



格式: MI1102R08

中国船级社质量认证有限公司
CHINA CLASSIFICATION SOCIETY CERTIFICATION CO., LTD.

能源管理体系认证证书

CERTIFICATE OF MANAGEMENT SYSTEM FOR ENERGY

编号: No. 00522En1269R0M

兹证明

南昌华勤电子科技有限公司

(注册/运营地址: 江西省南昌市南昌高新技术产业开发区天祥大道2999号 邮编: 330217;
统一社会信用代码: 91360106MA35WNBE9F)

This is to certify that the Management System for Energy (EnMS) of

**NANCHANG HUAQIN ELECTRONIC
TECHNOLOGY CO., LTD.**

(Registered/Operation Add: No.2999, TIANXIANG AVENUE, NANCHANG HIGH TECH INDUSTRIAL DEVELOPMENT ZONE, NANCHANG CITY, JIANGXI PROVINCE, 330217, P.R.CHINA; Uniform Code of Social Credit: 91360106MA35WNBE9F)

建立的能源管理体系符合标准: **GB/T 23331-2020/ISO50001:2018** 及 **RB/T 101-2013** 《能源管理体系 电子信息企业认证要求》。

has been found to conform to System Standard **GB/T 23331-2020/ISO50001:2018** and **RB/T101-2013 Energy management systems-Requirements for certification on electronics and information enterprises.**

本证书对下述范围的能源管理体系有效: *电子产品PCBA、平板电脑、笔记本电脑、无线数据终端产品、移动通信设备及其配件的生产过程所涉及的能源管理活动*。

This certificate is valid to the following scope for EnMS: ***PRODUCTION PROCESS OF ELECTRONIC PRODUCTS PCBA, TABLET COMPUTERS, NOTEBOOK COMPUTERS, WIRELESS DATA TERMINAL PRODUCTS, MOBILE COMMUNICATION EQUIPMENT AND ITS ACCESSORIES RELATED ENERGY MANAGEMENT ACTIVITIES***.

本证书有效期至: **2025年4月19日**。

This certificate is valid until: **19 April 2025.**

能源绩效信息见附件。/Energy performance information as shown in attachment.



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C005-M



发证日期: **2022年4月20日**。
Issued on: **20 April 2022.**

签发:
Issued by: **Huang Shiyuan**

本证书根据中国船级社质量认证有限公司认证规范及有关程序规定签发。获证组织必须定期接受监督审核并经审核合格此证书方继续有效。当本证书包括证书附件时,则附件必须与主证书同时使用。每一页证书(含附件)均须有本公司盖章方可生效。任何单位或个人均不应摘录或节选本证书的内容。有关各方对所持证书的真实性有疑问时,可以向我公司咨询。本证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)上查询。

This Certificate is issued pursuant to China Classification Society Certification Co., Ltd.(CCSC) Rules for System Certification and related procedures. This certificate continues to be valid only by passing the periodic supervision. When the certificate consists of appendix(es), all the appendix(es) together with the certificate are taken as a whole and shall be used simultaneously. No certificate page is valid without bearing the stamp of CCSC. Any part of the certificate including the appendix(es) can not be extracted or abridged by any unit or individual in any form. Related parties who about the authenticity of the certificate may consult with CCSC. The information of this certificate can be inquired through the official website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).



CERTIFICATE



This is to certify that

Samsung Electronics Co., Ltd. Semiconductor Business

1 Samsung-ro, Giheung-gu
Yongin-si, Gyeonggi-do, 17113
Republic of Korea

with the organizational units/sites as listed in the annex

has implemented and maintains an **Energy Management System**.

Scope:

The design, fabrication, foundry service, assembly testing and packaging of semiconductor products(memory & system LSI) and light emitting diode(LED).

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 50001 : 2018

Certificate registration no.	50350240 EMSt21
Date of original certification	2016-01-15
Valid from	2024-01-13
Valid until	2027-01-12
Date of certification	2023-12-13



DQS GmbH

Christian Gerling
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany
Administrative Office: DQS Korea LLC., #207, ACE Highend Tower 3rd,
145 Gasan Digital 1-ro, Geumcheon-gu, Seoul, 08506, Republic of Korea
The validity of this certificate can only be verified by the QR-code.

DQS IS A MEMBER OF





Annex to certificate
Registration No. 50350240 EMSt21

Samsung Electronics Co., Ltd. Semiconductor Business

1 Samsung-ro, Giheung-gu
Yongin-si, Gyeonggi-do, 17113
Republic of Korea

Location

Scope

50350241
Samsung Electronics Co., Ltd.
Semiconductor Business
Hwaseong Campus

The design, fabrication, foundry service, assembly testing and packaging of semiconductor products(memory & system LSI) and light emitting diode(LED).

1-2 Samsungjeonja-ro
Hwaseong-si, Gyeonggi-do, 18448
Republic of Korea

50350242
Samsung Electronics Co., Ltd.
Semiconductor Business
Onyang Campus

The assembly testing and packaging of semiconductor products (memory & system LSI).

158 Baebang-ro, Baebang-eup
Asan-si, Chungcheongnam-do, 31489
Republic of Korea

50350243
Samsung Electronics Co., Ltd.
Semiconductor Business
Cheonan Campus

The assembly testing and packaging of semiconductor products (memory & system LSI).

465 Beonyeong-ro
Seobuk-gu, Cheonan-si
Chungcheongnam-do, 31086
Republic of Korea

50350456
Samsung Electronics Co., Ltd.
Semiconductor Business
Pyeongtaek Campus

The design, fabrication, foundry service, assembly testing and packaging of semiconductor products(memory & system LSI) and light emitting diode(LED).

114 Samseong-ro
Pyeongtaek-si, Gyeonggi-do, 17786
Republic of Korea



能源管理体系认证证书

证书编号：00124En20171R0L/4403

兹证明

广州华星光电半导体显示技术有限公司

注册地址：中国广东省广州市黄埔区(中新广州知识城)亿创街1号406房之417

运营地址：中国广东省广州市黄埔区和通二路36号

统一信用代码：91440101MA9W1RMNXR

能源管理体系符合标准：

GB/T 23331-2020 / ISO 50001:2018

RB/T101-2013;

通过认证范围如下：

液晶显示面板的设计与制造所涉及的能源管理活动。

(获证组织本年度产品单位产量综合能耗及能耗核算边界见标有相同证书注册号的证书附件，
证书附件是本证书组成部分)

首次发证日期：2024年4月24日 本次发证日期：2024年4月24日 有效期至：2027年4月23日

在一个监督周期后，本证书必须与CQC签发的监督审核合格通知书合并使用方可有效。查询证书有效状态请登陆www.cqc.com.cn。
本证书信息可在国家认证认可监督管理委员会公示的网站(www.cnca.gov.cn)上查询



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C001-M

谢肇煦

Signed by: Xie ZhaoXu

MEMBER OF



中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

中国·北京·南四环西路188号9区 100070

<http://www.cqc.com.cn>



能源管理体系认证证书附件

获证组织名称：广州华星光电半导体显示技术有限公司

证书编号：00124En20171R0L/4403

审核类型	统计开始日期	统计结束日期	能源绩效	管理体系边界
初次认证 /再认证	2023-07-01	2023-12-31	单位产品综合能耗：0.1104 tce/Pcs	物理边界：中国广东省广州市黄埔区和通二路36号生产系统（含阵列、彩膜、成盒、模组等）；辅助生产系统（供配电系统、压缩空气系统、制冷系统等）和附属生产系统（办公、食堂）。
	2024-01-01	2024-03-31	单位产品综合能耗：0.0869 tce/Pcs	
第1次监督				
第2次监督				
第3次监督				

本次发证日期：2024年4月24日

此附件与相同编号的证书同时使用有效



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C001-M

谢肇煦

Signed by: Xie ZhaoXu

MEMBER OF



中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

中国·北京·南四环西路188号9区 100070

<http://www.cqc.com.cn>



BUREAU
VERITAS

Bureau Veritas Certification

SAMSUNG ELECTRO-MECHANICS VIETNAM CO., LTD

YEN BINH INDUSTRIAL PARK, DONG TIEN WARD, PHO YEN CITY,
THAI NGUYEN PROVINCE, VIETNAM

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 50001:2018

Scope of certification

MANUFACTURE OF CAMERA MODULE (INCLUDING LENS AND ACTUATOR) AND HIGH DENSITY INTERCONNECT CIRCUIT BOARD FCBGA (FLIP CHIP BALL GRID ARRAY).

Original Cycle Start Date:	08-03-2018
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	08-04-2023
Certification / Recertification cycle start date:	22-05-2023
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	21-05-2026

Certificate No.:	VN010494	Rev:	1	Issue date:	22-05-2023
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LUU THI MAI HUONG



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Certification Body Address: 5th Floor, 66 Prescott Street, London, E1 8HG, United Kingdom

Local Office: Unit 4.4A, 4th Floor, E-Town 1 Building, 364 Cong Hoa Street, Tan Binh District, Ho Chi Minh City, Vietnam

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +84 28 3812 2246.





