SSF-TKITP-400
SSF™ Pro Fiber Test Kit

Manual

OPTICAL LIGHT SOURCE
LDR
B/L SET
CW
λ
P▴
P▾
Pr
OLS
OPTICAL POWER METER
LDR
B/L SET
UNITS
REF
SAVE
DEL
OPM

CLEERLINE SSF™

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WARNING

To avoid the risk of serious eye damage, do not look into the laser at any time.

Handheld Power Meter

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Overview

This handheld optical light source is designed for fiber optic network installation, evaluation, and maintenance. Used with its matched optical power meter, it provides an accurate fiber network testing solution. This light source can provide 1-4 wavelengths with stable output power and features continuous adjustable output power. The intelligent backlight control function reduces power usage. The optical light source has a rugged appearance and comfortable design to clients' requirements.

Features

- Wave ID information can be transmitted when used with the matched optical power meter.
- Tone generation: 270HZ, 330HZ, 1KHZ, 2KHZ
- Adjustable output power
- Output power value shown on LCD display
- Intelligent backlight control (light intensity can be adjusted according to ambient light, greatly reducing power consumption)
- AA alkaline batteries and AC adapter for power supply
- Low battery indicator

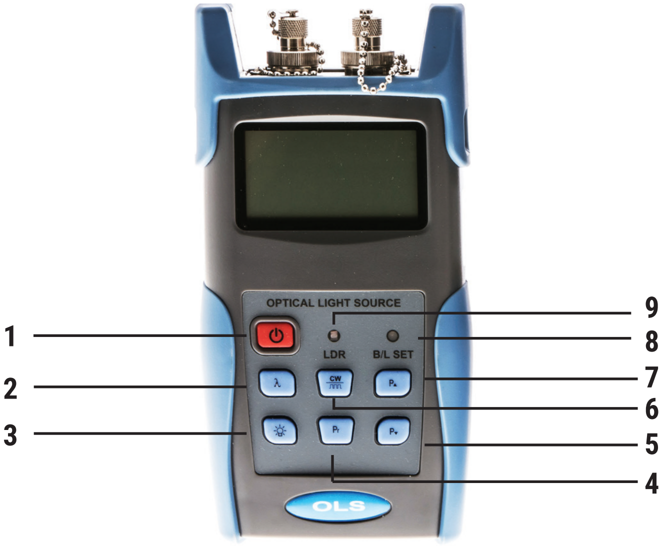
Accessories

(1) Operation Manual
(1) Cleaning Swabs
(3) 1.5V AA battery
(1) AC Power Supply Adapter
(1) Carrying Case

Specifications

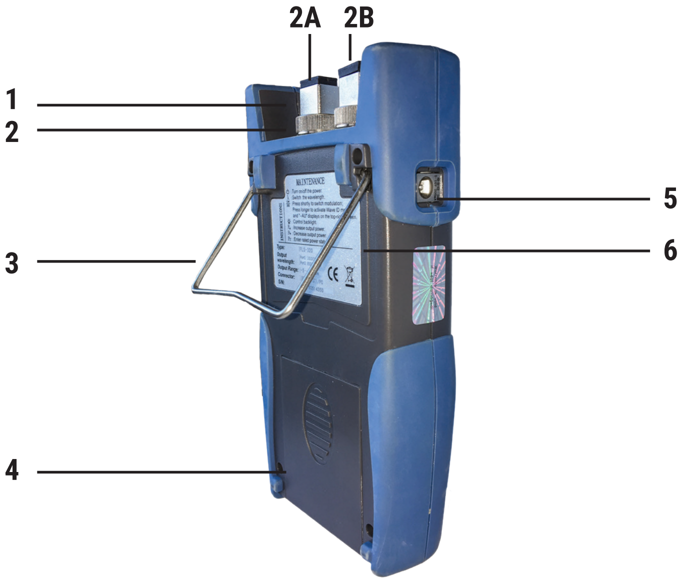
Model	Optical Light Source
Operating wavelength (nm)	850/1300/1310/1550
Applicable fiber	SM, MM
Laser type	FP-LD
Maximum Output Power (dBm)	-5 (adjustable)
Adjustable step size (dBm)	< 0.5 (adjustable between -5-12dBm)
Stability (dB, 15min, 20°C)	±0.1
Stability (dB, 30min, 20°C)	±0.05
Modulation (Hz)	CW, 270, 330,1K, 2K
Fiber Port	FC/PC or FC, SC, ST interchangeable
Alkaline Battery	3*AA,1.5V
Power Supply Adapter (V)	8.4
Battery Operating time (h)	45
Operation Temperature (°C)	-10 - +60
Storage Temperature (°C)	-25 - +70
Dimensions (mm) / Weight	175x90x44.5 / 255g

Functions



1	⏻	**Power On/Off**: Press to turn the unit on or off. **Auto Shut-Off Selection**: Press this key quickly to turn the auto shut-off function on or off.
2	λ	**Wavelength Selection:** Press to activate laser and select wavelength.
3	☼	**Backlight control**: Press to select LDR (intelligent backlight control) or backlight key mode.
4	P_r	**Rated power**: Select default output power (dBM) (maximum value) for wavelength in use
5	P▾	**Decrease**: Press to decrease the rated output power
6	CW	**Frequency modulation / Wavelength identification**: Press quickly to adjust the frequency. Press and hold to enter/exit wavelength identification mode.
7	P▴	**Increase**: Press to increase the output power
8	B/L Set	Backlight indicator
9	LDR	Intelligent backlight control sensor

