(on-site calibration included) (@ 50 Hz)	20	mV/V
			10	mV	100	mV	(on-site calibration included) (@ 60 Hz)	4.2	mV/V
			>0.1	V	1	V	(on-site calibration included) (@ 60 Hz)	2.5	mV/V
			>1	V	10	V	(on-site calibration included) (@ 60 Hz)	2.5	mV/V
			>10	V	100	V	(on-site calibration included) (@ 60 Hz)	2.3	mV/V
			>100	V	700	V	(on-site calibration included) (@ 60 Hz)	1.8	mV/V
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1011 AC Voltage Meter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: AC Voltage Calibration Procedure (Document No.: E-04-22-002)	10	V	10	V	(on-site calibration included) (@ 50 Hz)	0.94	mV/V
			100	V	100	V	(on-site calibration included) (@ 50 Hz)	0.89	mV/V
			700	V	700	V	(on-site calibration included) (@ 50 Hz)	1.5	mV/V
			10	mV	10	mV	(on-site calibration included) (@ 60 Hz)	4.0	mV/V
			100	mV	100	mV	(on-site calibration included) (@ 60 Hz)	3.6	mV/V
			1	V	1	V	(on-site calibration included) (@ 60 Hz)	0.95	mV/V
			10	V	10	V	(on-site calibration included) (@ 60 Hz)	0.89	mV/V
			100	V	100	V	(on-site calibration included) (@ 60 Hz)	0.89	mV/V
			700	V	700	V	(on-site calibration included) (@ 60 Hz)	1.5	mV/V
			10	V	700	V	(on-site calibration included) (@ 50 Hz)	14	mV/V
			10	mV	200	mV	(on-site calibration included) (@ 60 Hz)	13	mV/V
			>0.2	V	2	V	(on-site calibration included) (@ 60 Hz)	9.5	mV/V
			>2	V	20	V	(on-site calibration included) (@ 60 Hz)	9.4	mV/V
			>20	V	200	V	(on-site calibration included) (@ 60 Hz)	1.1	mV/V
			>200	V	700	V	(on-site calibration included) (@ 60 Hz)	1.5	mV/V
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1012 AC Current Source (on-site calibration included)	Multimeter Agilent/3458A	In-house method: AC Current Calibration Procedure (Document No.: E-04-22-004)	100	uA	100	uA	(on-site calibration included) (@ 60 Hz)	1.2	mA/A
			1	mA	1	mA	(on-site calibration included) (@ 60 Hz)	0.99	mA/A
			10	mA	10	mA	(on-site calibration included) (@ 60 Hz)	0.99	mA/A
			100	mA	100	mA	(on-site calibration included) (@ 60 Hz)	0.99	mA/A
			1	A	1	A	(on-site calibration included) (@ 60 Hz)	1.2	mA/A
			0.1	mA	10	mA	(on-site calibration included) (@ 60 Hz)	1.4	mA/A
			>10	mA	100	mA	(on-site calibration included) (@ 60 Hz)	3.6	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu			>100	mA	1	A	(on-site calibration included) (@ 60 Hz)	3.2	mA/A
KF1012 AC Current Meter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: AC Current Calibration Procedure (Document No.: E-04-22-004)	100	uA	100	uA	(on-site calibration included) (@ 60 Hz)	1.2	mA/A
			1	mA	1	mA	(on-site calibration included) (@ 60 Hz)	1.0	mA/A
			10	mA	10	mA	(on-site calibration included) (@ 60 Hz)	1.0	mA/A
			100	mA	100	mA	(on-site calibration included) (@ 60 Hz)	1.0	mA/A
			1	A	1	A	(on-site calibration included) (@ 60 Hz)	1.3	mA/A
			0.1	mA	20	mA	(on-site calibration included) (@ 60 Hz)	2.1	mA/A
			>20	mA	200	mA	(on-site calibration included) (@ 60 Hz)	1.8	mA/A