管理体系认证证书

证书编号: 01123EN30020R0L

OID 编号: 1.2.156.1.2.01123EN30020R0L

兹证明

宁德新能源科技有限公司

(社会信用代码: 91350902671920959B)

(宁德市蕉城区漳湾镇新港路 1 号, 352100)

能源管理体系符合标准:

GB/T 23331-2020/ISO 50001:2018 《能源管理体系 要求》

RB/T 101-2013 《能源管理体系 电子信息企业认证要求》

本证书覆盖下述范围:

位于福建省宁德市蕉城区漳湾镇新港路 1 号及

湖西区 (东侨工业集中区工业路东侧、团圆路北侧、建工路西侧)

宁德新能源科技有限公司范围内

与锂离子电池设计和生产制造

有关的能源管理活动

(本证书有效性依据发证机构的定期监督获得保持, 证书有效性信息请登录 www.cc.cesi.cn 进行查询)

(本证书信息可在国家认证认可监督管理委员会官方网站 www.cnca.gov.cn 上查询)

注: 认证注册范围不包括未获得有效的国家规定的相关行政许可, 资质许可的产品服务范围

发证日期: 2023 年 7 月 24 日

有效期至: 2026 年 7 月 23 日



北京赛西认证有限责任公司



中国认可

管理体系

MANAGEMENT SYSTEM

CNAS C011-M



地址: 北京市东城区安定门东大街 1 号

客服电话: 400-071-9000

网址: www.cc.cesi.cn



CERTIFICATE OF MANAGEMENT SYSTEM CERTIFICATION

Certificate No: 01123EN30020R0L
OID No: 1.2.156.1.2.01123EN30020R0L

This is to certify that the Energy Management System of

NINGDE AMPEREX TECHNOLOGY LIMITED

(Certificate of Social Credit Code : 91350902671920959B)

(No.1 Xingang Road, Zhangwan Town, Jiaocheng District, Ningde City, 352100)

has complied with the requirements of

GB/T 23331-2020/ISO 50001:2018

Energy management systems-Requirements

RB/T 101-2013

This certificate is valid for the following scope:

**THE ENERGY MANAGEMENT ACTIVITIES RELATED TO THE DESIGN
AND MANUFACTURE OF LITHIUM-ION BATTERIES PROVIDED BY NINGDE
AMPEREX TECHNOLOGY LIMITED, WHICH IS LOCATED AT NO.1 XINGANG ROAD
ZHANGWAN TOWN, JIAOCHENG DISTRICT, NINGDE CITY, FUJIAN PROVINCE
AND HUXI DISTRICT (EAST SIDE OF INDUSTRIAL ROAD, NORTH SIDE OF
TUANYUAN ROAD AND WEST SIDE OF JIANGONG ROAD, DONGQIAO
INDUSTRIAL CONCENTRATION ZONE)**

THE VALIDITY OF THIS CERTIFICATE DEPENDS ON THE CONSEQUENCE OF
THE ANNUALLY SURVEILLANCE EXECUTED BY THE CERTIFICATION BODY
PLEASE ACCESS www.cc.cesi.cn OR www.cnca.gov.cn FOR CHECKING VALIDITY OF THE CERTIFICATE

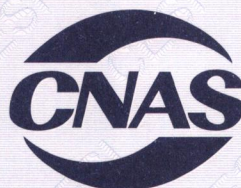
Note: The scope of product services without the related administrative permits and qualifications is
not included in the scope of certification registration.

Issue Date:2023-07-24

Valid Until:2026-07-23

General Manager

CESI Certification Co., Ltd.



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C011-M



证书附件



证书编号: 01123EN30020R0L
OID 编号: 1.2.156.1.2.01123EN30020R0L

发证日期: 2023 年 7 月 24 日

有效期至: 2026 年 7 月 23 日

获证组织名称: 宁德新能源科技有限公司
获证组织地址: 宁德市蕉城区漳湾镇新港路 1 号, 352100
证书编号: 01123EN30020R0L
认证依据标准: GB/T 23331-2020/ISO 50001:2018 《能源管理体系 要求》
RB/T 101-2013 《能源管理体系 电子信息企业认证要求》

审核类型及时间	审核周期单位产品/产值能耗	能耗核算边界
初次认证 2023 年 7 月 10 日- 2023 年 7 月 13 日	2022 年 4 月 1 日至 2023 年 3 月 31 日 综合能耗: 154515 吨标准煤 单位产值综合能耗: 39.72 千克标准煤/万元 单位产品综合能耗: 7.87 吨标准煤/MWh	位于福建省宁德市蕉城区漳湾镇新港路 1 号及湖西区(东侨工业集中区工业路东侧、团圆路北侧、建工路西侧)宁德新能源科技有限公司范围内与锂离子电池生产制造相关, 涵盖搅拌、涂布、备料、卷绕、包装、真空、注液、自由烘烤、化成、容量、抽真空、成型、容量复测、检测等主要生产系统用能, 及供配电系统、空压系统、冰水系统、空调通风系统、污水站、天然气锅炉系统、真空系统、废气处理系统等辅助生产系统用能, 及办公、研发、宿舍、餐厅、仓库等附属生产系统用能。覆盖厂区边界包括湖东 E 区、湖东 M 区、湖西 W 区、研发 R 区, 主要能源种类为电力、天然气、蒸汽。
第 次监督		
第 次监督		





证书 CN23/00004500

下述组织

重庆惠科金渝光电科技有限公司

统一社会信用代码 91500113331527042W

注册地址：重庆市巴南区界石镇石景路 1 号
经营地址：中国重庆市巴南区界石镇石景路 1 号

的管理体系已经过审核，并被证明符合下述要求

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

所涉及的活动范围覆盖

薄膜晶体管液晶显示器件的设计和制造过程涉及到的能源采购、接收、贮存、加工转换、输配、使用、余热余能回收利用过程的管理及节能技术的应用。

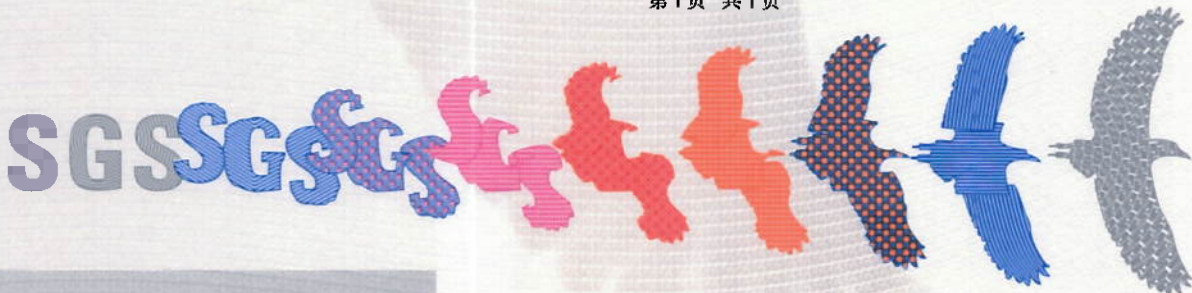
获证组织上年度和本年度的单位产品综合能耗和万元产值能耗及能耗核算边界见标有相同证书注册号的证书附件，证书附件是本证书的组成部分

该证书的有效有效期自 2023 年 08 月 22 日至 2026 年 08 月 21 日
并须经过符合要求的监督审核保持有效
持续认证至少在证书失效前 60 天执行
版本号 1. 初始注册日期 2023 年 08 月 22 日

签署

通标标准技术服务有限公司
北京市阜成路 73 号世纪裕惠大厦 16 层 100142
电话: +86 (10)6845-6699 传真: +86 (10)6845-8121 www.sgs.com
本证书信息可在国家认证认可监督管理委员会公示的网站 www.cnca.gov.cn 上查询

第 1 页 共 1 页



本文件是真实的电子版证书，仅供客户用于其商业用途。客户可自行打印，视同副本。本文件根据 Terms and Conditions | SGS 中认证服务通用条款的要求颁发。请注意其中已包含的责任范围、赔偿和司法管辖事项。本文件受 SGS 版权保护，任何未经授权的对此文件的内容或外观的变更、伪造或篡改皆属非法。

重庆惠科金渝光电科技有限公司

统一社会信用代码 91500113331527042W
中国重庆市巴南区界石镇石景路1号

**GB/T 23331-2020/
ISO 50001:2018
RB/T 101-2013**

版本号 1



获证组织能效指标及能耗核算边界

审核类型及时间	审核周期内单位产品/产值能耗	能耗核算边界
初次认证 审核 2023年7月 19-21日	<p>2021年10月-2022年9月 万元产值能耗: 0.0477吨标准煤/万元 单位产品能耗: 0.0107吨标准煤/平方米</p> <p>2022年10月-2023年6月 万元产值能耗: 0.0509吨标准煤/万元 单位产品能耗: 0.0113吨标准煤/平方米</p>	<p>位于重庆市巴南区界石镇石景路1号的重庆惠科金渝光电科技有限公司, 主要用能过程包括阵列、彩膜、成盒和模组等生产系统以及配电、暖通、压缩空气、纯水、冰水、废水处理、废气处理和大宗气等辅助生产系统以及办公和食堂等附属生产系统。</p> <p>2021年10月-2022年9月, 薄膜晶体管液晶显示器件产量为 5713519.43平方米 2022年10月-2023年6月, 薄膜晶体管液晶显示器件产量为 3771234.09平方米</p>
第1次监督 年月日		
第2次监督 年月日		

第1页 共1页

Certificate CN23/00004500

The management system of

CHONGQING HKC OPTOELECTRONICS TECHNOLOGY CO., LTD.