Handheld Optical Light Source



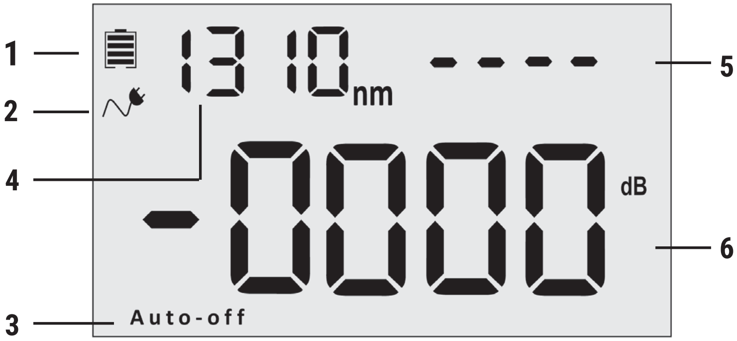
Back/Side

1	**Dust Cap**: Place the dust cap over the connectors to protect the optical connector when not in use
2	**Optical Connector**: SC/PC optical connector. **2A**: Port 1: 1310/1550nm Output **2B**: Port 2: 850/1300nm Output
3	**Bracket**: Collapsible metal bracket can be adjusted 0-90 degrees
4	**Battery Pack**: Contains 3 x 1.5 AA Batteries
5	**Label**: Basic function and instruction information
6	**AC Adapter Port**: Connect AC adapter

Note

Small amounts of dust on the connector will affect the accuracy of the measurement. Use isopropyl alcohol and a cotton swab to clean the connector. Moisten the cotton swab with alcohol, insert the cotton swab in the connector, slightly rotating the cotton swab. Always dry using a second dry cotton swab.

Handheld Optical Light Source



Screen

1	🔋	**Battery Indicator**: displays when battery power in use. The capacity shown will decrease with battery power. Replace batteries as needed.
2	🔌	**AC Adapter Indicator**: displays when AC power in use
3	Auto-off	**Auto-off**: the light source will automatically shut off when idle for ten minutes. Press power button (⏻) quickly to turn Auto-Off function on or off.
4	nm	**Wavelength**: (nm) 850/1300: Multimode fiber testing 1310/1550: Single mode fiber testing
5		**Modulated Frequency**: (Hz) ***Dashed line indicates laser is off*.**
6		Output Power Value: (dBm)

Powering the Light Source

Power Supply Options

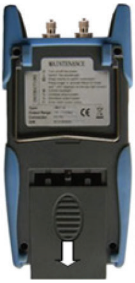
The light source can be powered by either battery or AC adapter power, allowing total flexibility for most testing sites and situations.

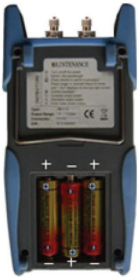
AA Battery

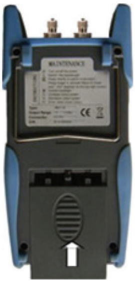
When batteries are in use, 🔋 will display on the top left of the screen (Screen, page 7).
There are five levels of battery power:

🔋	70%-100% power
🔋	40%-70% power
🔋	20%-40% power
🪫	Less than 20%. The power meter will shut down.
▯	Replace batteries

Replacing Batteries





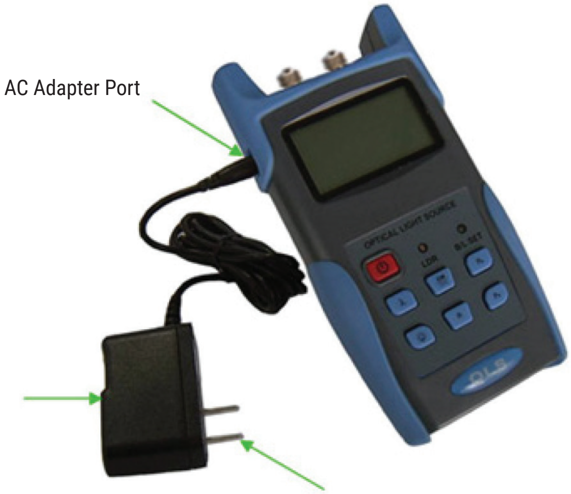


1. Push the clip fastener on the battery compartment cover down.
2. Remove the battery compartment cover and remove all three batteries, noting their positive and negative orientation. The negative battery connector should be against the spring.
3. Insert 3 new 1.5VV AA batteries. Be sure to align correctly.
4. Refit the battery compartment cover. The clip fastener should click shut.

Power Supply Unit

AC power can be used when the batteries are empty. The AC adapter indicator, ∿, will display on the left of the screen when AC power is in use (Screen, page 7). The light source will default to AC power supply if charged batteries are present in the unit when it is plugged in.

When using the AC adapter, connect the power plug (pictured) and insert it into the AC adapter port



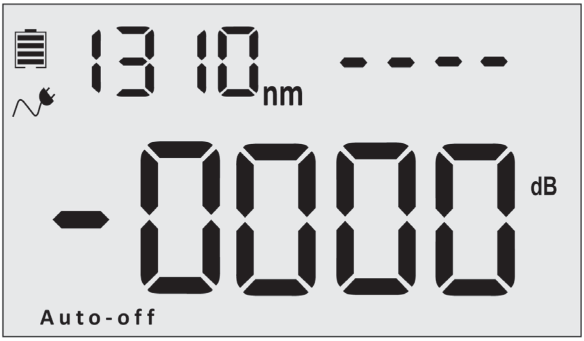
Note

Only use the power supply unit supplied with the tester. Using another type of power supply may damage the instrument.

Turning the Light Source On or Off

Turning the Light Source On

1. Insert the battery or connect the power supply unit.
2. Press and hold ⏻ on the tester. Note that this does not activate the laser.
3. The screen display will show a dashed line in the upper right corner.