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable		smallest uncertainty	
			minimum value	units	maximum value	units	explanation	value	units	
KF1012 AC Current Meter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: AC Current Calibration Procedure (Document No.: E-04-22-004)	>200	mA	1	A	(on-site calibration included) (@ 60 Hz)	1.4	mA/A	
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										
KF1013 AC High Voltage Meter	HIPOT TESTER Chroma/9055	In-house method: AC High Voltage Calibration Procedure (Document No.: E-04-22-077)	1	kV	10	kV	(@ 60 Hz)	37	mV/V	
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										
KF1013 AC High Voltage Source	High Voltage Voltmeter VITREK/4700	In-house method: AC High Voltage Calibration Procedure (Document No.: E-04-22-077)	1	kV	10	kV	(@ 60 Hz)	12	mV/V	
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu										





calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF1014 AC High Current Source (on-site calibration included) AC High Current Meter (on-site calibration included)	Current measurement kit (multi-function ammeter+clamp-on current probe) Keysight 34470A /Yokogawa 751552	In-house method: AC High Current Calibration Procedure (Document No.: E-04-22-131)	1	A	20	A	(on-site calibration included) (@ 50 Hz)	13	mA/A
			>20	A	400	A	(on-site calibration included) (@ 50 Hz)	6.8	mA/A
			1	A	20	A	(on-site calibration included) (@ 60 Hz)	9.3	mA/A
			>20	A	400	A	(on-site calibration included) (@ 60 Hz)	6.8	mA/A
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									
KF2001 AC Electrical Power Source	Digital Power Meter Chroma /66202	In-house method: AC Electrical Power Calibration Procedure (Document No.: E-04-22-012)	120	W	120	W	120 V, 1 A, PF = 1 (Single phase 60 Hz)	1.8	mW/W
			240	W	240	W	240 V, 1 A, PF = 1 (Single phase 60 Hz)	1.8	mW/W
			1200	W	1200	W	120 V, 10 A, PF = 1 (Single phase 60 Hz)	2.4	mW/W
			2400	W	2400	W	240 V10 A, PF = 1 (Single phase 60 Hz)	2.4	mW/W
			60	W	60	W	120 V, 1 A, PF = 0.5 Lag (Single phase 60 Hz)	3.6	mW/W
			120	W	120	W	240 V, 1 A, PF = 0.5 Lag (Single phase 60 Hz)	3.6	mW/W
			600	W	600	W	120 V, 10 A, PF = 0.5 Lag (Single phase 60 Hz)	5.6	mW/W
			1200	W	1200	W	240 V, 10 A, PF = 0.5 Lag (Single phase 60 Hz)	5.6	mW/W
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF2001 AC Electrical Power Meter	Calibrator Fluke/5502A	In-house method: AC Electrical Power Calibration Procedure (Document No.: E-04-22-012)	120	W	120	W	120 V, 1 A, PF = 1 (Single phase 60 Hz)	1.9	mW/W
			240	W	240	W	240 V, 1 A, PF = 1 (Single phase 60 Hz)	1.9	mW/W
			1200	W	1200	W	120 V, 10 A, PF = 1 (Single phase 60 Hz)	2.5	mW/W
			2400	W	2400	W	240 V, 10 A, PF = 1 (Single phase 60 Hz)	2.5	mW/W
			60	W	60	W	120 V, 1 A, PF = 0.5 Lag (Single phase 60 Hz)	3.7	mW/W
			120	W	120	W	240 V, 1 A, PF = 0.5 Lag (Single phase 60 Hz)	3.7	mW/W
			600	W	600	W	120 V, 10 A, PF = 0.5 Lag (Single phase 60 Hz)	5.7	mW/W
			1200	W	1200	W	240 V, 10 A, PF = 0.5 Lag (Single phase 60 Hz)	5.7	mW/W
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									
KF3001 Ground Bond Meter	Grounding Tester Standard Zentech/9002	In-house method: Ground Bond Tester Calibration Procedure (Document No.: E-04-22-049)	10	mΩ	10	mΩ	(25 A, 60 Hz)	12	mΩ/Ω
			100	mΩ	100	mΩ	(25 A, 60 Hz)	6.8	mΩ/Ω
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range			measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value		value	units
KF3001 Resistor (on-site calibration included)	Multimeter Agilent/3458A	In-house method: Resistance Calibration Procedure (Document No.: E-04-22-005)	10	Ω	10	(on-site calibration included)	31	$\mu\Omega/\Omega$
			100	Ω	100	(on-site calibration included)	28	$\mu\Omega/\Omega$
			1	k Ω	1	(on-site calibration included)	17	$\mu\Omega/\Omega$
			10	k Ω	10	(on-site calibration included)	16	$\mu\Omega/\Omega$
			100	k Ω	100	(on-site calibration included)	17	$\mu\Omega/\Omega$
			1	M Ω	1	(on-site calibration included)	29	$\mu\Omega/\Omega$
			10	M Ω	10	(on-site calibration included)	97	$\mu\Omega/\Omega$
			100	M Ω	100	(on-site calibration included)	0.65	m Ω/Ω

Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu

KF3001 Ohmmeter (on-site calibration included)	Calibrator Fluke/5730A	In-house method: Resistance Calibration Procedure (Document No.: E-04-22-005)	10	Ω	10	(on-site calibration included)	49	$\mu\Omega/\Omega$
			100	Ω	100	(on-site calibration included)	39	$\mu\Omega/\Omega$
			1	k Ω	1	(on-site calibration included)	30	$\mu\Omega/\Omega$
			10	k Ω	10	(on-site calibration included)	29	$\mu\Omega/\Omega$
			100	k Ω	100	(on-site calibration included)	30	$\mu\Omega/\Omega$
			1	M Ω	1	(on-site calibration included)	44	$\mu\Omega/\Omega$
			10	M Ω	10	(on-site calibration included)	0.12	m Ω/Ω
			100	M Ω	100	(on-site calibration included)	0.67	m Ω/Ω

Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu

KF3002 Inductor	LCR Meter HP/4284A	In-house method: Inductance Calibration Procedure (Document No.: E-04-22-072)	100	μH	100	(@ 1 kHz)	1.6	mH/H
			1	mH	1	(@ 1 kHz)	0.64	mH/H
			10	mH	10	(@ 1 kHz)	0.64	mH/H
			100	mH	100	(@ 1 kHz)	0.64	mH/H
			1	H	1	(@ 1 kHz)	0.84	mH/H
			10	H	10	(@ 1 kHz)	2.4	mH/H

Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu



calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KF3002 Inductance Meter	Standard Inductance Quadtech/1482B (100 μ H) /1482E (1 mH) /1482H (10 mH) /1482L (100 mH) /1482P (1 H) /1482T (10 H)	In-house method: Inductance Calibration Procedure (Document No.: E-04-22-072)	100	μ H	100	μ H	(@ 1 kHz)	2.1	mH/H
			1	mH	1	mH	(@ 1 kHz)	1.4	mH/H
			10	mH	10	mH	(@ 1 kHz)	1.4	mH/H
			100	mH	100	mH	(@ 1 kHz)	1.4	mH/H
			1	H	1	H	(@ 1 kHz)	1.5	mH/H
			10	H	10	H	(@ 1 kHz)	2.6	mH/H
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									
KF3003 Capacitance	LCR Meter HP/4284A	In-house method: Capacitance Calibration Procedure (Document No.: E-04-22-071)	100	pF	100	pF	(@ 1 kHz)	0.58	mF/F
			1	nF	1	nF	(@ 1 kHz)	0.58	mF/F
			10	nF	10	nF	(@ 1 kHz)	0.58	mF/F
			100	nF	100	nF	(@ 1 kHz)	0.58	mF/F
			1	μ F	1	μ F	(@ 1 kHz)	0.59	mF/F
			Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu						
KF3003 Capacitance Meter	Standard Capacitor HP/16383A (100 pF) /16384A (1000 pF) /16385A (0.01 μ F) /16386A (0.1 μ F) /19387A (1 μ F)	In-house method: Capacitance Calibration Procedure (Document No.: E-04-22-071)	100	pF	100	pF	(@ 1 kHz)	1.4	mF/F
			1	nF	1	nF	(@ 1 kHz)	1.4	mF/F
			10	nF	10	nF	(@ 1 kHz)	1.4	mF/F
			100	nF	100	nF	(@ 1 kHz)	1.4	mF/F
			1	μ F	1	μ F	(@ 1 kHz)	1.4	mF/F
			Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu						



Time And Frequency

calibration items	working standard brand /model	calibration method document name /no.	measurand level or range				measurement conditions /independent variable	smallest uncertainty	
			minimum value	units	maximum value	units		value	units
KJ0200 Frequency Counter	Rubidium Frequency Standard SRS/FS725	In-house method: Frequency Calibration Procedure (Document No.: E-04-22-016)	100	kHz	100	kHz		8.8 E-08	Hz/Hz
			1	MHz	1	MHz		8.8 E-08	Hz/Hz
			5	MHz	5	MHz		8.8 E-08	Hz/Hz
			10	MHz	10	MHz		8.8 E-08	Hz/Hz
Approval Signatory: CHIANG, Ming-Yao; LEE, Wen-Yu									

Note : Smallest uncertainty represents an expanded uncertainty using a coverage factor approximately 95 % level of confidence.
(Null Below)