Unified Social Credit Code 91500113331527042W

Business Registration Address: No. 1 Shijing Road, Jieshi Town, Banan District, Chongqing City

Business Operation Address: No. 1 Shijing Road, Jieshi Town, Banan District, Chongqing City, P.R. China

has been assessed and certified as meeting the requirements of

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

For the following activities

Design and manufacture of thin film transistor liquid crystal display (TFT-LCD) open cells involving management of energy procurement, receiving, storage, processing and conversion, transmission and distribution, use, waste heat and waste energy recycling and the utilization of energy-saving technologies.

For the detail information regarding boundaries and comprehensive energy consumption, please see the appendix with the same number of this certificate and it is the component of this certificate.

This certificate is valid from 22 August 2023 until 21 August 2026 and remains valid subject to satisfactory surveillance audits.

Re certification audit due a minimum of 60 days before the expiration date
Issue 1. Certified since 22 August 2023.

Authorized by

SGS CSTC Standards Technical Services Co., Ltd.
16F Century YuHui Mansion, No. 73 Fucheng Road, Beijing, P.R. CHINA 100142
t +86 (0)10 6845-6699 f +86 (0)10 6845-8121 www.sgs.com

The certification information can be verified on the web site of Certification and Accreditation Administration of the People's Republic of China www.cnca.gov.cn

Page 1 of 1



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The Appendix of Certificate CN23/00004500

CHONGQING HKC OPTOELECTRONICS TECHNOLOGY CO., LTD.

Unified Social Credit Code 91500113331527042W
 No. 1 Shijing Road, Jieshi Town, Banan District,
 Chongqing City, P.R. China

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

Issue 1



Organization's energy performance indicators and boundaries

Audit type and date	Energy consumption per unit product or unit output value during audit cycle	Boundaries
Initial Audit 19~21 Jul., 2023	<p>From Oct., 2021 to Spet., 2022 Energy consumption per unit output value: 0.0477 tce/10K ¥RMB Energy consumption per unit product: 0.0107 tce/10K pcs</p> <p>From Oct., 2022 to Jun., 2023 Energy consumption per unit output value: 0.0509 tce/10K ¥RMB LCD Energy consumption per unit product: 0.0113 tce/10K pcs</p>	<p>Chongqing HKC Optoelectronics Technology Co., Ltd. located in No. 1 Shijing Road, Jieshi Town, Banan District, Chongqing City.</p> <p>The main energy consumption processes include the main production systems such as array, color film, cell and module, the auxiliary production systems include power distribution, HVAC, compressed air, pure water, ice water, waste water treatment, waste gas treatment and bulk gas, and the subsidiary production systems such as administrative offices and canteens.</p> <p>From Oct., 2021 to Spet., 2022, the production quantity of thin film transistor liquid crystal display (TFT-LCD) open cells is 5713519.43 m² From Oct., 2022 to Jun., 2023, the production quantity of thin film transistor liquid crystal display (TFT-LCD) open cells is 3771234.09 m²</p>
1 st Sur		
2 nd Sur		

Certificate CN23/00002652.01

Coretronic Optotech (Suzhou) Co., Ltd.

Unified Social Credit Code 91320509336372406Y
Business Registration Address: No. 688 Pangjin Road, Wujiang Economic and Technological Development Zone
Business Operation Address: No. 688 Pangjin Road, Wujiang Economic and Technological Development Zone, Suzhou City, Jiangsu Province, P.R. China
has been assessed under the management system of the certified organisation defined in the main certificate CN23/00002652 as meeting the requirements of

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

For the following activities

**Design and manufacture of modules used in liquid crystal displays (LCD),
manufacture of splice liquid crystal displays (SLCD) involving management
of energy procurement, receiving, storage, processing and conversion,
transmission and distribution, use, waste heat and waste energy recycling
and the utilization of energy-saving technologies**

For the detail information regarding boundaries and comprehensive energy consumption, please see the appendix with the same number of this certificate and it is the component of this certificate

This certificate is valid from 18 May 2023 until 17 May 2026
and remains valid subject to satisfactory surveillance audits.

Re certification audit due a minimum of 60 days before the expiration date
Issue 1. Certified since 18 May 2023

Multiple certificates have been issued for this scope

The main certificate is numbered CN23/00002652

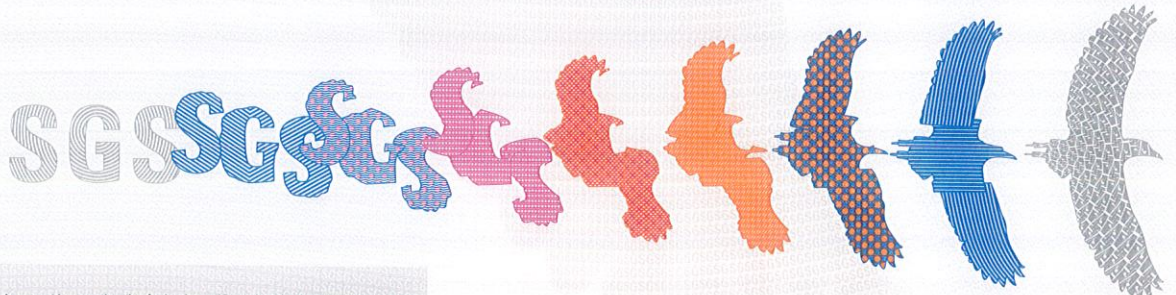
The validity of this certificate depends on the validity of the main certificate

Authorised by

SGS CSTC Standards Technical Services Co., Ltd.
16F Century YuHui Mansion, No. 73 Fucheng Road, Beijing, P.R. CHINA 100142
t +86 (0)10 6845-6699 f +86 (0)10 6845-8121 www.sgs.com

The certification information can be verified on the web site of Certification and Accreditation Administration of the People's Republic of China www.cnca.gov.cn

Page 1 of 1



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证书 CN23/00002652.01



苏州璨宇光电有限公司

统一社会信用代码 91320509336372406Y

注册地址：吴江经济技术开发区庞金路 688 号

经营地址：中国江苏省苏州市吴江经济技术开发区庞金路 688 号

依据主证书 CN23/00002652 中规定的管理体系已经过审核，并被证明符合下述要求

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013



所涉及的活动范围覆盖

液晶显示器模组的设计和制造，液晶拼接显示器的制造过程中涉及到的能源采购、接收、贮存、加工转换、输配、使用、余热余能回收利用等过程的管理及节能技术的应用

获证组织上年度和本年度的单位产品综合能耗和万元产值能耗及能耗核算边界见标有相同证书注册号的证书附件，证书附件是本证书的组成部分

该证书的有效期自 2023 年 05 月 18 日至 2026 年 05 月 17 日
并须经过符合要求的监督审核保持有效
持续认证至少在证书失效前 60 天执行
版本号 1. 初始注册日期 2023 年 05 月 18 日



在此范围内出具了多张证书
主证书编号为 CN23/00002652

本证书的有效期限取决于主证书的有效期限

签署

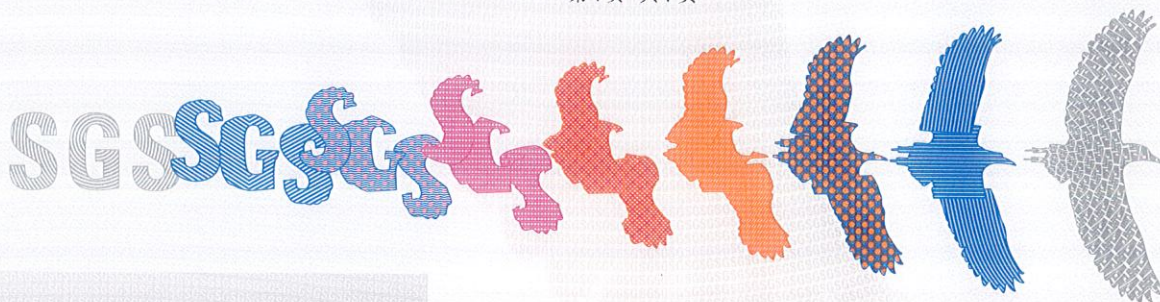
通标标准技术服务有限公司

北京市阜成路 73 号世纪裕惠大厦 16 层 100142

电话: +86 (0)10 6845-6699 传真: +86 (0)10 6845-8121 www.sgs.com

本证书信息可在国家认证认可监督管理委员会公示的网站 www.cnca.gov.cn 上查询

第 1 页 共 1 页



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The Appendix of Certificate CN23/00002652.01

Coretronic Optotech (Suzhou) Co., Ltd.