See page 7 for screen details

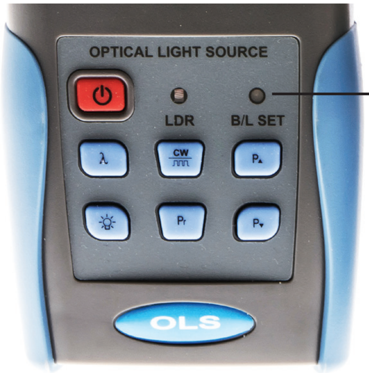
Auto Shutdown Function

Press the ⏻ key to enable or disable the auto shutdown function. When selected, “Auto-Off” will appear at the bottom of the screen. The light source will shut down automatically after 10 minutes idle.

Turning the Light Source Off

Hold down ⏻ to turn off the light source.

Backlight Control



B/L SET

1. Green when LDR activates
2. Red when Key Control Mode activates

LDR: Intelligent Backlight Control Mode

In LDR, the light source will automatically adjust the backlight to ambient light within 15 seconds.

Key Control Mode

In key control mode, pressing the ☼ key turns the backlight on or off.

1. With light source turned on, press and hold the ☼ key.
2. The BL/SET light will turn red. (Fig X)
3. After 10 seconds, the indicator light will turn off. Key control mode is active.

Changing Backlight Mode

Press and hold the ☼ key to switch from one backlight mode to the other. Green B/L Set light indicates the LDR is active.

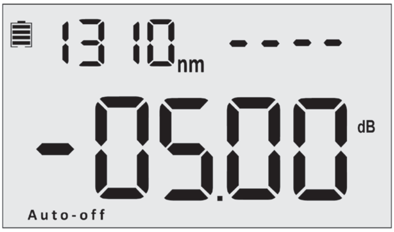
Laser Settings

Note

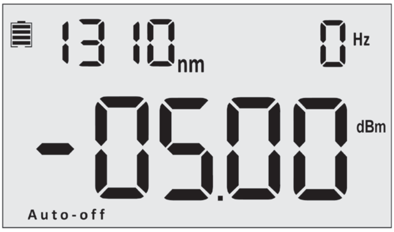
1. A warm-up period of 5 minutes or less is normally required to ensure stable output power.
2. Ensure that connectors and patch cable ends are clean before attaching. Be sure to connect the correct type of patch cable.
3. *To avoid the risk of serious eye damage, do not look into the laser at any time.*

Activating the Laser

1. Remove dust cap and connect patch cable.
2. When the light source is first powered on, the laser will not be active. Press the wavelength (λ) key to activate the laser.
3. Pressing λ will set the initial frequency to 0Hz.



Laser Off



Laser On
Wavelength: 1310nm
Frequency: 0Hz
Rated Output Power: -5.00 dBM

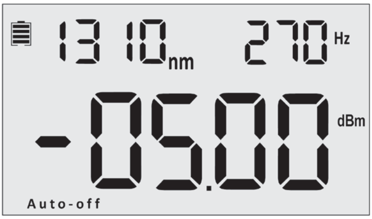
Selecting Wavelength

Press λ to select the output wavelength (nm) displayed at top left of screen.
Available wavelengths are 850nm, 1300nm (multimode testing) and 1310nm, 1550nm (single mode testing).

Selecting Frequency

When laser is active, press CW to adjust the frequency (Hz). The value is displayed in the top right corner of the screen.
Available frequencies are 0Hz (continuous wave), 270Hz, 330Hz, 1000Hz, and 2000Hz.

When the laser is off, pressing and holding this key twice in succession will activate the laser.



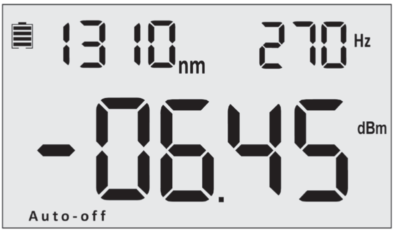
Frequency is displayed at the
top right of the screen

The matching power meter can be configured to identify the frequency set on the light source, see **Automatic Frequency Detection**.

Output Power

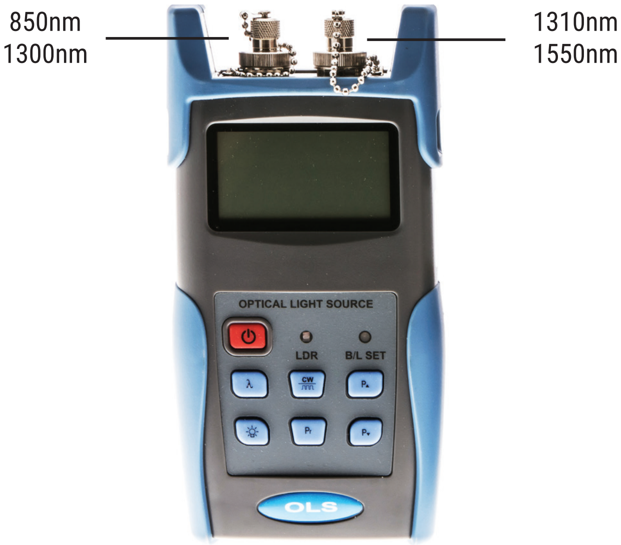
Each available wavelength setting allows the output power (laser light intensity) to be adjusted within the range of approximately -5 to -12 dBm.

1. Press Pr to select the maximum output power available for the selected wavelength.
2. Press P▲ to increase the output power. If maximum value available already appears on screen, this key will return the light source to the minimum dBm output for the wavelength and then increase the output.
3. Press P▼ to decrease the output power. If minimum value available already appears on screen, this key will return the light source to the maximum dBm output for the wavelength and then decrease the output.



