OPTICAL FIBER FUSION SPLICER

AI-7C

PRODUCT MANUAL

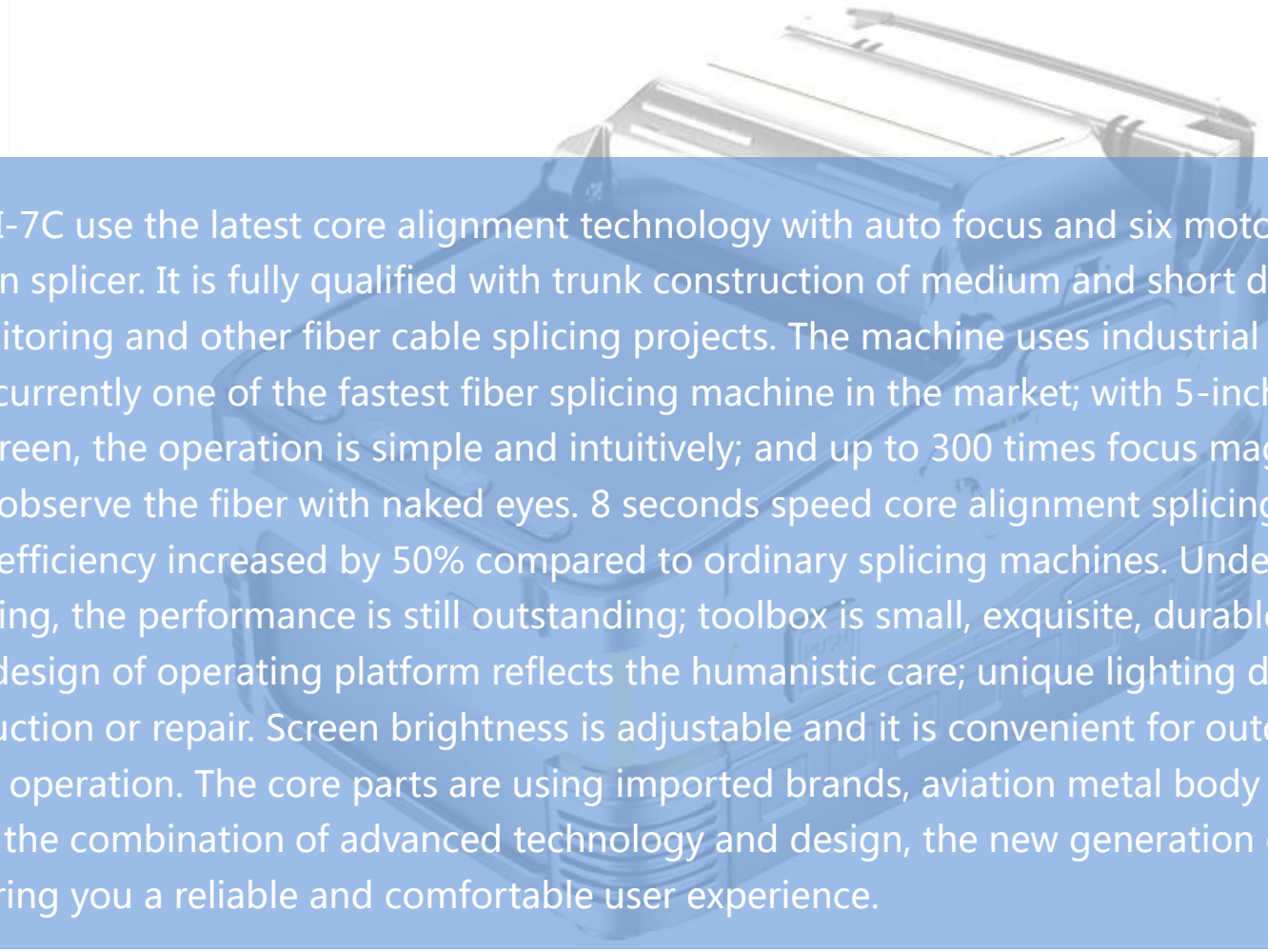
www.signalfiresplicer.com

SIGNAL FIRE TECHNOLOGY CO., LTD.