Unified Social Credit Code 91320509336372406Y
No. 688 Pangjin Road, Wujiang Economic and Technological Development Zone, Suzhou City, Jiangsu Province, P.R. China

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

Issue 1



Organization's energy performance indicators and boundaries

Audit type and date	Energy consumption per unit product or unit output value during audit cycle	Boundaries
Initial 4—6 May 2023	<p>From Jun. 2021 to May 2022: 2.169 kgce/ten thousand yuan modules used in liquid crystal displays (LCD): 2.713 tce/ten thousand pcs splice liquid crystal displays (SLCD): 1.392 tce/ten thousand pcs</p> <p>From Jun. 2022 to Mar. 2023: 1.952 kgce/ten thousand yuan modules used in liquid crystal displays (LCD): 2.817 tce/ten thousand pcs splice liquid crystal displays (SLCD): 1.089 tce/ten thousand pcs</p>	<p>Coretronic Optotech (Suzhou) Co., Ltd. located in No. 688 Pangjin Road, Wujiang Economic and Technological Development Zone, Suzhou City, Jiangsu Province, P.R. China, the main energy consumption processes include the main production systems such as assembly, test and aging test, the auxiliary production systems include power supply and distribution, air compressing, air exchanging and lighting, air conditioning, chilled water unit, boiler, exhaust gas treatment and canteen.</p> <p>From Jun. 2021 to May 2022: the production quantity of modules used in liquid crystal displays (LCD) is 95.2039 ten thousand pcs.</p> <p>From Jun. 2021 to May 2022: the production quantity of splice liquid crystal displays (SLCD) is 589.5196 ten thousand pcs.</p> <p>From Jun. 2022 to Mar. 2023: the production quantity of modules used in liquid crystal displays (LCD) is 35.2243 ten thousand pcs.</p> <p>From Jun. 2022 to Mar. 2023: the production quantity of splice liquid crystal displays (SLCD) is 377.6723 ten thousand pcs.</p>
1 st Sur		
2 nd Sur		

Page 1 of 1



证书 CN23/00002652.01 附件

苏州璨宇光电有限公司

统一社会信用代码 91320509336372406Y
中国江苏省苏州市吴江区经济技术开发区庞金路 688 号

GB/T 23331-2020/ ISO 50001:2018 RB/T 101-2013

版本号 1



获证组织能效指标及能耗核算边界

审核类型及时间	审核周期内单位产品/产值能耗	能耗核算边界
初次认证审核 2023年05月4-6日	2021年6月~2022年5月: 2.169 千克标准煤/万元 液晶显示器模组: 2.713 吨标准煤/万台 液晶拼接显示器: 1.392 吨标准煤/万台 2022年6月~2023年3月: 1.952 千克标准煤/万元 液晶显示器模组: 2.817 吨标准煤/万台 液晶拼接显示器: 1.089 吨标准煤/万台	位于中国江苏省苏州市吴江区经济技术开发区庞金路 688 号的苏州璨宇光电有限公司, 主要用能过程包括组装、测试和老化测试等主要生产系统以及供电、空气压缩、排风照明、空调、冰机、锅炉、废气处理和食堂等辅助生产系统。 2021年6月—2022年5月, 液晶显示器模组产量为 95.2039 万台。 2021年6月—2022年5月, 液晶拼接显示器产量为 589.5196 万台。 2022年6月—2023年3月, 液晶显示器模组产量为 35.2243 万台。 2022年6月—2023年3月, 液晶拼接显示器产量为 377.6723 万台。
第1次监督审核 年月日		
第2次监督审核 年月日		

第1页 共1页

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证书号：04124En20039R0



能源管理体系认证证书

兹证明

青岛京东方光电科技有限公司

统一社会信用代码：91370211MA94T3M62L

住所：山东省青岛市黄岛区王台街道办事处台中路29号518室

建立的能源管理体系符合标准

GB/T 23331-2020/ISO50001:2018;RB/T101-2013

生产/经营场所：山东省青岛市黄岛区王台街道佳台路以南，环台东路以西，王台东路以东，春台路以北合围区域青岛京东方光电科技有限公司园区（不含青岛京东方光电科技有限公司生活区）

认证范围：TFT-LCD（薄膜晶体管液晶显示屏）模组的设计和生涉及的能量管理活动

能源绩效和能源管理体系边界见附件

发证日期	有效日期至	首次发证	换证日期
2024/05/06	2027/05/05	*****	*****

本证书认证范围与其涉及的有效法律法规要求一并使用，该要求包含但不限于行政许可、资质范围和强制性认证要求等
证书继续有效以是否加贴监审合格标志为准

第一次监审
合格标志

第二次监审
合格标志



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C041-M



华测认证有限公司

中国深圳市宝安区新安街道留仙三路4号华测检测大楼8楼A区

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Certificate No: 04124En20039R0



ENERGY MANAGEMENT SYSTEM CERTIFICATE

This is to certify that

Qingdao BOE Optoelectronics Technology Co.,LTD.

Unified Credit Record: 91370211MA94T3M62L

Registration Address: No.518,Room 29,Taizhong Road,Wangtai Sub-district,Huangdao District,Qingdao City,Shandong Province

Has been awarded this certificate for compliance with the standard

GB/T 23331-2020/ISO50001:2018;RB/T101-2013

Production/Business Address: Enclosed area south of Jiatai Road,west of HuanTai East Road,east of Wangtai East Road,and north of Chuntai Road,Wangtai Sub-district,Huangdao District,Qingdao City,Shandong Province,within the campus of Qingdao BOE Optoelectronics Technology Co.,Ltd. (excluding the living quarters of Qingdao BOE Optoelectronics Technology Co.,Ltd.)

Scope:Energy management activities related to the design and production of TFT-LCD (Thin Film Transistor Liquid Crystal Display) modules

Energy performance and energy management system boundary see annex

Issue	Expiry	Initial Issue	Recertification
2024/05/06	2027/05/05	*****	*****

The scope of certification under this certificate shall be used together with the effective regulatory and statutory requirements involved, which shall include but not be limited to administrative license, qualification scope and mandatory certification requirements, etc.

Surveillance conformity label should be pasted below for continual effectiveness of this certificate.

第一次监审
合格标志

第二次监审
合格标志



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C041-M



General manager

CTI Certification Co., Ltd.

Zone A 8F CTI Building, No.4 Liu Xian San Road, Xin'an Street, Bao'an District, Shen Zhen, China.
You can seek the certificate details which are both on the CTI official website (www.cti-cert.com) and the Certification and Accreditation Administration of the People's Republic of China official website (www.cnca.gov.cn)



能源管理体系认证证书

附件

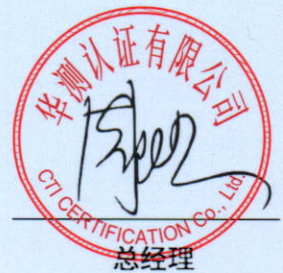
能源绩效和能源管理体系边界

统计报告期	能源绩效	能源体系边界
2024.1-3	综合能耗：3229.28 吨标准煤 单位产值综合能耗：22.90 千克标准煤/万元 单位产量综合能耗：154.05 千克标准煤/千片	山东省青岛市黄岛区王台街道佳台路以南，环台东路以西，王台东路以东，春台路以北合围区域青岛京东方光电科技有限公司园区（不含青岛京东方光电科技有限公司生活区）

此附件是具有相同证书号的能源管理体系认证证书不可分割部分，随能源管理体系认证证书有效



中国认可
管理体系
MANAGEMENT SYSTEM
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华测认证有限公司

中国深圳市宝安区新安街道留仙三路4号华测检测大楼8楼A区

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ENERGY MANAGEMENT SYSTEM CERTIFICATE

Annex

Energy management system and accounting boundary energy performance calculation

Statistical reporting period	Energy performance	Energy system boundary
2024.1-3	<p>Comprehensive energy consumption:3229.28 tce</p> <p>Comprehensive energy consumption per unit of output value:22.90 kgce/ ten thousand yuan</p> <p>Comprehensive energy consumption per unit output: 154.05 kgce/10,00 pieces</p>	<p>Enclosed area south of Jiatai Road, west of HuanTai East Road,east of Wangtai East Road,and north of Chuntai Road,Wangtai Sub-district, Huangdao District,Qingdao City, Shandong Province,within the campus of Qingdao BOE Optoelectronics Technology Co., Ltd.(excluding the living quarters of Qingdao BOE Optoelectronics Technology Co.,Ltd.)</p>

This attachment is an inseparable part of energy management system certificate with the same certificate number and is with the same effectiveness with the Energy management system certificate.



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C041-M



General manager

CTI Certification Co., Ltd.