In this image, P▼ has been pushed to decrease the output power shown on page 12.

Automatic Wavelength Identification



Light Source

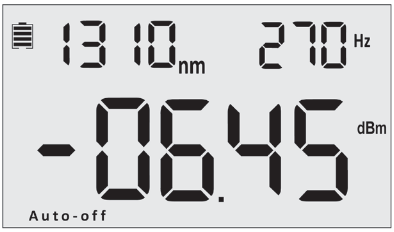
1. Connect the light source to its matched optical power meter
2. On the light source, press λ to activate laser.
3. Press and hold CW until --AU appears on the upper right corner of the screen. This indicates that Wave ID mode is active.
4. On the power meter, press and hold λ until --AU appears on the upper right corner of the screen. Wave ID mode is now active.
5. Press λ to change wavelength on light source as desired. After 3-5 seconds, the power meter will update to match the wavelength
6. To exit Wave ID, press and hold λ on the power meter. On the light source, press and hold CW to return to continuous wave (0Hz).

Note

Wave ID Mode and Auto Frequency Detection cannot operate at the same time.

Automatic Frequency Detection

Automatic Frequency Detection will operate by default when Automatic Wavelength Identification mode is not in use.



1. Connect the light source to its match power meter.
2. On the light source, press λ to activate laser.
3. Press CW to select modulation frequency (270Hz, 330Hz, 1KHz, or 2KHz). This will display on the upper right of the screen.
4. The optical power meter will detect the frequency automatically and display it on the upper right corner of its screen.

Note

Wave ID Mode and Auto Frequency Detection cannot operate at the same time.

Maintenance and Troubleshooting

1. Always keep the connector ports of the light source clean.
2. Use the regulated optical connector for testing.
3. Shut off the power and cover laser with dust-proof cap after use.
4. When using AC adapter, ensure power supply is within the required voltage range.
5. Remove the batteries when light source not in use for extended periods of time.

Troubleshooting

Issue	Possible Reason	Solution
Faint screen display	Low battery power	Charge or replace the battery.
Unit fails to turn on	Low battery power or battery inserted incorrectly	(A) Replace the battery (B) Re-insert the battery
Optical power is not stable after when light source turned on		Allow a 15 minute warm-up period

Warning

1. Ensure the connector is clean before testing.
2. Only use the supplied adapter.
3. Do not look into the laser when unit is on.
4. Charge the batteries before use. Do not charge in unit.
5. Cover laser with dust-proof cap when not in operation.
6. Clean the optical port of the power meter regularly.

Warranty

Caution: Do not attempt to repair as doing so will void warranty.
This Optical Power Meter is covered by an 18 month warranty.

1. We warrant that this power meter will be free from defects in material and workmanship for 18 months. Should the device fail at any time during this warranty period, we will, at our sole discretion, replace and repair or refund the purchase price of the product. The worth of the repair or replacement will not be higher than purchasing price of this unit.
2. If device issues cannot be solved by the troubleshooting methods, please contact us or the local distributor directly.
3. We will repair or replace the unit free of charge in case of defects in production, workmanship or material. This warranty only applies to the unit under normal operation without any damage or misuse/abuse.
4. The shipping costs incurred by repair or replacement for the unit under warranty will be shared by both parties.

SSF-TKITP-400 Power Meter

Overview

The Cleerline SSF™ Optical Power Meter is a newly designed fiber optic tester intended for the installation, engineering evaluation, and maintenance of fiber networks.

Compared with other power meters, the TKITP-400 Power Meter has more functions, including automatic wavelength identification, auto wavelength switching, intelligent backlight, and data saving via USB port.

Combined with its matched handheld optical light source, it offers a quick and accurate testing solution on both single mode and multimode fibers.

Features

- Wave ID: auto wavelength identification & switching
- Frequency ID: auto frequency identification
- Manual and automatic (ambient light sensing) backlight control modes
- Storage of up to 1000 data records, downloadable via USB cable
- Mini USB port for downloading and saving testing records
- Adjustable/storable reference power level
- User self-calibration function
- Auto shutdown function
- Up to 200 hours battery life

Accessories

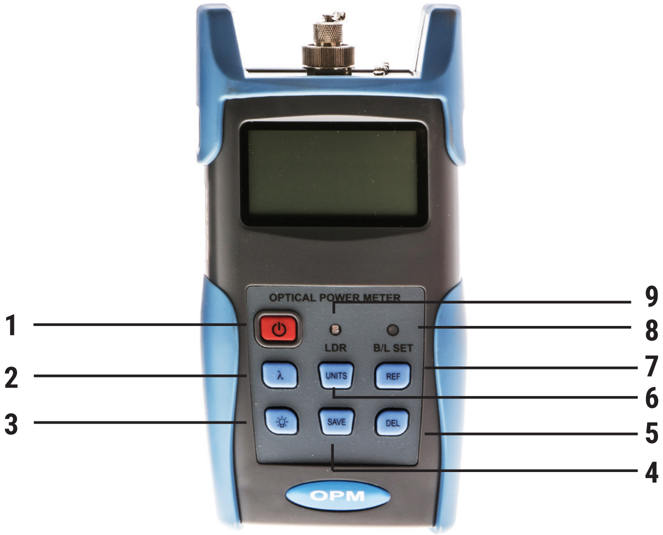
(1) Operation Manual
(1) USB Cable
(3) 1.5V AA battery
(1) AC Power Supply Adapter
(1) Cotton cleaning swab