OPTICAL FIBER FUSION SPLICER

NEW PRODUCT LAUNCH
CLASSIC MASTERPIECE

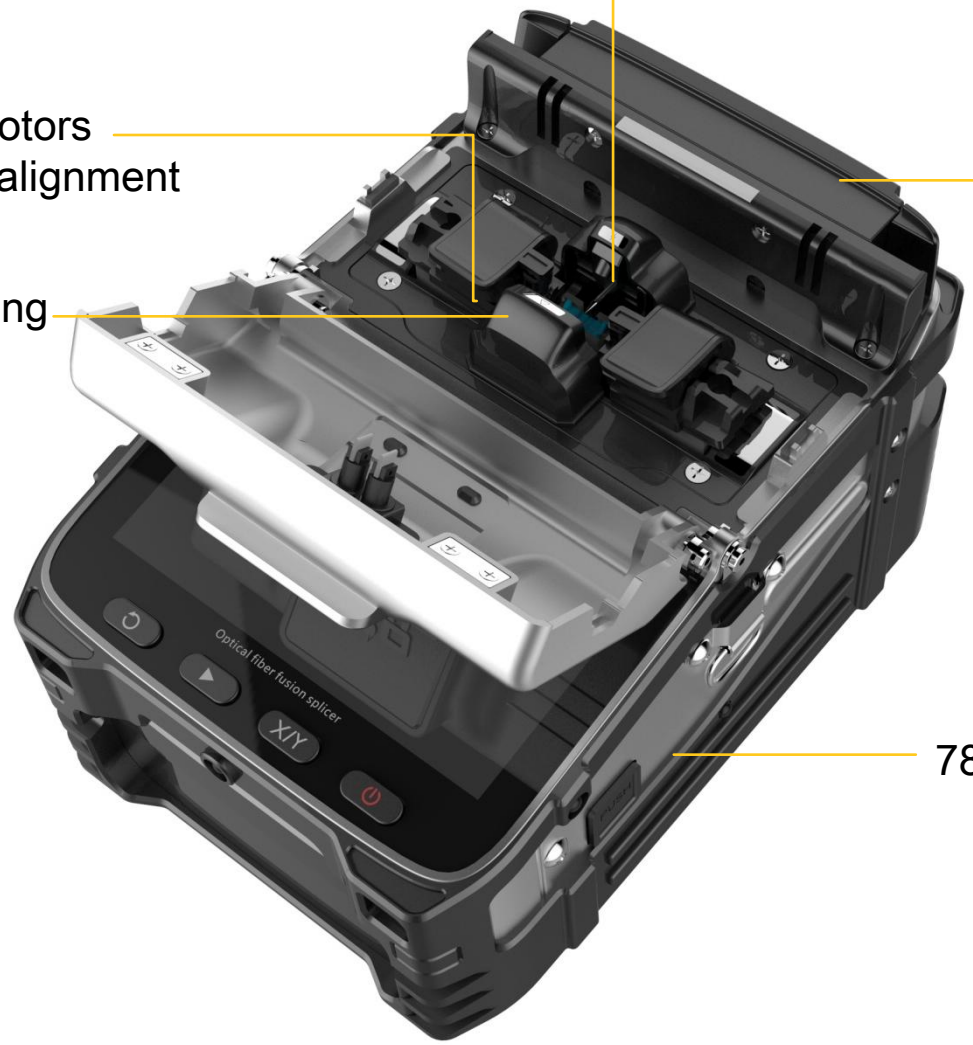
OPTICAL FIBER FUSION SPLICER



Signal Fire AI-7C use the latest core alignment technology with auto focus and six motors, it is a new generation of fiber fusion splicer. It is fully qualified with trunk construction of medium and short distance, FTTH project, security monitoring and other fiber cable splicing projects. The machine uses industrial quad-core CPU, fast response, is currently one of the fastest fiber splicing machine in the market; with 5-inch 800X480 high-resolution screen, the operation is simple and intuitively; and up to 300 times focus magnifications, making it is very easy to observe the fiber with naked eyes. 8 seconds speed core alignment splicing, 18 seconds heating, the working efficiency increased by 50% compared to ordinary splicing machines. Under the conditions of rigorous testing, the performance is still outstanding; toolbox is small, exquisite, durable, and with unique bench design. The design of operating platform reflects the humanistic care; unique lighting design, it is convenient for night construction or repair. Screen brightness is adjustable and it is convenient for outdoor sunshine environment operation. The core parts are using imported brands, aviation metal body material with exquisite details. With the combination of advanced technology and design, the new generation of optical fiber fusion splicer will bring you a reliable and comfortable user experience.

MASTERPIECE
HIGH-END LUXURY

OPTICAL FIBER FUSION SPLICER



Disassembly free three-in-one fiber holder

Six motors
Core alignment

18 seconds fast heating

8 seconds fast splicing

7800mAh large capacity battery

METAL BODY
AESTHETIC DETAILS

OPTICAL FIBER FUSION SPLICER

- 26 patent results

Automatic heating

5 inch display Simultaneously
align fibers Loss display

Protective case

300 times magnification
auto focus

METAL BODY
AESTHETIC DETAILS

THE TOOLBOX

COMES WITH A STOOL TO FACILITATE THE CONSTRUCTION WORKERS.

Stool can bear 100KG

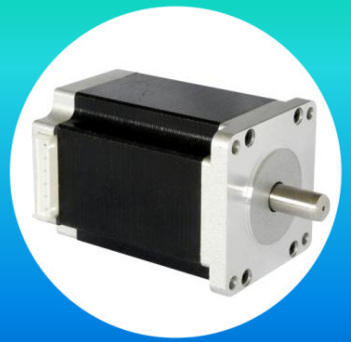
Remove the stool

Do not need to take out the splicer machine from the toolbox while working.

Fiber cleave operator station

Two layers

CORE PARTS QUALITY ASSURANCE



Siemens stepper motor	Roth ROUST linear guide	Sanyo lithium battery	Aviation metal material