Zone A 8F CTI Building, No.4 Liu Xian San Road, Xin'an Street, Bao'an District, Shen Zhen, China.
You can seek the certificate details which are both on the CTI official website (www.cti-cert.com) and the
Certification and Accreditation Administration of the People's Republic of China official website
(www.cnca.gov.cn)

Certificate of Registration

能源管理体系 – ISO 50001:2018

兹证明：
友达光电（苏州）有限公司
91320594728739895L
中国
江苏省
苏州工业园区
苏虹中路398号
邮编：215021

AUO(Suzhou)Co.Ltd.
No. 398 Suhong Zhong Road
Suzhou Industrial Park
Jiangsu
215021
China

持有证书：**ENMS 800211**

并运行符合ISO 50001:2018要求的能源管理体系，认证范围如下：

薄膜液晶液晶显示屏模组制造过程的能源管理活动 单位产值综合能耗（当量值）为0.0112吨标准煤/万元。主要生产工艺为：液晶原片，磨边磨角，研磨，画面检测，清洁，偏光片贴附，镭射切割，OLB贴合，注胶，PCB贴合，PCB测试，组装，加铁框，老化，测试，打包。基于2022年1~12月数据

The energy management activities for the manufacture of thin film transistor liquid crystal display screen modules. The comprehensive energy consumption per unit output value (energy calorific value) is 0.0112 tce/10K RMB. The production process is as follows: LCD original film, Grinding, Tape Cleaning, CCTV Testing, Panel Cleaning, POL Attaching, Laser Cutting, OLB Bonding, PCB Bonding, PCB Testing, Assembly, Bezel, Aging, Testing, Packing. Based on the data from January to December 2022



BSI代表：

Michael Lam – Managing Director Assurance, APAC

首次发证日期：2014-12-11

生效日期：2023-12-11

最新发证日期：2023-12-06

有效期至：2026-12-10

Page: 1 of 1



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此证书只在提供完整正本时才有效。

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BSI保证英国有限公司，注册地英国，注册号码7805321，地址：389 Chiswick High Road, London W4 4AL, UK

BSI集团公司成员。



管理体系认证证书

证书编号: 01122EN30010R0L

OID 编号: 1.2.156.1.2.01122EN30010R0L

兹证明

福州京东方光电科技有限公司

(社会信用代码: 913501813376201683)

(福建省福州市福清市音西街道福俱路 99 号, 350300)

能源管理体系符合标准:

GB/T 23331-2020/ISO 50001:2018 《能源管理体系 要求》

RB/T 101-2013 《能源管理体系 电子信息企业认证要求》

本证书覆盖下述范围:

位于福建省福州市福清市音西街道福俱路 99 号

福州京东方光电科技有限公司范围内

与薄膜晶体管液晶显示器研发设计、生产、服务

有关的能源管理活动

(本证书有效性依据发证机构的定期监督获得保持, 证书有效性信息请登录 www.cc.cesi.cn 进行查询)

(本证书信息可在国家认证认可监督管理委员会官方网站 www.cnca.gov.cn 上查询)

注: 认证注册范围不包括未获得有效的国家规定的相关行政许可, 资质许可的产品服务范围

发证日期: 2022 年 5 月 12 日

有效期至: 2025 年 5 月 11 日



北京赛西认证有限责任公司



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C011-M



地址: 北京市东城区安定门东大街 1 号

客服电话: 400-071-9000

网址: www.cc.cesi.cn



CERTIFICATE OF MANAGEMENT SYSTEM CERTIFICATION

Certificate No: 01122EN30010R0L

OID No: 1.2.156.1.2.01122EN30010R0L

This is to certify that the Energy Management System of

FUZHOU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD.

(Certificate of Social Credit Code : 913501813376201683)

(No.99, Fuju Rd., Yinxi St., Fuqing City, Fuzhou City, Fujian Province, P. R. China, 350300)

has complied with the requirements of

GB/T 23331-2020/ISO 50001:2018

Energy management systems-Requirements

RB/T 101-2013

This certificate is valid for the following scope:

**THE ENERGY MANAGEMENT ACTIVITIES RELATED TO THE DESIGN
R&D, PRODUCTION AND SERVICE OF TFT- LCD PROVIDED BY FUZHOU
BOE OPTOELECTRONICS TECHNOLOGY CO., LTD., WHICH IS LOCATED
AT NO.99, FUJU RD., YINXI ST., FUQING CITY, FUZHOU CITY
FUJIAN PROVINCE, CHINA**

THE VALIDITY OF THIS CERTIFICATE DEPENDS ON THE CONSEQUENCE OF
THE ANNUALLY SURVEILLANCE EXECUTED BY THE CERTIFICATION BODY
PLEASE ACCESS www.cc.cesi.cn OR www.cnca.gov.cn FOR CHECKING VALIDITY OF THE CERTIFICATE

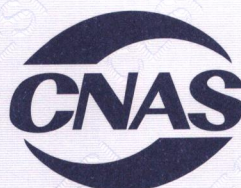
Note: The scope of product services without the related administrative permits and qualifications is
not included in the scope of certification registration.

General Manager

CESI Certification Co., Ltd.

Issue Date:2022-05-12

Valid Until:2025-05-11



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C011-M



Add: No.1Andingmen Dongdajie Dongchengqu,Beijing,China Tel: 400-071-9000

[Http://www.cc.cesi.cn](http://www.cc.cesi.cn)

证书附件



证书编号: 01122EN30010R0L
OID 编号: 1.2.156.1.2.01122EN30010R0L

发证日期: 2022 年 5 月 12 日

有效期至: 2025 年 5 月 11 日

获证组织名称: 福州京东方光电科技有限公司
获证组织地址: 福建省福州市福清市音西街道福俱路 99 号, 350300
证书编号: 01122EN30010R0L
认证依据标准: GB/T 23331-2020/ISO 50001:2018 《能源管理体系 要求》
RB/T101-2013 《能源管理体系 电子信息企业认证要求》

审核类型及时间	审核周期单位产品/产值能耗	能耗核算边界
初次认证 2022 年 4 月 24 日 -4 月 27 日	2021 年 1 月至 12 月 综合能耗: 95175 吨标准煤 单位产品综合能耗: 9.16 千克标准煤/平方米 单位产值综合能耗: 49.6 千克标准煤/万元	位于福建省福州市福清市音西街道福俱路 99 号福州京东方光电科技有限公司与薄膜晶体管液晶显示器研发设计、生产、服务相关, 涵盖阵列工程 Array (阵列基板制备)、彩膜工程 CF (彩膜基板制备)、成盒工程 Cell (液晶盒制备)、模块工程 Module (液晶模块制备) 等主要生产系统用能, 供配电系统、冰水系统、空压系统、冷却循环水系统、空调通风系统、真空系统、水处理系统等辅助生产系统用能, 及废气处理系统、废水处理系统、仓库、办公区、食堂等附属生产系统用能, 主要能源种类为电力、天然气。
第 次监督		
第 次监督		



Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that:

Samsung Display Co., Ltd.
181
Samsung-ro
Tangeong-myeon, Asan-si
Chungcheongnam-do
31454
Republic of Korea

Holds Certificate No:

ENMS 795719

and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

The Design and manufacture of OLED(Organic Light Emitting Diodes) and QD(Quantum Dot) display panel.

For and on behalf of BSI:

Michael Lam, Managing Director Assurance - APAC

Original Registration Date: 2017-08-03

Latest Revision Date: 2023-12-11

Effective Date: 2023-12-14

Expiry Date: 2026-12-13

Page: 1 of 2



...making excellence a habit.™

Certificate No: **ENMS 795719**

Location	Registered Activities
Samsung Display Co., Ltd. 181 Samsung-ro Tangjeong-myeon, Asan-si Chungcheongnam-do 31454 Republic of Korea	The Design and manufacture of OLED(Organic Light Emitting Diodes) and QD(Quantum Dot) display panel.
Samsung Display Co., Ltd. 1, Samsung-ro Giheung-gu Yongin-si Gyeonggi-do 17113 Republic of Korea	The Design and manufacture of OLED(Organic Light Emitting Diodes) and QD(Quantum Dot) display panel.
Samsung Display Co., Ltd. 465, Beonyeong-ro Seobuk-gu Cheonan-si Chungcheongnam-do 31086 Republic of Korea	The Design and manufacture of OLED(Organic Light Emitting Diodes) and QD(Quantum Dot) display panel.

Original Registration Date: 2017-08-03

Latest Revision Date: 2023-12-11

Effective Date: 2023-12-14

Expiry Date: 2026-12-13

Page: 2 of 2

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated [online](#).
Printed copies can be validated at www.bsigroup.com/ClientDirectory or telephone +82 2 777 4123.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.

Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that:

Samsung Electro-Mechanics Co., Ltd.
Suwon Headquarter
150, Maeyoung-ro
Yeongtong-gu
Suwon-si
Gyeonggi-do
16674
Republic of Korea

Holds Certificate No:

ENMS 726541

and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

The development of MLCC (Multi Layer Ceramic Capacitor), Inductor, Camera Module, Wifi Module and Lens.