Specifications

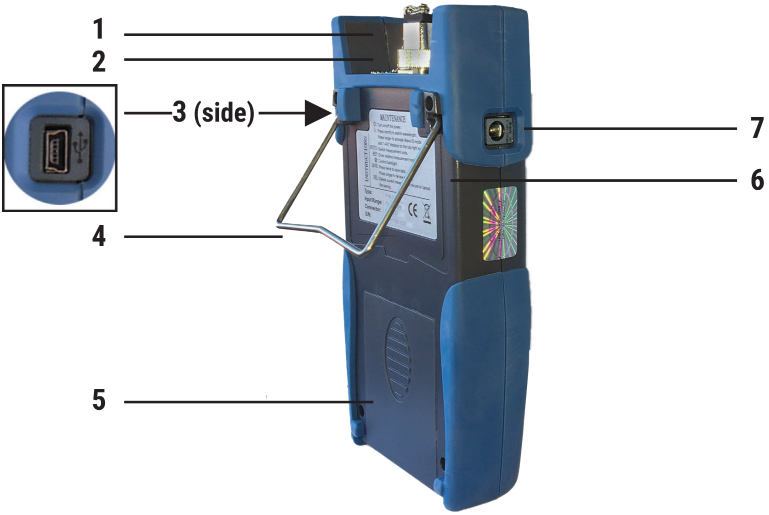
Model	A	C
Calibration Wavelength (nm)	850/1300/1310/1490/1550/1625	
Detector type	InGaAs	
Measurement Range (dBm)	-70 - +6	-50 -+26
Uncertainty (dB)	±0.15 (3.5%)	
Linearity (dB)	±0.02	
Display resolution (dB)	0.01	
Frequency ID (Hz)	270, 330,1K, 2K	
Wave ID (nm)	850,1300, 1310, 1490, 1550, 1625	
Date Storage Capacity	1000	
Communication Port	USB	
Standard Connector	FC /2.5mm universal	
Optional Optical Connector	SC/FC Type	
Optional Optical Connector	None	
Alkaline battery	3*AA, 1.5V	
Power Adapter (V)	8.4	
Battery Operating time (h)	200 without backlight*	
Operation Temperature (°C)	-10 - +60	
Storage Temperature (°C)	-25 - +70	
Dimension (mm)	175x90x44.5	
Weight (g)	231	

* Continuous backlight operation will shorten battery life

Functions



1	⏻	**Power On/Off**: Press and hold to turn the unit on or off. **Auto Shut-Off Selection**: Press this key quickly to turn the auto shut-off function on or off.
2	λ	**Wavelength Selection**: Press to select wavelength. Press and hold to enter Wavelength Auto-ID mode.
3	☼	**Backlight control**: Press to select backlight mode.
4	SAVE	**Save/View**: Display data records and save new.
5	DEL	**Delete**: Cancel or delete saved records
6	UNITS	**Unit Selection**: Press to select units dBM: Optical power measurement (absolute) dB: Relative (loss) measurement mW, uW, nW: Power- milliwatts, microwatts, or nanowatts
7	REF	**Reference**: Set current power value (dBM) as reference
8	**B/L Set**	Backlight indicator
9	**LDR**	Intelligent backlight control sensor

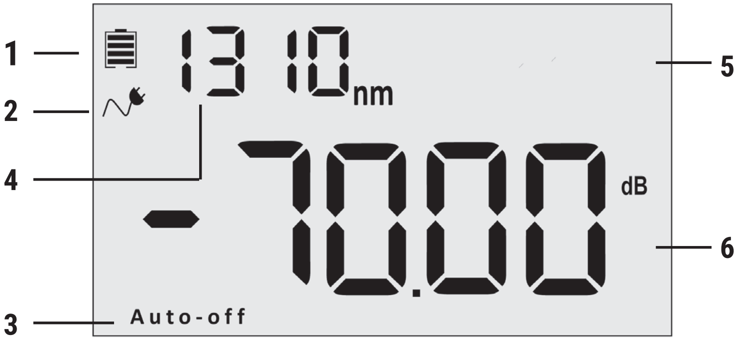


Back/Sides

1	**Dust Cap**: Place the dust cap over the connectors to protect the optical connector when not in use
2	**Optical Connector**: SC (Φ2.5mm) optical connector.
3	**Mini USB Port**: Connect USB cable
4	**Bracket**: Collapsible metal bracket can be adjusted 0-90 degrees
5	**Battery Pack**: Contains 3 x 1.5 AA Batteries
6	**Label**: Basic function and instruction information
7	**AC Adapter Port**: Connect AC adapter

Note

Small amounts of dust on the connector will affect the accuracy of the measurement. Use isopropyl alcohol and a cotton swab to clean the connector. Moisten the cotton swab with alcohol, insert the cotton swab in the connector, slightly rotating the cotton swab. Dry using a second dry cotton swab.



Screen

1	🔋	Battery Indicator: displays when battery power in use. The capacity shown will decrease with battery power. Replace batteries as needed.
2	🔌	AC Adapter Indicator: displays when AC power in use
3	Auto-off	Auto-off: the power meter will automatically shut off when idle for ten minutes. Press power button (⏻) quickly to turn Auto-Off function on or off.
4	nm	Wavelength: (nm) 850/1300: Multimode fiber testing 1310/1550: Single mode fiber testing
5		Various: Depending on settings, this area will display a. --AU: Automatic Wavelength mode active b. Data record number c. Power reference value (dBM) d. Frequency (Hz) determined by light source settings
6		Output Power and Relative Measurement: Depending on settings, the power meter will display dBM (absolute power measurement), relative measurement used for loss (dB), or xW (mW, uW, nW) value.