Lighting for splicer

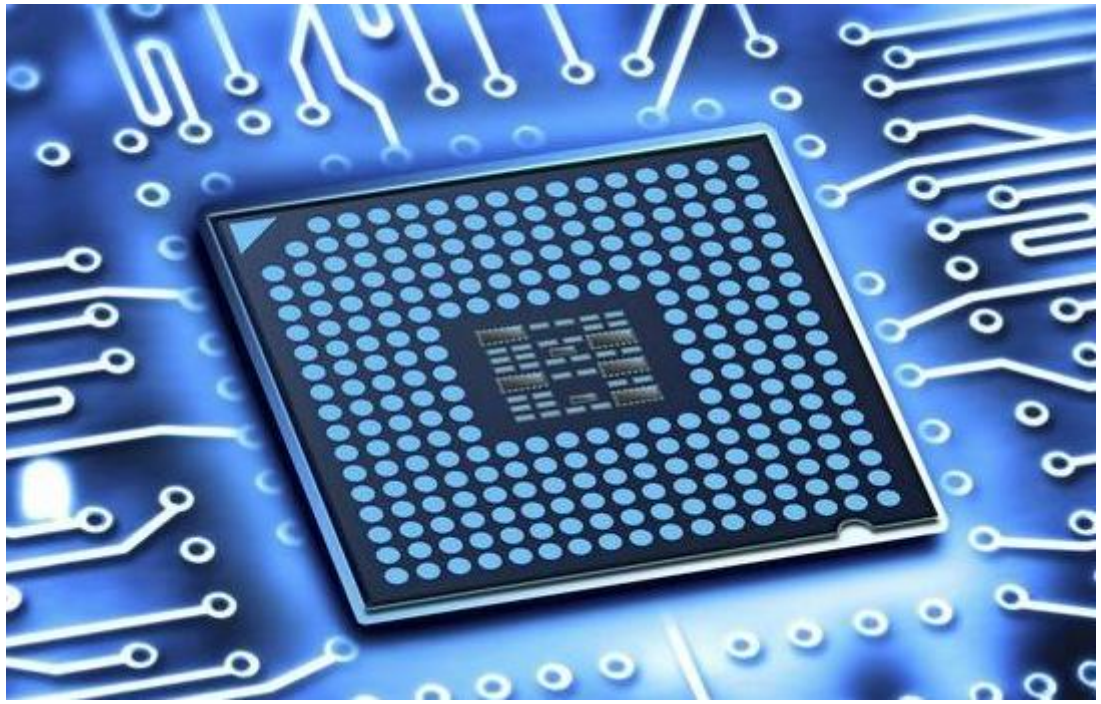
Convenient for night operation

Can charge the phone

Avoid the use of outdoor construction mobile phones without electricity

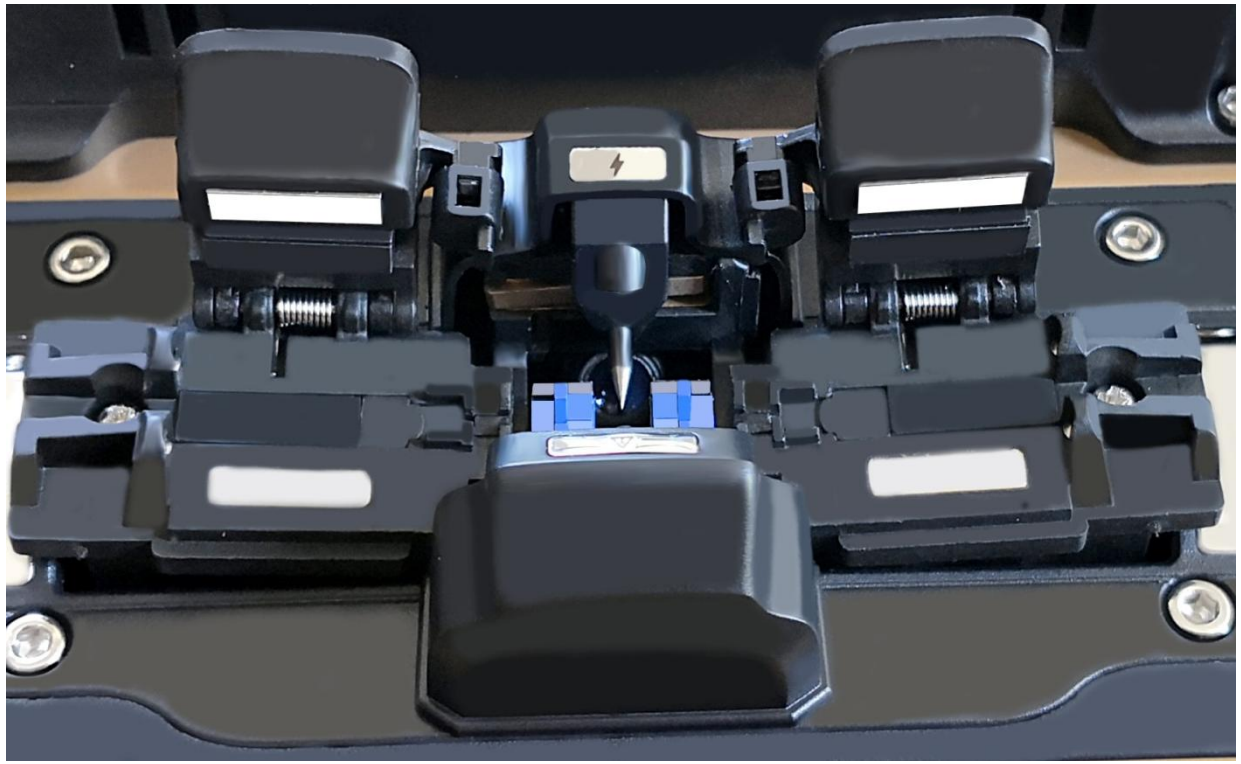
INDUSTRIAL QUAD-CORE CHIP CPU

Synchronous operation / speed response / no jammed / super experience



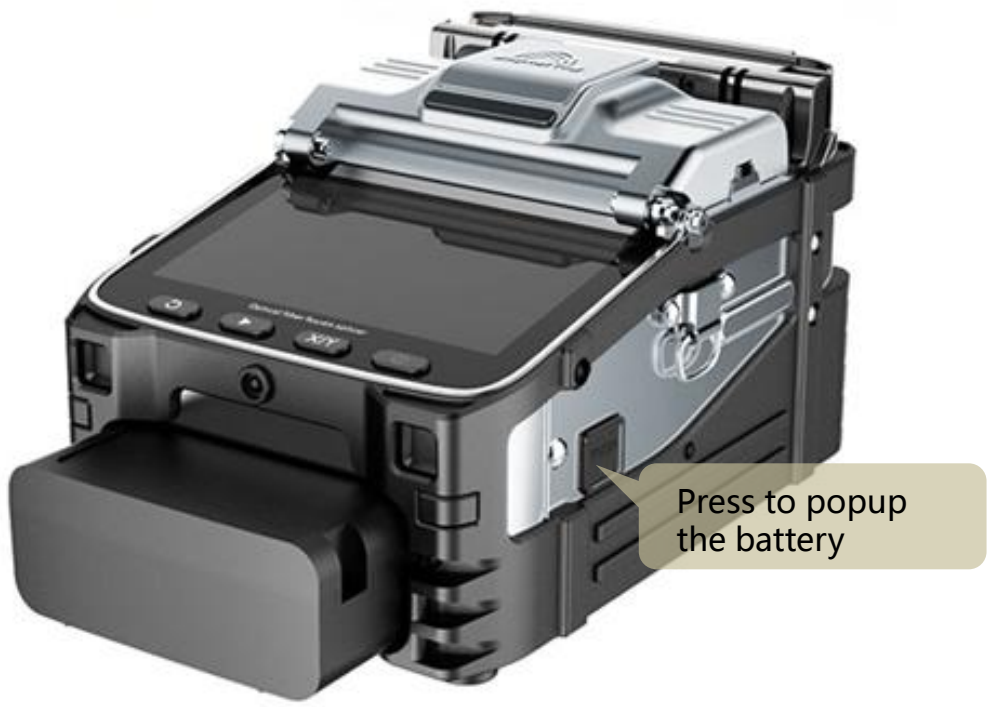
3 IN 1 FIBER HOLDER

SM, MM, bare fiber, pigtail, rubber-insulated, multi fiber cable



7800mAh LARGE CAPACITY BATTERY

charging time ≤ 3.5 hours/continuous splicing and heating about 240 times



10 LANGUAGES TO SWITCH FREELY

Covers the global major user market

CHINESE

ENGLISH

FRENCH

RUSSIAN

ITALIAN

PORTUGUESE

POLISH

SPANISH

THAI

ARABIC

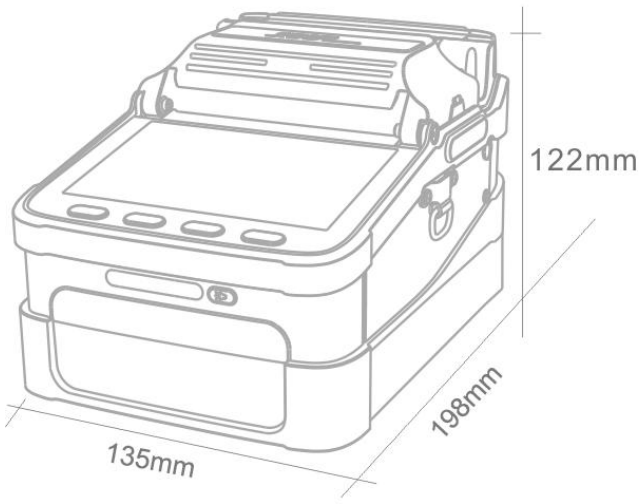
Show good performance in plateau, desert, and extreme cold environment

BASIC PARAMETER

Fiber alignment	Core/cladding alignment / Manual alignment
Splicing time	8S
Heating time	18S
Heating mode	Automatic heating (Preheating)
Focus mode	Six motors Auto focus
Applicable Fibers	SM(G.652&G.657)、MM (G.651) 、DS(G.657)、NZDS (G.655)
Splice Loss	0.025dB (SM) 、0.01dB (MM) 0.04dB (DS/NZDS)
Control technology	Real-time control and calibration of fusion ARC
Return loss	Better than 60DB
