

Technical Specification

for

FiTs (Fiber Installation Tools)

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VER R1A

1. Description

The FiTs is a handy instrument to provide several wavelengths for testing the fiber equipment in an optical network and FTTx construction.

There are 650 nm Fiber Checker & Light Source is ideal for field or laboratory testing of optical communication systems at visible light 650 nm and 850 nm / 1310 nm / 1490 nm / 1550 nm . Light Source features zero warm up, superb productivity and is easy to use with its pocket-size and rugged handy design.



2. Features

- Pocket-size & rugged, handy stand alone design.
- With 2 light source ports and 1 power meter ports
- Optical Visible light 650 nm module
- Optional 850 nm / 1310 nm / 1490 nm / 1550 nm power meter.
- Interchangeable SFP-sized module design with SC / LC connector.
- Flexible for changing wavelengths.& stable output wavelength.
- High Output Power stability.
- Excellent re-connection repeatability.
- USB connected to PC and the measured power values could be recorded into a file.
- Economical and easy to use.
- With internal chargeable battery via USB.

3. Application

- Maintenance CATV / Telecom / FTTH in Singlemode or Multimode fiber optical fiber networks.
- Testing in standard fibers & patch cords.
- Optical Fiber network installations.

4. Specification

Operating Temp.	0°C ~ 50°C
Storage Temp.	0°C ~ 70°C
Battery Operating Time (Green Light) At one light source & power meter module.	3 ~ 5 hours
Battery Low Warning Time (Red Light)	0.5 hour

4.1. Fiber Checker Plug-In Module

Laser Class	Class 2M
Wavelength	650 nm ± 10 nm @ 25°C
Spectral Width	< 10 nm
Output Power	> 0.5 mW @ 25°C into 9 μm fiber
Emitting Range	Visibility to 3 km

4.2. Multimode Power Meter Plug-In Module

Wavelength (Multimode)	850 nm
Optical Power Range (Multimode)	-40dBm ~ +5 dBm
Resolution (Multimode)	0.1 dB
Accuracy (Multimode)	<+/- 1 dBm

4.3. Singlemode Power Meter Plug-In Module

Wavelength (Singlemode)	1310 nm / 1490 nm / 1550 nm
Optical Power Range (Singlemode)	-50dBm ~ +5 dBm
Resolution (Singlemode)	0.1 dB
Accuracy (Singlemode)	<+/- 0.3 dBm

4.4. Light Source Modules Plug-In Module

Output Power Accuracy	+/- 0.5 dB
Output Power Stability (1 HR)	+/- 0.05 dB

	Min.	Typ.	Max.	Unit	Note
850 nm VCSEL Output Power	-5			dBm	**
Center Wavelength λ_C		850		nm	**
Spectral Width $\Delta\lambda$			<0.85	nm	**
1310 nm FP LD Output Power	-5			dBm	**
Center Wavelength λ_C	1290	1310	1330	nm	**
Spectral Width $\Delta\lambda$			<4	nm	**
1550 nm FP LD Output Power	-5			dBm	**
Center Wavelength λ_C	1520	1550	1570	nm	**
Spectral Width $\Delta\lambda$			<4	nm	**
1310 nm DFB LD Output Power	-3			dBm	**
Center Wavelength λ_C	1290	1310	1330	nm	**
Spectral Width $\Delta\lambda$			<1	nm	**
1550 nm DFB LD Output Power	-3			dBm	**
Center Wavelength λ_C	1530	1550	1570	nm	**
Spectral Width $\Delta\lambda$			<1	nm	**
1490 nm* CWDM Output Power	-3			dBm	**
Center Wavelength λ_C	$\lambda_C^* - 3$	λ_C^*	$\lambda_C^* + 3$	nm	**
Spectral Width $\Delta\lambda$			<1	nm	**

Note:

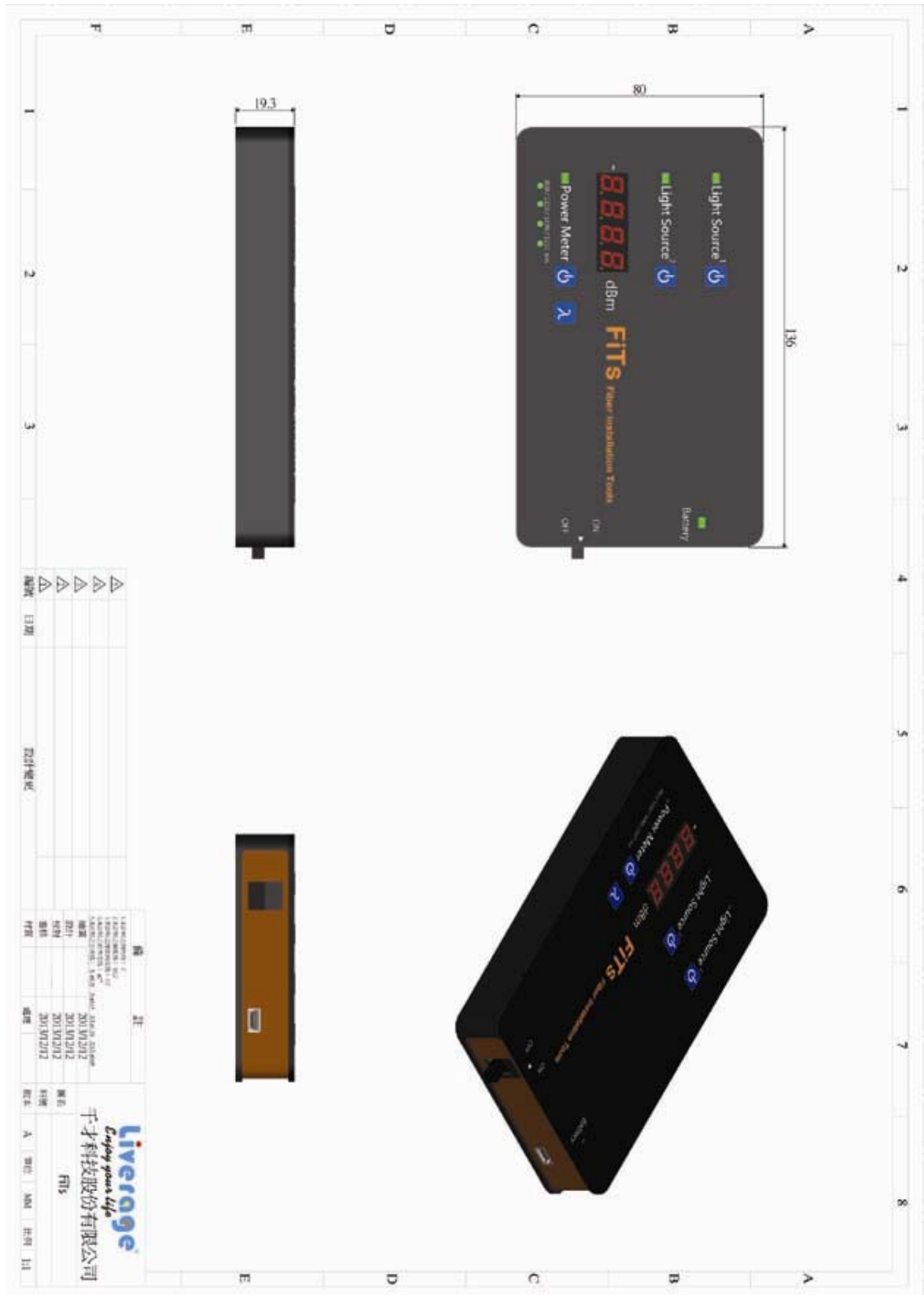
***CWDM LD λC:**

S200125Xxxxx

1270 nm / 1290 nm / 1310 nm / 1330 nm / 1350 nm / 1370 nm / 1390 nm / 1410 nm /
1430 nm / 1450 nm / 1470 nm / 1490 nm / 1510 nm / 1530 nm / 1550 nm / 1570 nm /
1590 nm / 1610 nm / 1625 nm