For and on behalf of BSI:

Michael Lam - Managing Director Assurance, APAC

Original Registration Date: 2013-06-28

Latest Revision Date: 2022-04-23

Effective Date: 2022-05-17

Expiry Date: 2025-05-16

Page: 1 of 1



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能源管理体系认证证书

证书编号: 00124En20121R0L/3200

兹证明

名硕电脑(苏州)有限公司

注册/运营地址: 中国江苏省苏州新区金枫路 233 号

统一社会信用代码: 913206067141180353

能源管理体系符合标准:

GB/T 23331-2020 / ISO 50001:2018

RB/T101-2013;

通过认证范围如下:

笔记本电脑、游戏机、平板电脑、VR 眼镜、键盘、多媒体交互式白板、一体机(微型计算机)的生产及相关能源管理活动

(获证组织本年度产品单位产量综合能耗及能耗核算边界见标有相同证书注册号的证书附件, 证书附件是本证书组成部分)

首次发证日期: 2024年3月26日 本次发证日期: 2024年3月26日 有效期至: 2027年3月25日

在一个监督周期后, 本证书必须与CQC签发的监督审核合格通知书合并使用方为有效, 查询证书有效状态请登录www.cqc.com.cn, 本证书信息可在国家认证认可监督管理委员会公示的网站(www.cnca.gov.cn)上查询



谢肇煦

Signed by: Xie Zhaoxu

MEMBER OF



中国质量认证中心

CHINA QUALITY CERTIFICATION CENTRE

中国·北京·南四环西路188号9区 100070

<http://www.cqc.com.cn>

B 0000811

2024年版

Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that:

LG Display Co., Ltd.
Paju Plant
245, Lg-ro
Wollong-myeon
Paju-si
Gyeonggi-do
10845
Republic of Korea

Holds Certificate No:

ENMS 608503

and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

The design and manufacture of TFT LCD(liquid crystal display) modules and OLED(organic light emitting diodes).

For and on behalf of BSI:

Michael Lam - Managing Director Assurance, APAC

Original Registration Date: 2013-12-13

Effective Date: 2022-12-13

Latest Revision Date: 2022-10-22

Expiry Date: 2025-12-12

Page: 1 of 2



...making excellence a habit.™

Certificate No: **ENMS 608503**

Location	Registered Activities
LG Display Co., Ltd. Paju Plant 245, Lg-ro Wollong-myeon Paju-si Gyeonggi-do 10845 Republic of Korea	The design and manufacture of TFT LCD(liquid crystal display) modules and OLED(organic light emitting diodes).
LG Display Co., Ltd. Gumi Plant Factory 1 209, 3 Gongdan-2ro Gumi-si Gyeongsangbuk-do 39394 Republic of Korea	The design and manufacture of TFT LCD(liquid crystal display) modules and OLED(organic light emitting diodes).
LG Display Co., Ltd. Gumi Plant Factory 4,5,6 174, 3 Gongdan-2ro Gumi-si Gyeongsangbuk-do 39401 Republic of Korea	The design and manufacture of TFT LCD(liquid crystal display) modules and OLED(organic light emitting diodes).

Original Registration Date: 2013-12-13

Latest Revision Date: 2022-10-22

Effective Date: 2022-12-13

Expiry Date: 2025-12-12

Page: 2 of 2

This certificate was issued electronically and remains the property of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated [online](#).
Printed copies can be validated at www.bsigroup.com/ClientDirectory or telephone +82 2 777 4123.

Information and Contact: BSI, Kitemark Court, Davy Avenue, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 345 080 9000
BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.
A Member of the BSI Group of Companies.



Certificate TW22/10043

The management system of

Mediatek Inc. (Headquarters) Building D

No.11, Lixing 3rd Rd., Hsinchu Science Park,
Hsinchu 30078, Taiwan.

has been assessed and certified as meeting the requirements of

ISO 50001:2018

For the following activities

IC Design.

This certificate is valid from 13 January 2022 until 13 January 2025 and remains valid subject to satisfactory surveillance audits.
Recertification audit due before 23 December 2024
Issue 1. Certified since 13 January 2022

Authorised by

SGS Taiwan Ltd.
136-1, Wu Kung Road, New Taipei Industrial Park, Wu Ku District, New Taipei City, Taiwan
t +886 (0)2 2299 3939 f +886 (0)2 2299 3231 www.sgs.com

Page 1 of 1



**Management System
Certification
MS001**



This document is issued by the Company subject to its General Conditions of Certification Services accessible at www.sgs.com/terms_and_conditions.htm. Attention is drawn to the limitations of liability, indemnification and jurisdictional issues established therein. The authenticity of this document may be verified at <http://www.sgs.com/en/certified-clients-and-products/certified-client-directory>. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

BUREAU VERITAS
Certification



WUXI MURATA ELECTRONICS CO., LTD.

HEAD OFFICE: NO.6 XINGCHUANG 1ST ROAD, B ZONE, EXPORT
PROCESSING ZONE, WUXI CITY, JIANGSU PROVINCE P.R.CHINA

Unified social credit code: 913202146079159952

This is a multi-site certificate, additional site(s) are listed on the next page(s).

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 50001:2018

Scope of certification

Murufacturing of Kiloherzt Ceramic Filters, Potentiometers, PTC and NTC Thermistors, Chip Monolithic Ceramic Capacitors, Ceramic Resonators, Antenna for Mobile Communication Equipment

Original cycle start date:	22-MARCH-2022
Expiry date of previous cycle:	NA
Certification / Recertification audit date:	25 -NOVEMBER-2021
Certification / Recertification cycle start date:	22-MARCH-2022

Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: **21-MARCH-2025**

Certificate No.: **IND.22.15022/EN/U**

Version: **No.1**, Issue date: **22-MARCH-2022**

Signed on behalf of BVCH SAS UK Branch



0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom.

Local office address: Rm. B, F4, No.1288, Waima Road, Huangpu District, Shanghai, China. 200011.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +86 21 23190329

Certified organisation has to accept and pass regular surveillance audits, then this certificate can be continuously valid. Information of this certificate may be obtained by visiting CNCA website (www.cnca.gov.cn).



WUXI MURATA ELECTRONICS CO., LTD.

ISO 50001:2018

Scope of certification

<u>Site Name/Location</u>	<u>Site Address</u>	<u>Site Scope</u>
Head Office: WUXI MURATA ELECTRONICS CO., LTD.	NO.6 XINGCHUANG 1ST ROAD,B ZONE,EXPORT PROCESSING ZONE,WUXI CITY,JIANGSU PROVINCE P.R.CHINA	Murufacturing of Kiloherzt Ceramic Filters, Potentiometers, PTC and NTC Thermistors, Chip Monolithic Ceramic Capacitors, Ceramic Resonators, Antenna for Mobile Communication Equipment
Site 1: WUXI MURATA ELECTRONICS CO., LTD.	NO.9 XIQIN ROAD,COMPREHENSIVE BONDED BUREAU,HIGH-TECH ZONE,WUXI CITY,JIANGSU PROVINCE P.R.CHINA	Murufacturing of Chip Monolithic Ceramic Capacitors

Certificate No.: **IND.22.15022/EN/U**

Version: **No.1**, Issue date: **22-MARCH-2022**

Signed on behalf of BVCH SAS UK Branch



0008

Certification body address: 5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom.

Local office address: Rm. B, F4, No.1288, Waima Road, Huangpu District, Shanghai, China. 200011.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +86 21 23190329

Certified organisation has to accept and pass regular surveillance audits, then this certificate can be continuously valid. Information of this certificate may be obtained by visiting CNCA website (www.cnca.gov.cn).

BUREAU VERITAS
Certification



无锡村田电子有限公司

总部：无锡出口加工区B区行创1路6号

统一社会信用代码：913202146079159952

此份为多场所证书，各分场所见证书附页

必维认证集团认证控股有限公司英国分公司
确证上述单位的管理体系已经评审
并确认符合下列管理体系标准全部适用条款的要求

ISO 50001:2018

体系覆盖范围

千赫兹陶瓷滤波器、可变电阻器、PTC热敏电阻、NTC热敏电阻、贴片式
陶瓷电容器、陶瓷振荡器、移动通讯设备用天线的制造

最初认证周期起始日期：2022年03月22日
上一周期的到期日：NA
认证/再认证审核日期：2021年11月25日
本次认证/再认证周期起始日期：2022年03月22日

在证书持有者之管理体系持续符合要求的运行条件下，本证书至下述日期有效：
2025年03月21日

证书号：IND.22.15022/EN/U

版本号：No.1，发证日期：2022年03月22日

必维认证集团认证控股有限公司英国分公司
授权代表



0008

认证机构地址：5th Floor, 66 Prescot Street, London E1 8HG, United Kingdom
当地办公室地址：中国上海市黄浦区外马路1268号综合楼四层B室，邮编：200011

为进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 21 23190329
获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督
管理委员会官方网站(www.cnca.gov.cn)上查询。

第一页 共两页

UKAS Certificate Template multisite rev3.9

October 22, 2021

BUREAU VERITAS
Certification



无锡村田电子有限公司

ISO 50001:2018

体系覆盖范围

场所名称	场所地址	场所认证范围
总部：无锡村田电子有限公司	无锡出口加工区B区行创1路6号	千赫兹陶瓷滤波器、可变电阻器、PTC热敏电阻、NTC热敏电阻、贴片式陶瓷电容器、陶瓷振荡器、移动通信设备用天线的制造
地址1：无锡村田电子有限公司	无锡高新区综合保税区锡钦路9号	贴片式陶瓷电容器的制造