Fiber diameter	Cladding Diameter：80-150μm Coating Diameter：100-1000μm
Fiber Cleave Length	Coating less than 250μm：8-16mm Coating less than 250-1000μm:16mm
Software update Length	Automatically update、 Update by a key
Boot time	1 second

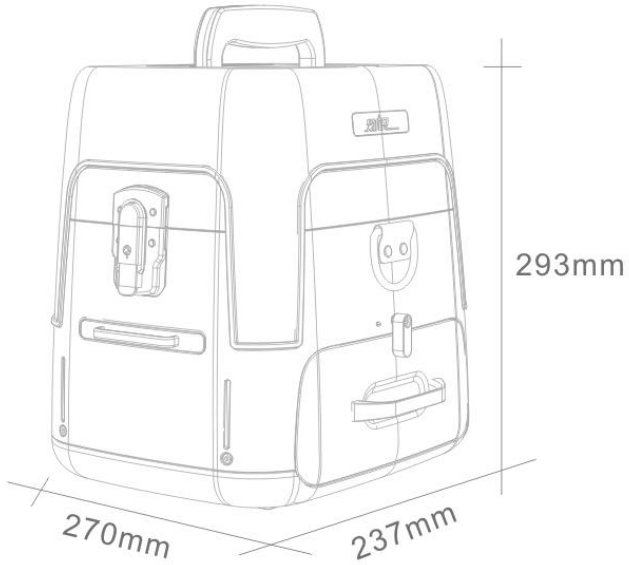
Language Setting	10 languages to switch freely
Tension Test	Standard 2N
Fiber holders	3 in 1 fiber holder, SM, MM, bare fiber, pigtail, rubber-insulated, multi fiber cable
Magnification	300 for X or Y view, 150 for X or Y view
Screen	5 inch TFT color display
Splicing Mode	Normal / high precision splicing
Splicing method	Fully automatic、Step by step splicing
Splicing record storage	Synchronize to the phone, the server to cloud storage unlimited
Built-in battery	7800 mA high-capacity lithium battery, charging time ≤ 3.5 hours, continuous splicing and heating about 240 times
Power supply	Input AC100-240V 50 / 60HZ, output DC13.5V / 4.8A, the current power mode can be identified, real-time detection of battery power
Operating Conditions	Temperature -15 ~ +50 ℃, humidity: <95% RH (no condensation) Working altitude: 0 ~ 5000m. Resist max. wind speed: ≤ 15m / s
Shrinkable tube	60mm、50mm、40mm、25mm
Product protection	Waterproof, dust proof, shock-resistant