Powering the Meter

Power Supply Options

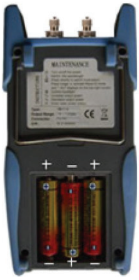
The power meter can be powered by either battery or AC adapter power, allowing total flexibility for most testing sites and situations.

AA Battery

When batteries are in use, 🔋 will display on the top left of the screen (Screen, page 24).
There are five levels of battery power:

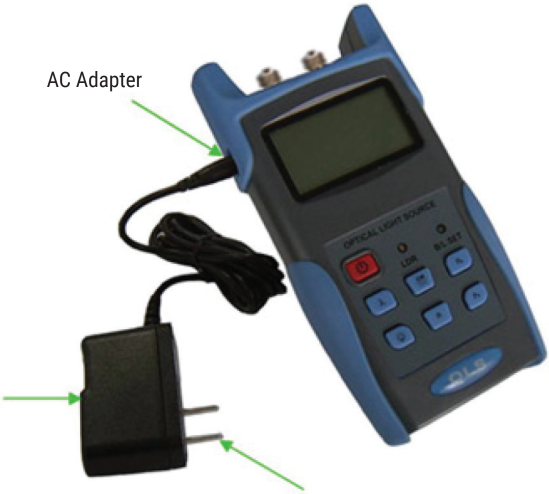
🔋	70%-100% power
🔋	40%-70% power
🔋	20%-40% power
🪫	Less than 20%. The power meter will shut down.
🪫	Replace batteries

Replacing Batteries



1. Push the clip fastener on the battery compartment cover down.
2. Remove the battery compartment cover and remove all three batteries, noting their positive and negative orientation. The negative battery connector should be against the spring.
3. Insert 3 new 1.5VV AA batteries. Be sure to align correctly.
4. Refit the battery compartment cover. The clip fastener should click shut.

Power Supply Unit



AC power can be used when the batteries are empty. The AC adapter indicator, 🔌, will display on the left of the screen when AC power is in use (Fig X, 2). The power meter will default to AC power supply if charged batteries are present in the unit when it is plugged in.

When using the AC adapter, connect the power plug (pictured) and insert it into the AC adapter port

Note

Only use the power supply unit supplied with the tester. Using another type of power supply may damage the instrument.

Connecting Cables

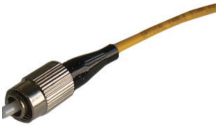
Connecting USB Cable

Use the USB cable supplied with the power meter to connect the power meter to a USB port on a PC.

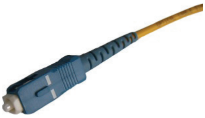
Connecting Patch Cable

To connect a patch cable, remove the dust proof cap.

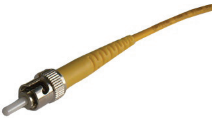
This power meter accepts SC and ST connectors (SC & Φ2.5mm). For LC testing, utilize SC to LC reference patch cords and included LC-type adapters.



FC Patch Cord



SC Patch Cord



ST Patch Cord

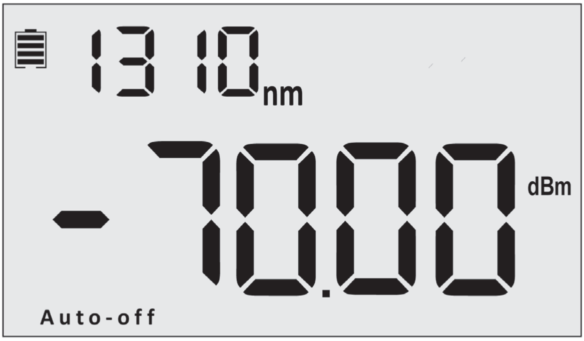
Note

Note: When changing the optical connector, be careful of the connector and the end-face.

Turning the Power Meter On or Off

Turning the Power Meter On

1. Insert the battery or connect the power supply unit.
2. Press and hold ⏻ on the tester.



See page 24 for screen details

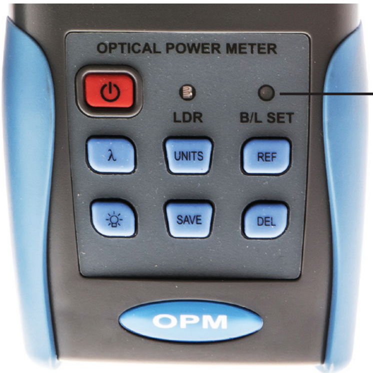
Auto Shutdown Function

Press the ⏻ key to enable or disable the auto shutdown function. When selected, “Auto-Off” will appear at the bottom of the screen. The light source will shut down automatically after 10 minutes idle.

Turning the Power Meter Off

Hold down ⏻ to turn off the power meter.

Backlight Control



B/L SET
1. Green when LDR activates
2. Red when key control mode activates

LDR: Intelligent Backlight Control Mode

In LDR, the power meter will automatically adjust the backlight to ambient light within 15 seconds.

Key Control Mode

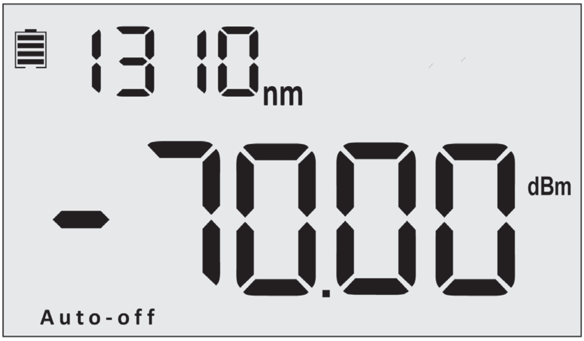
In key control mode, pressing the ☼ key turns the backlight on or off.