**** @ 25°C in 9 / 125 μm singlemode fiber**

5. Dimension (Unit : mm)



6. Ordering Information

Part Number	Connector	Description
FiTs Standard Package		
S2009991	LC	<ul style="list-style-type: none"> ■ FiTs Main Frame in plastic case ■ FP LD 1310 nm plug-in module LC ■ Power Meter Module LC Connector Multimode 850 nm Singlemode 1310 nm 1490 nm 1550 nm
S2009992	SC	<ul style="list-style-type: none"> ■ FiTs Main Frame in plastic case ■ FP LD 1310 nm plug-in module SC ■ Power Meter Module SC Connector Multimode 850 nm Singlemode 1310 nm 1490 nm 1550 nm
Optional Main Frame		
S20091009999		FiTs Main Frame in metal case
S20091009998		FiTs Main Frame in plastic case
Optional Fiber Checker Module for FiTs		
S20092120650	SC	650 nm Visible Red Light Plug In Module
Optional Light Source Module for FiTs		
S20093610850	LC	VCSEL LD 850 nm plug-in module LC
S20093620850	SC	VCSEL LD 850 nm plug-in module SC
S20093311310	LC	FP LD 1310 nm plug-in module LC
S20093321310	SC	FP LD 1310 nm plug-in module SC
S20093311550	LC	FP LD 1550 nm plug-in module LC
S20093321550	SC	FP LD 1550 nm plug-in module SC
S20093411310	LC	DFB LD 1310 nm plug-in module LC
S20093421310	SC	DFB LD 1310 nm plug-in module SC
S20093411550	LC	DFB LD 1550 nm plug-in module LC
S20093421550	SC	DFB LD 1550 nm plug-in module SC

S2009 351 1490	LC	1490 CWDM LD plug-in module LC
S2009 352 1490	SC	1490 nm CWDM LD plug-in module SC
Optional Power Meter Module for FiTs		
S20094318	LC	LC Connector Power Meter Module for: Multimode 850 nm Singlemode 1310 nm 1490 nm 1550 nm
S20094328	SC	SC Connector Power Meter Module for: Multimode 850 nm Singlemode 1310 nm 1490 nm 1550 nm

7. Service Contacts

Please contact us

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8. Record of Revisions

Record of Revisions		
Rev.	Date	Description of Change
PRELIMINARY	2013.01.22	PRELIMINARY Specification issued.
PRELIMINARY VER A	2013.01.28	PRELIMINARY VER A Released
PRELIMINARY VER B	2013.03.12	850 nm & MM Power Meter adding
PRELIMINARY VER C	2013.03.14	SM & MM Meter Deleted S20092512 added
PRELIMINARY VER D	2013.10.30	S20093610850 → S20093620850 FOR 850 LIGHT SOURCE SC
PRELIMINARY VER E	2013.11.18	Adding: With internal chargeable battery via USB. Battery Operating Time (Green Light) Battery Low Warning Time (Red Light)
PRELIMINARY VER F	2013.12.20	<1> Light Source :Output Power Accuracy +/-0.2dB → +/-0.5dB <2> Power Meter Multimode : -50 ~ +5dBm → -40 ~ +5dBm <3> Features : Compatible LC connectors → Deleted <4> Battery Operating Time : 3~5 小時 Adding → At one light source & power meter module. <5> Fiber Checker Emitting rage : 3~5Km → 3Km Drawing modified.
VER A	2014.05.05	Original Specification released. Page 1 Product Picture added 4.3 Power Meter Module modified <+/- 1 dBm → <+/- 0.3 dBm
VER B	2014.11.05	S20094318 LC Power Meter Module added.

VER C	2015.04.11	S20091009999 FiTs Main Frame in metal case S20091009998 FiTs Main Frame in plastic case
VER D	2015.11.01	To add the 4.5 GUI & updated the pictures in page#1. S20092110650 --. Deleted
VER R1A	2016.03.16	Ordering information Items added For standard sets information. 4.5 GUI Pictures deleted.