Size



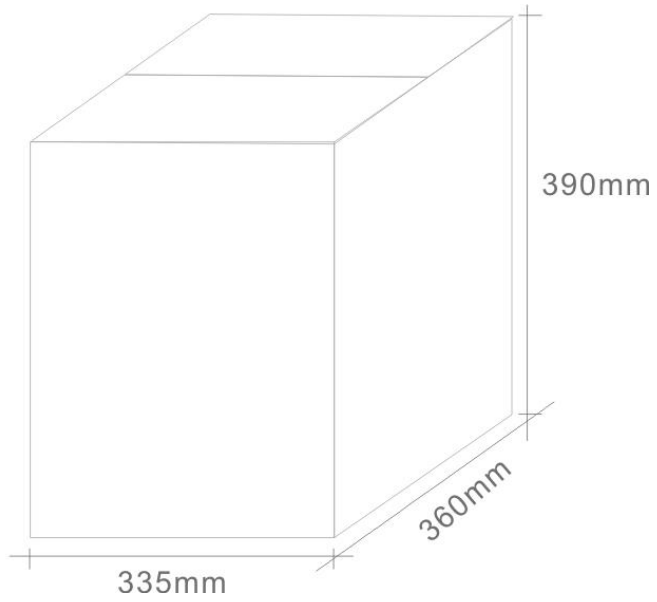
Machine weight

2.08kg (with battery)
1.60kg (without battery)



Toolbox weight

7.1kg (including machine and accessories)



Total weight

8.60kg

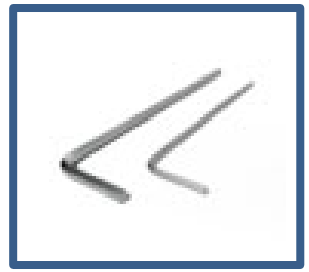
Accessories in the tool box

Fiber Cleaver

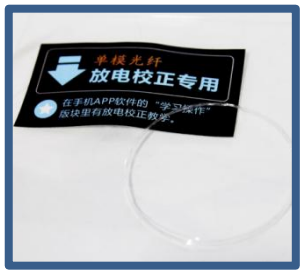
Spare electrode

Wire stripping pliers

Miller stripper


Hex key

carrying case



Fiber for
ARC calibration

Strap

Power Adapter

Alcohol Bottle

Brush

User’ s manual
Quality Certificate
Warranty Card

ABOUT US

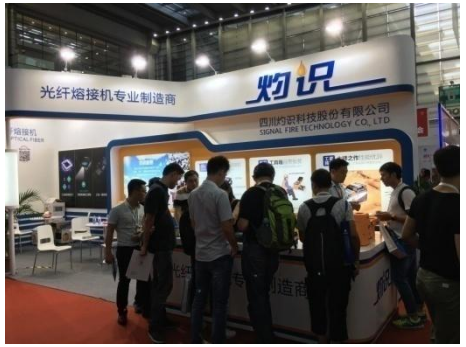
Signal Fire Technology Co.,Ltd. Is A High-Tech Enterprise Which Is Specialized In Research And Development, Production And Sales Of Communications Products. The Main Products Are Automatic Intelligent Optical Fiber Fusion Splicer, Optical Time Domain Reflectometer (OTDR), Light Power Meter, Optical Cable Construction Tools Equipment, Fiber Fusion And Taper Equipment, Optical Cable Blowing Machine Etc. Our Products Are Widely Used In China Telecom, China Mobile, China Unicom, Broadcasting, Electricity, Railways, Petrochemical, Military, Coal Industry, Research Institutions And Other Fields.

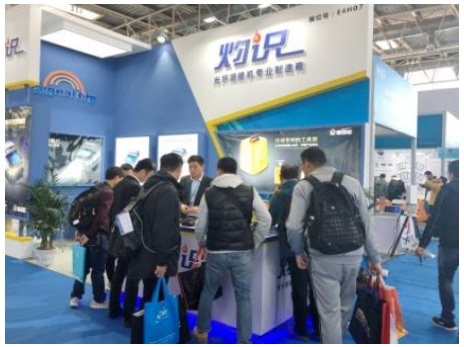
Our Company Has A Modern Production Plant And Standardized Office Buildings, With A Total Area Of Nearly 6,000 Square Meters, About 380 Employees, Including 10 Senior Engineers, 12 Master's Degree Or Above, Bachelor Degree Or Above Accounted For 45%.