1. With power meter turned on, press and hold the ☼ key.
2. The BL/SET light will turn red. (Fig X)
3. After 10 seconds, the indicator light will turn off. Key control mode is active.

Changing Backlight Mode

Press and hold the ☼ key to switch from one backlight mode to the other. Green B/L Set light indicates the LDR is active.

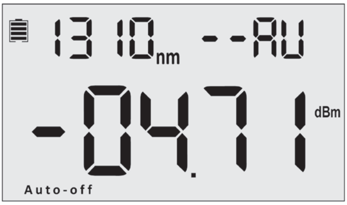
Wavelength



Calibrating Wavelength

1. Press λ to select wavelength (displayed on top left of the screen). 1310nm is the default value.
2. For testing, the wavelength value must be the same as the value on the matched light source.
3. Multimode testing: 850nm or 1300nm
4. Single mode testing: 1310nm or 1550nm

Automatic Wavelength Detection



1. Press and hold λ until --AU appears in the upper right corner (pictured above). B/L set light will also illuminate. This indicates that Wavelength Auto Identification mode is active. Wavelength will be detected based on the settings of the matched light source.
2. To exit Wavelength Auto ID mode, press and hold λ until --AU disappears. B/L set light will stay illuminated until ☼ is pressed.
3. For information on configuring these settings with light source, see next page.

Automatic Wavelength Identification Configuration

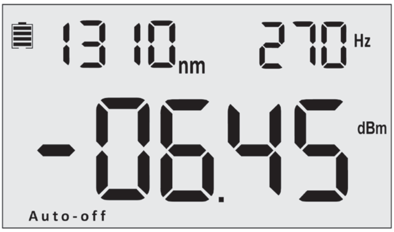
1. Connect the power meter to its match light source, using the correct patch cable. On the light source, press λ to activate laser.
2. On the light source, press and hold CW until --AU appears on the upper right corner of the screen. This indicates that Wave ID mode is active.
3. On the power meter, press and hold λ until --AU appears on the upper right corner of the screen. Wave ID mode is now active.
4. Press λ to change wavelength on light source as desired. After 3-5 seconds, the power meter will update to match the wavelength
5. To exit Wave ID, press and hold λ on the power meter. On the light source, press and hold CW to return to continuous wave (0Hz).

Note

1. ***To avoid the risk of serious eye damage, do not look into the laser on the light source at any time.***
2. ***Wave ID Mode and Auto Frequency Detection cannot operate at the same time.***

Automatic Frequency Detection

Automatic Frequency Detection will operate by default when Automatic Wavelength Identification mode is not in use.

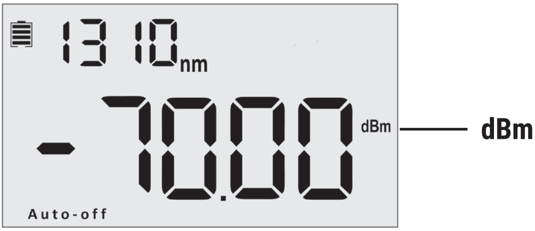


Light Source Screen

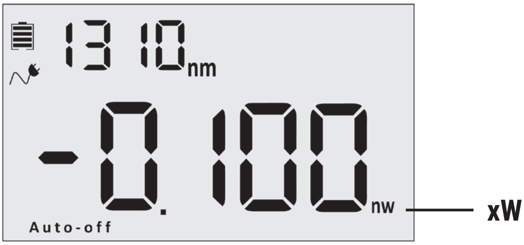
1. Connect the power meter to its matched light source.
2. On the light source, press λ to activate laser.
3. Press CW on the light source to select modulation frequency (270Hz, 330Hz, 1KHz, or 2KHz). This will display on the upper right of the screen.
4. Selecting a specific wavelength can improve test result accuracy.
5. The optical power meter will detect the frequency automatically.

Choosing Units

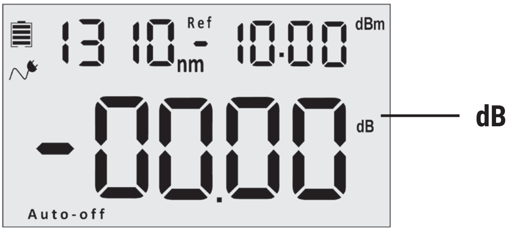
Press UNITS to select absolute power measurement (dBM), relative measurement used for loss (dB), and milliwatts/microwatts/nanowatts (xW).


1310 nm
-70.00 dBm
dBm
Auto-off

Absolute power is measured in dBm, or decibel-milliwatts. This is a ratio of decibels of power as referenced to 1 milliwatt. 0 dBm = 1 milliwatt, -10 dBm = 0.1 milliwatt, and 10 dBm = 10 milliwatts.

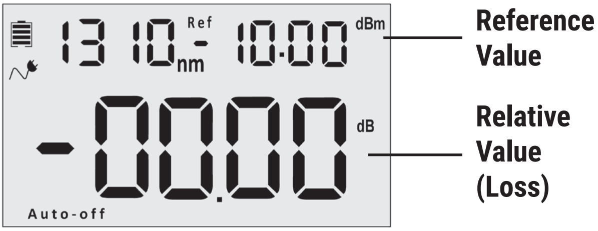

1310 nm
-0.100 nw
xW
Auto-off

The power meter can also express power in milliwatts, microwatts, or nanowatts. It is more common to utilize dBm as dBm provide a more efficient way of expressing wide ranges of power values.
0.001mW =1 uW = 1000nW


1310 nm
Ref
-10.00 dBm
-00.00 dB
dB
Auto-off

Optical loss is measured in decibels (dB) and will appear as a negative value (i.e. -2.1 dB). dB expresses the ratio of measured power to reference power.
dB =10log(measured power/reference)

Setting Reference Value

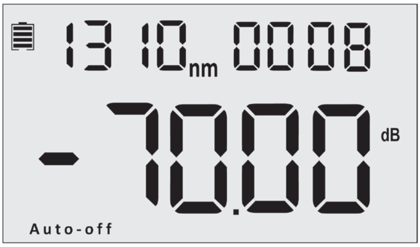

1310 nm
Ref
-10.00 dBm
-00.00 dB
Auto-off
Reference Value
Relative Value (Loss)

Press REF to store the current power value (dBm) as the reference value, displayed at the top right of the screen along with “Ref” at the center of the screen.