证书号：IND.22.15022/EN/U

版本号：No.1，发证日期：2022年03月22日

必维认证集团认证控股有限公司英国分公司
授权代表



0008

认证机构地址：5th Floor, 66 Prescot Street, London E1 6HG, United Kingdom
当地办公室地址：中国上海市黄浦区外马路1288号综合楼四层B室，邮编：200011

为进一步澄清本证书范围和有效状态，以及此管理体系要求的适用性，请电：+86 21 23190329
获证组织必须定期接受监督审核并经审核合格此证书方继续有效。本证书信息可在国家认证认可监督管理委员会官方网站(www.cnca.gov.cn)上查询。

第二页 共两页

UKAS Certificate Template multisite rev3.9

October 22, 2021



Certificate of Registration

ENERGY MANAGEMENT SYSTEM - ISO 50001:2018

This is to certify that: Innolux Corporation
No.168, Kesyue Rd.
Hsinchu Science Park
Miaoli County
35053
Taiwan

群創光電股份有限公司
臺灣
苗栗縣
竹南鎮新竹科學園區
科學路168號
35053

Holds Certificate No: **ENMS 722439**

and operates an Energy Management System which complies with the requirements of ISO 50001:2018 for the following scope:

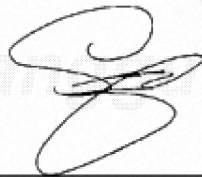
The design, manufacture and assembly of flat panel displays and electronic application products.

The main energy uses include:

- electricity for production process, lighting, equipment and air conditioning
- LNG for local scrubber and boiler
- diesel for emergency power generator

平面顯示器及電子應用產品之設計、製造與組裝

For and on behalf of BSI:



Michael Lam - Managing Director Assurance, APAC

Original Registration Date: 2020-05-26

Effective Date: 2023-05-26

Latest Revision Date: 2023-04-14

Expiry Date: 2026-05-25



Certificate

Standard

GB/T23331-2020/ISO 50001:2018

Certificate Registr. No.

17 737 2132310

Certificate Holder:

Xiamen Tianma Micro-Electronics Co., Ltd.
Unified Social Credit Code: 913502005684102135
Registration Address:

Room 433, South of Torch Plaza, No. 56~58, Torch Road,
Torch Park, Torch Hi-Tech Zone, Xiamen City, 361101 Fujian
P. R. China

Operation Address:

No.6999, West Xiang'an Road, Industry Area, Torch Hi-Tech
Zone(Xiang'an) Xiamen City, 361101 Fujian, P. R. China

Scope:

Energy Management Activities of Design and Manufacturing of
Low Temperature Poly-Silicon Liquid Crystal Display (LTPS-
LCD) and Low Temperature Poly-Silicon Liquid Crystal Display
Module (LTPS-LCM); Manufacturing of Color Filter (CF),
Design and Manufacturing of Back Light Unit (BLU)

Proof has been furnished by means of an audit that the
requirements of GB/T23331-2020/ISO 50001:2018 are met.

Validity:

The certificate is valid from 2023-01-14 until 2025-01-17.
It remains valid subject to satisfactory surveillance audits.
First certification 2022

This certificate information can be searched on CNCA official
website <http://www.cnca.gov.cn>

2023-01-14



TUV Rheinland (China) Ltd.
Room 301, 3F and Room 1203, 12F, Building 4, No.15, Ronghua
South Road, Beijing Economic-Technological Development
Area, Beijing (Yizhuang group in high-end industrial area
of Beijing Pilot Free Trade Zone), 100176, P. R. China

Annex to certificate

Standard **GB/T23331-2020/ISO 50001:2018**

Certificate Registr. No. **17 737 2132310**

Organization's energy performance indicators and boundaries

Audit type and date	Energy consumption per unit product or unit output value during audit cycle	Boundaries
Initial 2021-12-14~2021-12-17	2021.01.01-2021.11.30 Ten Thousand Output Value Energy Consumption:0.0581tCe/10k RMB Comprehensive energy consumption for unit output: 0.02067 tCe/m ²	No. 6999, West Xiang'an Rd., Industry Area, Torch Hi-Tech Zone(Xiang'an), Xiamen City, Fujian Province 361101, P.R. China, Xiamen Tianma Micro-Electronics Co., Ltd Design and Manufacturing of Low Temperature Poly-Silicon Liquid Crystal Display (LTPS-LCD) and Low Temperature Poly-Silicon Liquid Crystal Display Module (LTPS-LCM); Manufacturing of Color Filter (CF), Design and Manufacturing of Back Light Unit (BLU). The Main Production Equipment: PVD, CVD, ELA,IMP, Track, EXP, DET, WET. Air Compressor System, Air Conditioning System, Waste Water Treatment System, Pure Water System and Substations Station.Production Support Energy Use :Office and Canteen. The Main Production Capacity: 2021.01.01-2021.11.30 LTPS-LCD:775.6 kpcs LTPS-LCM:214,529 kpcs CF:1044.7 kpcs

Annex to certificate

Standard

GB/T23331-2020/ISO 50001:2018

Certificate Registr. No. **17 737 2132310**

<p>1st Surveillance 2022-12-15~2022-12-16</p>	<p>2021.01.01-2021.12.31 Ten Thousand Output Energy Value Consumption:0.06068 tCe /10k RMB Comprehensive energy consumption for unit output: 0.02155 tCe/m²</p> <p>2022.01.01-2022.11.30 Ten Thousand Output Energy Value Consumption: 0.08014 tCe /10k RMB Comprehensive energy consumption for unit output: 0.02260 tCe/m²</p>	<p>BLU:47,080.7 kpcs No. 6999, West Xiang'an Rd., Industry Area, Torch Hi-Tech Zone(Xiang'an), Xiamen City, Fujian Province 361101, P.R. China, Xiamen Tianma Micro-Electronics Co., Ltd Design and Manufacturing of Low Temperature Poly-Silicon Liquid Crystal Display (LTPS-LCD) and Low Temperature Poly-Silicon Liquid Crystal Display Module (LTPS-LCM); Manufacturing of Color Filter (CF), Design and Manufacturing of Back Light Unit (BLU). The Main Production Equipment: PVD, CVD, ELA,IMP, Track, EXP, DET, WET. Air Compressor System, Air Conditioning System, Waste Water Treatment System, Pure Water System and Substations Station.Production Support Energy Use :Office and Canteen.</p> <p>The Main Production Capacity: 2021.01.01-2021.12.31 LTPS-LCD:876.8 kpcs LTPS-LCM:231479 kpcs CF:1140.7kpcs BLU:50780.1kpcs</p> <p>No. 6999, West Xiang'an Rd., Industry Area, Torch Hi-Tech Zone(Xiang'an), Xiamen City, Fujian Province 361101, P.R. China, Xiamen Tianma Micro-Electronics Co., Ltd Design and Manufacturing of Low Temperature Poly-Silicon Liquid Crystal Display (LTPS-LCD) and Low Temperature Poly-Silicon Liquid Crystal Display Module (LTPS-LCM); Manufacturing of Color Filter (CF), Design and Manufacturing of Back</p>
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Annex to certificate

Standard

GB/T23331-2020/ISO 50001:2018

Certificate Registr. No. **17 737 2132310**

		<p>Light Unit (BLU). The Main Production Equipment: PVD, CVD, ELA,IMP, Track, EXP, DET, WET. Air Compressor System, Air Conditioning System, Waste Water Treatment System, Pure Water System and Substations Station.Production Support Energy Use :Office and Canteen.</p> <p>The Main Production Capacity: 2022.01.01-2022.11.30</p> <p>LTPS-LCD:753.1 kpcs LTPS-LCM: 152061.4 kpcs CF:962.2 kpcs BLU: 45249.7 kpcs</p>
2nd Surveillance		

2023-01-14



TUV Rheinland (China) Ltd.
Room 301, 3F and Room 1203, 12F, Building 4, No.15,
Ronghua
South Road, Beijing Economic-Technological Development
Area, Beijing (Yizhuang group in high-end industrial area
of Beijing Pilot Free Trade Zone), 100176, P. R. China

认证证书

标准

GB/T23331-2020/ISO 50001:2018

证书登记号码

17 737 2132310

证书持有者:

厦门天马微电子有限公司

统一社会信用代码: 913502005684102135

注册地址:

中国福建省厦门市火炬高技术产业开发区火炬园火炬路 56~58
号火炬广场南 433 室

邮编: 361101

经营地址:

中国福建省厦门市火炬高新区(翔安)产业区翔安西路 6999 号
邮编: 361101

认证范围:

低温多晶硅液晶显示器和低温多晶硅液晶显示模块的设计及制造、彩色滤光膜的制造、背光的的设计和制造相关过程的能源管理活动

有效期:

证明完成了审核并满足了 GB/T23331-2020/ISO 50001:2018 标准的要求。

证书有效期从 2023-01-14 至 2025-01-17。
此证书须经过符合要求的监督审核保持有效。
初次发证始于 2022 年

本证书信息可在国家认证认可监督管理委员会官方网站上查询
<http://www.cnca.gov.cn>

2023-01-14

莱茵检测认证服务(中国)有限公司
中华人民共和国北京市北京经济技术开发区
荣华南路 15 号院 4 号楼 3 层 301 室、12 层 1203 室
(北京自贸试验区高端产业片区亦庄组团), 100176

证书附件

标准

GB/T23331-2020/ISO 50001:2018

证书登记号码

17 737 2132310

获证组织能效指标及能耗核算边界

审核类型及时间	审核周期内单位产品/产值能耗	能耗核算边界
初次认证 2021-12-14~2021-12-17	2021年01月01日-2021年11月30日: 万元产值能耗: 0.0581 标准煤/万元 单位产品综合能耗: 0.02067 标准煤/平方米	中国福建省厦门火炬高新区(翔安)产业园翔安西路6999号, 厦门天马微电子有限公司, 低温多晶硅液晶显示器和低温多晶硅液晶显示模块的设计及制造、彩色滤光膜的制造、背光的设计和制造。主要生产设备: 物理沉积设备、化学沉积设备、准分子激光退火机、蚀刻机、切割机、涂布机、曝光机、干刻机等。辅助生产设备: 空压机、超声波清洗机、废水处理系统、纯水系统、配电系统。附属生产用能: 办公和食堂。 主要产品产能: 2021年01月01日-2021年11月30日 低温多晶硅液晶显示器: 77.56 万片 低温多晶硅液晶显示模块: 21,452.90 万片 彩色滤光膜: 104.47 万片 背光: 4,708.07 万片
第一次监督审核 2022-12-15~2022-12-16	2021年01月01日-2021年12月31日: 万元产值能耗: 0.06068 标准煤/万元	中国福建省厦门火炬高新区(翔安)产业园翔安西路6999号, 厦门天马微电子有限公司, 低温多晶硅液晶显示器和低温多晶硅液晶显示模块的设计及制造、彩色滤光膜的制造、背光的设计和制造。主要生产设备: 物理

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	<p>单位产品综合能耗： 0.02155 标准煤 /平方 米</p> <p>2022 年 01 月 01 日- 2022 年 11 月 30 日：</p> <p>万元 产 值 能 耗： 0.08014 标准煤 /万元</p> <p>单位产品综合能耗： 0.02260 标准煤 /平方 米</p>	<p>沉积设备、化学沉积设备、准分子激光退火设备/离子注入设备、涂布机、曝光机、干刻机、蚀刻机、切割机、贴合机、超声波清洗机等。辅助生产设备：空压系统、空调系统、废水处理系统、纯水系统、配变电站。附属生产用能：办公和食堂。</p> <p>主要产品产能： 2021 年 01 月 01 日-2021 年 12 月 31 日： 低温多晶硅液晶显示器：87.68 万片 低温多晶硅液晶显示模块：23147.90 万片 彩色滤光膜：114.07 万片 背光：5078.01 万片</p> <p>中国福建省厦门火炬高新区（翔安）产业园翔安西路 6999 号，厦门天马微电子有限公司，低温多晶硅液晶显示器和低温多晶硅液晶显示模块的设计及制造、彩色滤光膜的制造、背光的设计和制造。主要生产设备：物理沉积设备、化学沉积设备、准分子激光退火设备/离子注入设备、涂布机、曝光机、干刻机、蚀刻机、切割机、贴合机、超声波清洗机。辅助生产设备：空压系统、空调系统、废水处理系统、纯水系统、配变电站。附属生产用能：办公和食堂。</p> <p>主要产品产能： 2022 年 01 月 01 日-2022 年 11 月 30 日： 低温多晶硅液晶显示器：75.31 万片 低温多晶硅液晶显示模块：15206.14 万片</p>
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证书附件

标准

GB/T23331-2020/ISO 50001:2018

证书登记号码

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		彩色滤光膜: 96.22 万片 背光: 4524.97 万片
第二次监督审核		

2023-01-14

莱茵检测认证服务(中国)有限公司

中华人民共和国北京市经济技术开发区
荣华南路15号院4号楼3层301室、12层1203室
(北京自贸试验区高端产业片区亦庄组团), 100176



ENSURE YOUR SUCCESS

CERTIFICATE

This is to certify that the Energy Management System of

COASIA CM VINA JOINT STOCK COMPANY

Factory: Luong Son Industrial Park, Km 36, National Highway 6, Hoa Son Commune, Luong Son District, Hoa Binh Province, Vietnam

has been assessed and found to conform with the requirements of the following standard

TCVN ISO 50001:2019/ ISO 50001:2018

Certification Scope: Manufacture of Camera module;
Boundary applicable to the Factory: Luong Son Industrial Park, Km 36, National Highway 6, Hoa Son Commune, Luong Son District, Hoa Binh Province, Vietnam)

Certificate Number: NL 043.22.B

The validity of this Certificate: From 22 December 2022 to 21 December 2025

Original Certification: 22 December 2022



ENSURE YOUR SUCCESS

JAS-ANZ



DIRECTOR



Tran Quoc Dung



ENERGY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. 00124En20035R0M/3302

**We hereby certify that
Ningbo Sunny Opotech Co.,Ltd.**

Registered Address: No.67-69 Fengle Road, Yangming Street, Yuyao City, Ningbo City, Zhejiang Province, P.R.China
No.1 Operating Address: No.1 Building and No.4 Building, No.67-69 Fengle Road, Yangming Street, Yuyao City, Ningbo City, Zhejiang Province, P.R.China
No.2 Operating Address: No.1918 Shinan West Road, Yuyao City, Ningbo City, Zhejiang Province, P.R.China
Business Registration Number: 91330281780435020G

by reason of its
Energy Management System
has been awarded this certificate for compliance with the standard
**ISO 50001:2018
RB/T101-2013;**

The Energy Management System Applies in the following area:

Energy Management Activities Related to the Design and Production of Photoelectrical Camera Module Products

(The appendix with the same certificate number to this certificate is part of this certificate, referring the comprehensive energy consumption for unit output of product and energy consumption calculation boundary of the certified client within this year)

Certified since: January 29, 2024 Valid from: January 29, 2024 Valid until: January 28, 2027

After a surveillance cycle, the certificate is valid only when used together with an Acceptance Notice of Surveillance Audit issued by CQC.

Please access www.cqc.com.cn for checking validity of the certificate.

This certificate and its relevant information can query in the website of Certification and Accreditation Administration of the People's Republic of China (www.cnca.gov.cn).



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C001-M

谢肇煦

Signed by: Xie ZhaoXu

MEMBER OF



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan(the South Fourth Ring Road) Xilu(West Road), Beijing 100070, China

<http://www.cqc.com.cn>



Appendix of main certificate

No.00124En20035R0M/3302

Audit type	Statistics from	Statistics to	Energy performance	Management system boundary
Initial Certification/Recertification	2023-01-01	2023-09-30	Energy Consumption per Product:0.029kgce/piece	Energy Management Activities Related to the Design and Production of Photoelectrical Camera Module Products, the main production process includes: SMT, COB, AA, assembly and test; Auxiliary production system: power supply and distribution, air purification system, compressed air system, HVAC system, vacuum system, pure water system; Affiliated production system: office, Lanjiang canteen
First Surveillance				
Second Surveillance				
Third Surveillance				

Issued on January 29, 2024

This appendix shall not be used as a stand-alone document.



中国认可
管理体系
MANAGEMENT SYSTEM
CNAS C001-M

谢肇煦

Signed by: Xie ZhaoXu

MEMBER OF



CHINA QUALITY CERTIFICATION CENTRE

Section 9, No.188, Nansihuan(the South Fourth Ring Road) Xilu(West Road), Beijing 100070, China

<http://www.cqc.com.cn>

TỔNG CỤC TIÊU CHUẨN ĐO LƯỜNG CHẤT LƯỢNG

TRUNG TÂM CHỨNG NHẬN PHÙ HỢP (QUACERT)



ENSURE YOUR SUCCESS

GIẤY CHỨNG NHẬN

Chứng nhận Hệ thống Quản lý Năng lượng của

CÔNG TY TNHH INTOPS VIỆT NAM

Khu công nghiệp Yên Phong, xã Long Châu, huyện Yên Phong, tỉnh Bắc Ninh, Việt Nam

đã được đánh giá và xác nhận phù hợp với yêu cầu của tiêu chuẩn

TCVN ISO 50001:2019 / ISO 50001:2018

Phạm vi được chứng nhận

Sản xuất, gia công các linh kiện bằng nhựa và linh kiện kim loại sử dụng cho lắp ráp điện thoại, máy tính xách tay, máy tính bảng, cây ATM và các thiết bị trong công nghiệp điện, điện tử, ô tô, y tế.

Số Giấy chứng nhận:

NL 052.23.B

Hiệu lực Giấy chứng nhận:

từ ngày 18/12/2023 đến ngày 17/12/2026

Ngày chứng nhận lần đầu:

18/12/2023



GIÁM ĐỐC



Trần Quốc Dũng