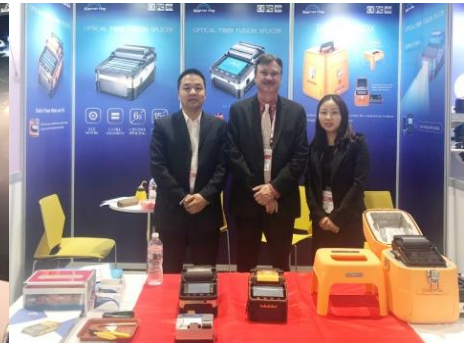
ABOUT US

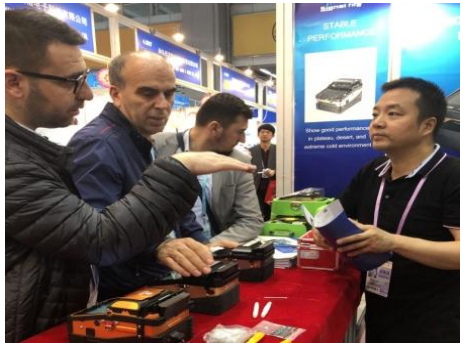
Our Company Owns Independent Intellectual Property Rights For Signal Fire Automatic Intelligent Optical Fiber Fusion Splicer And Its Related Products. Our Products Have Been Sold To Many Countries And Regions, Including North America, South America, Europe And Southeast Asia Etc, Our Products Have Gained Highly Praise From Customers.

EXHIBITION PHOTOS



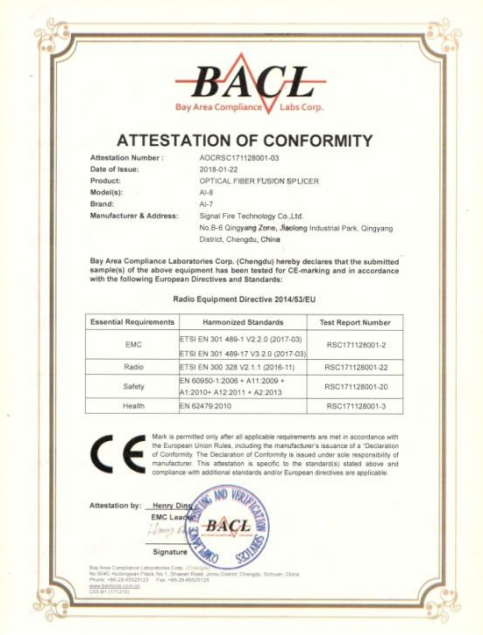






EXHIBITION PHOTOS

INTELLECTUAL PROPERTY



BACL
Bay Area Compliance Labs Corp.

ATTESTATION OF CONFORMITY

Attestation Number : AOCRSC171128001-03
Date of Issue: 2018-01-22
Product: OPTICAL FIBER FUSION SPLICER
Model(s): AI-8
Brand: AI-7
Manufacturer & Address: Signal Fire Technology Co.,Ltd. No.B-6 Qingyang Zone, Jiaolong Industrial Park, Qingyang District, Chengdu, China

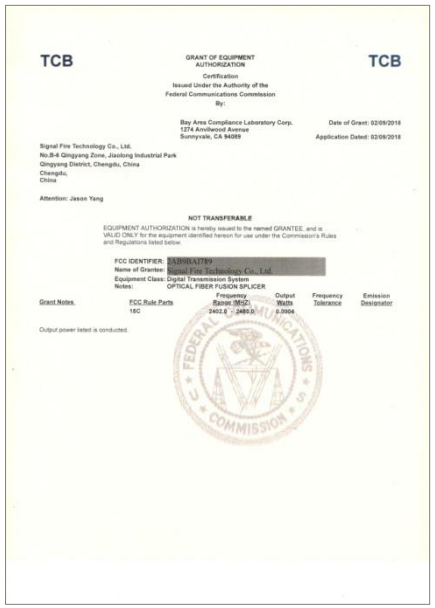
Bay Area Compliance Laboratories Corp. (Chengdu) hereby declares that the submitted sample(s) of the above equipment has been tested for CE-marking and in accordance with the following European Directives and Standards:

Radio Equipment Directive 2014/53/EU

Essential Requirements	Harmonized Standards	Test Report Number
EMC	ETSI EN 301 489-1 V2.2.0 (2017-03) ETSI EN 301 489-17 V3.2.0 (2017-03)	RSC171128001-2
Radio	ETSI EN 300 328 V2.1.1 (2016-11)	RSC171128001-22
Safety	EN 60950-1:2006 + A11:2009 + A1:2010+ A12:2011 + A2:2013	RSC171128001-20
Health	EN 62479:2010	RSC171128001-3

CE Mark is permitted only after all applicable requirements are met in accordance with the European Union Rules, including the manufacturer's issuance of a 'Declaration of Conformity. The Declaration of Conformity is issued under sole responsibility of manufacturer. This attestation is specific to the standard(s) stated above and compliance with additional standards and/or European directives are applicable.

Attestation by: Henry Ding
EMC Leader
Signature



TCB GRANT OF EQUIPMENT AUTHORIZATION TCB

Certification
Issued Under the Authority of the Federal Communications Commission By:

Bay Area Compliance Laboratory Corp.
1274 Anvilwood Avenue
Sunnyvale, CA 94089

Date of Grant: 02/09/2018
Application Dated: 02/09/2018

Signal Fire Technology Co., Ltd.
No.B-6 Qingyang Zone, Jiaolong Industrial Park
Qingyang District, Chengdu, China
Chengdu,
China

Attention: Jason Yang

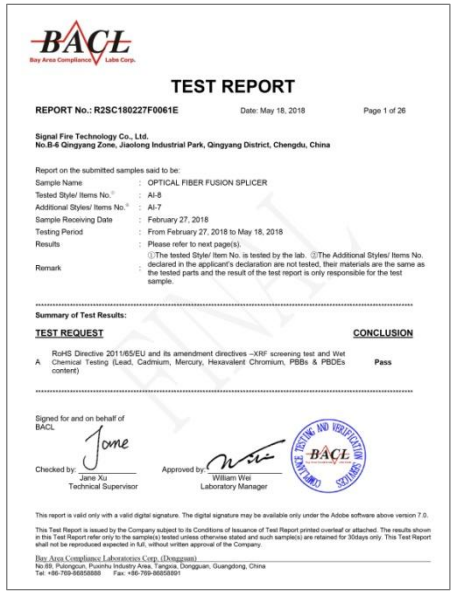
NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: 2ABWBAI7789
Name of Grantee: Signal Fire Technology Co.,Ltd.
Equipment Class: Digital Transmission System
Notes: OPTICAL FIBER FUSION SPLICER

Grant Notes	FCC Rule Parts	Frequency Range (MHz)	Output Watts	Frequency Tolerance	Emission Designator
	15C	2402.0 - 2480.0	0.0004		

Output power listed is conducted.



BACL
Bay Area Compliance Labs Corp.

TEST REPORT

REPORT No.: R2SC180227F0061E Date: May 18, 2018 Page 1 of 26

Signal Fire Technology Co., Ltd.
No.B-6 Qingyang Zone, Jiaolong Industrial Park, Qingyang District, Chengdu, China

Report on the submitted samples said to be:

Sample Name	:	OPTICAL FIBER FUSION SPLICER
Tested Style/ Items No.①	:	AI-8
Additional Styles/ Items No.②	:	AI-7
Sample Receiving Date	:	February 27, 2018
Testing Period	:	From February 27, 2018 to May 18, 2018
Results	:	Please refer to next page(s).
Remark	:	①The tested Style/ Item No. is tested by the lab. ②The Additional Styles/ Items No. declared in the applicant's declaration are not tested, their materials are the same as the tested parts and the result of the test report is only responsible for the test sample.

Summary of Test Results:

TEST REQUEST		CONCLUSION
A.	RoHS Directive 2011/65/EU and its amendment directives –XRF screening test and Wet Chemical Testing (Lead, Cadmium, Mercury, Hexavalent Chromium, PBBs & PBDEs content)	Pass

Signed for and on behalf of BACL

Checked by: Jane Xu, Technical Supervisor
Approved by: William Wei, Laboratory Manager

This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

This Test Report is issued by the Company subject to its Conditions of Issuance of Test Report printed overleaf or attached. The results shown in this Test Report refer only to the sample(s) tested unless otherwise stated and such sample(s) are retained for 30days only. This Test Report shall not be reproduced expected in full, without written approval of the Company.

Bay Area Compliance Laboratories Corp. (Dongguan)
No.69, Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China
Tel: +86-769-88858888 Fax: +86-769-88858991

Certificate

Certificate No.: 11417Q43162R0M

This is to certify that the Quality Management System of

SICHUAN ZHUOSHI TECHNOLOGIES CO., LTD.

Unified Social Credit Code: 91510100072411028D

Registered/Production Address:No.B-6, Qingyang Park, Jiaolong Industrial Port, Qingyang District, Chengdu City
Office Address:No.404, Floor 4, Guancheng Garden(Tanxiangge), NO.123, Xiaonan Street, Chengdu CITY, Sichuan Province

Has been audited to conform to the following Quality Management System standard

GB/T 19001-2016/ISO 9001:2015

This Quality Management System is valid for the

Development and production of optical fiber splicer

Initial issued date: Aug. 22, 2017
Date of issue: Aug. 22, 2017
Date of expiry: Aug. 21, 2020

Issued by:
Beijing East Allreach Certification Center Co., Ltd.

ISO 9001 ISO 9001

We obtained PCT patents, 8 invention patents, 16 utility model patents, and 2 appearance patents.

专 利 合 作 条 约

PCT

国际检索报告

(PCT 第 18 条和细则 43 和 44)

申请人或代理人的档案号 LZP18005	关于后续行为	见 PCT/ISA/220 表和适用时，见下面第 5 项
国际申请号 PCT/CN2018/096816	国际申请日 (日/月/年) 16.7 月 2018(16.07.2018)	(最早的)优先权日 (日/月/年)
申请人 罗春晖 等		

按照条的第 18 条，本国际检索报告由本国际检索单位做出并送交申请人。报告副本送交国际局。

本国际检索报告总计 5 页。

☐ 它还附有本报告所引用的各现有技术文件的副本。

1. 报告的基础

a.关于语言，进行国际检索基于：

☒ 国际申请提交时使用的语言。

☐ 该国际申请的_____语言译文，为了国际检索的目的提供该种语言的译文(细则 12.3(a)和 23.1(b))。

b.☐ 本国际检索报告考虑了本单位许可或被通知的根据细则91所做出的明显错误更正。(细则43.6之二(a))。

c.☐ 关于国际申请中公开的任何核苷酸和/或氨基酸序列(见第 I 栏)。

2. ☐ 某些权利要求被认为是不能检索的(见第 II 栏)。

3. ☐ 缺乏发明的单一性(见第 III 栏)。

4. 关于发明名称。

☒ 同意申请人提出的发明名称。

☐ 发明名称由本单位确定如下：

5. 关于摘要。

☐ 同意申请人提出的摘要。

☒ 根据细则 38.2(b)，摘要由本单位制定，如第 IV 栏中所示。自本国际检索报告发文日起一个月内，申请人可以向本单位提出意见。

6. 关于附图。

a.随摘要一起公布的附图是：图 1

☒ 按照申请人建议的。

☐ 由本单位选择的，因为申请人没有建议一幅图。

☐ 由本单位选择的，因为该图能更好地表示发明的特征。

b. ☐ 没有与摘要一起公布的附图。

国家知识产权局 专利审查业务章

PCT/ISA/210 表(第 1 页)(2015 年 1 月)

1/5

证书号第3147253号

实用新型专利证书

实用新型名称：一种用于光纤熔接机的电极座

发 明 人：罗春晖

专 利 号：ZL 2013 2 0219700.0

专利申请日：2013 年 04 月 26 日

专 利 权 人：罗春晖

授权公告日：2013 年 09 月 04 日

本实用新型经过本局依照中华人民共和国专利法进行初步审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为十年，自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费。本专利的年费应当在每年 04 月 26 日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

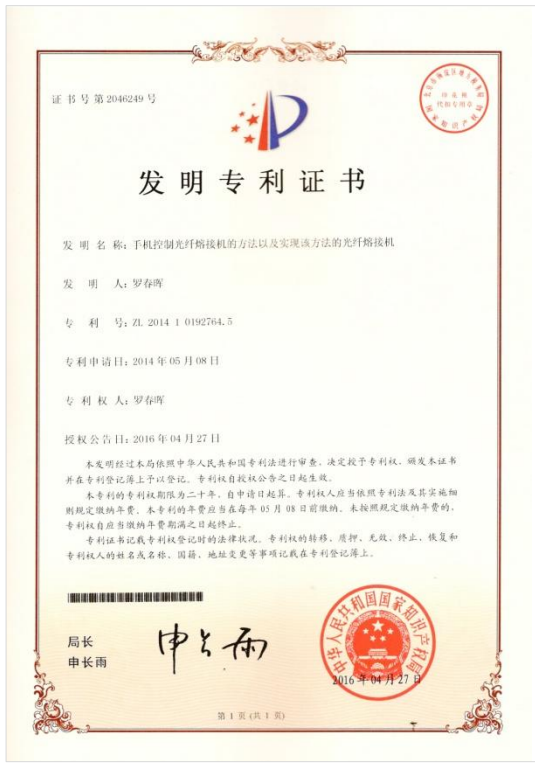
专利证书记载专利权登记时的法律状况，专利权的转移、质押、无效、终止、恢复和专利权人的姓名或名称、国籍、地址变更等事项记载在专利登记簿上。

局长 田力普

中华人民共和国国家知识产权局

2013 年 09 月 04 日

第 1 页(共 1 页)



证书号第2046249号

发明专利证书

发 明 名 称：手机控制光纤熔接机的方法以及实现该方法的光纤熔接机

发 明 人：罗春晖

专 利 号：ZL 2014 1 0192764.5

专利申请日：2014 年 05 月 08 日

专 利 权 人：罗春晖

授权公告日：2016 年 04 月 27 日

本发明经过本局依照中华人民共和国专利法进行审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为二十年，自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费，本专利的年费应当在每年 05 月 08 日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

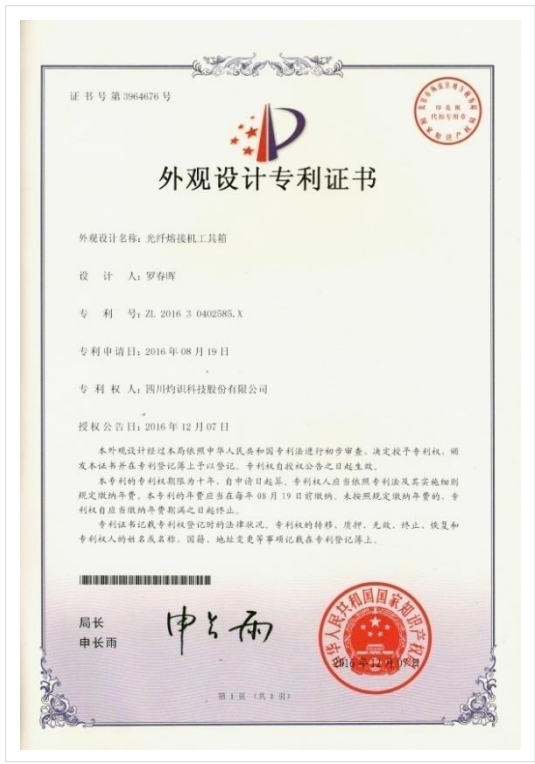
专利证书记载专利权登记时的法律状况，专利权的转移、质押、无效、终止、恢复和专利权人的姓名或名称、国籍、地址变更等事项记载在专利登记簿上。

局长 申长雨

中华人民共和国国家知识产权局

2016 年 04 月 27 日

第 1 页(共 1 页)



证书号第3964676号

外观设计专利证书

外观设计名称：光纤熔接机工具箱

设 计 人：罗春晖

专 利 号：ZL 2016 3 0402585.X

专利申请日：2016 年 08 月 19 日

专 利 权 人：四川灼识科技股份有限公司

授权公告日：2016 年 12 月 07 日

本外观设计经过本局依照中华人民共和国专利法进行初步审查，决定授予专利权，颁发本证书并在专利登记簿上予以登记。专利权自授权公告之日起生效。

本专利的专利权期限为十年，自申请日起算。专利权人应当依照专利法及其实施细则规定缴纳年费，本专利的年费应当在每年 08 月 19 日前缴纳。未按照规定缴纳年费的，专利权自应当缴纳年费期满之日起终止。

专利证书记载专利权登记时的法律状况，专利权的转移、质押、无效、终止、恢复和专利权人的姓名或名称、国籍、地址变更等事项记载在专利登记簿上。

局长 申长雨

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SERVICE COMMITMENT

Five years warranty, but these circumstances are not within the scope of this provision.

●01.Except for the cleaver, miller clamp, stripping pliers, fiber holders and other tools whose life depends on the frequency of use and the use of the environment. Also electrodes are consumption material which are not in the warranty.

●02.Battery and power adapter are warranty for one year, it is in free warranty where it is damaged or can not be charged in one year.