The set reference value will be compared to current value and used to calculate dB (relative value).

Managing Data Records

This power meter can store up to 1000 data records.

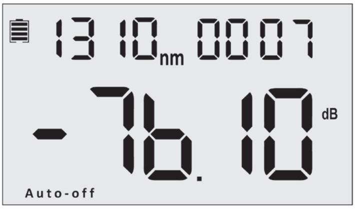

1310 nm
0008
-70.00
dB
Auto-off

Saving Records

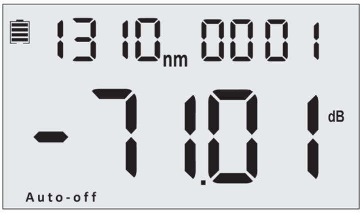
Press SAVE to record testing data. The record number will display at the top right of the screen.

To confirm and save the data, press SAVE twice. To cancel, press DEL

Keeping a written log of the record number is also recommended for reference.


1310 nm
0007
-76.10
dB
Auto-off

Newest


1310 nm
0001
-71.01
dB
Auto-off

Oldest

Viewing and Deleting Records

To view previous records, press and hold SAVE. The most recently saved data will be displayed. Press SAVE again to scroll through the previous data records (newest to oldest)

To delete a record, press DEL

Press and hold SAVE to exit.

Downloading and Installing Software

To download and install the SSF-TKITP-400 Software, please visit

https://cleerlinefiber.com/document/software/

Select SSF-TKITP-400 Testing Kit Software.

Please follow the instructions on the web page for installation.

Software Set-Up

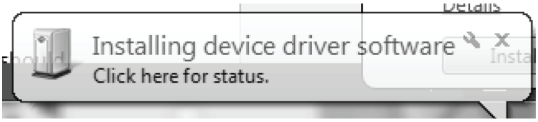
Note

Prior to attempting to connect the power meter to your computer, visit https://cleerlinefiber.com/document/software/ to download and install the TKITP-400 software.

Compatibility: Windows 7, 10

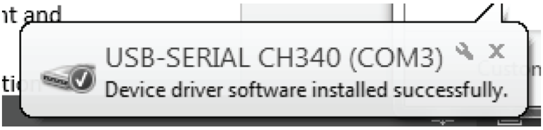
Connecting the Power Meter

1. With the Power Meter turned off, connect the USB cable to Power Meter and computer USB port.
2. Turn on Power Meter



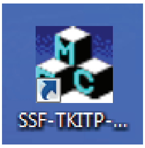
Installing device driver software
Click here for status.

3. “Installing device driver software” dialog will appear automatically.

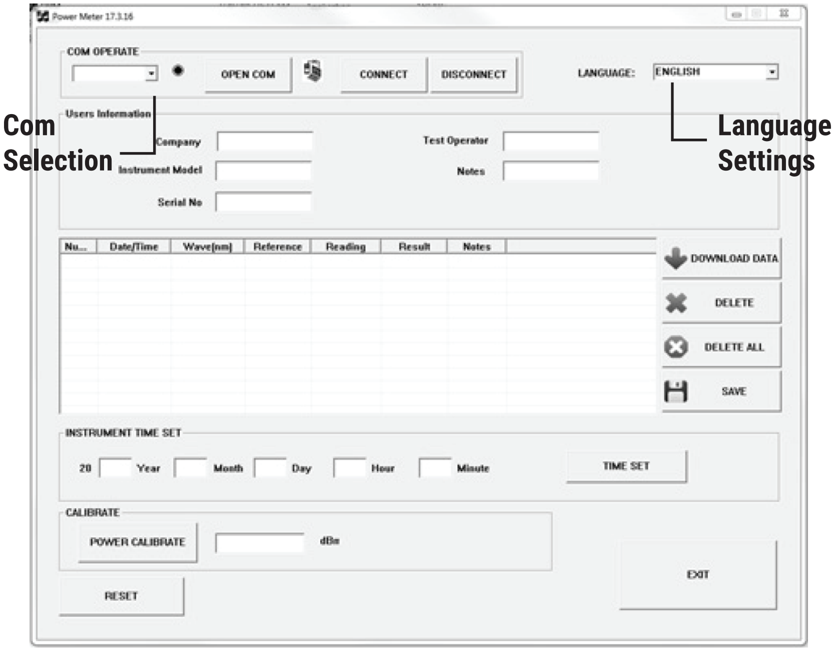


USB-SERIAL CH340 (COM3)
Device driver software installed successfully.

4. USB-SERIAL CH340 (Com3) will install after approximately 2-3 minutes.



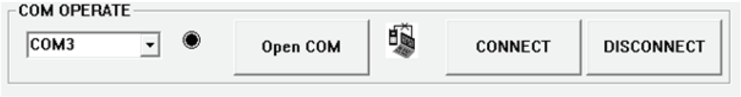
5. Once Power Meter has installed, select SSF-TKITP-400 desktop icon to open.


Power Meter 17.3.16
COM OPERATE
OPEN COM
CONNECT
DISCONNECT
LANGUAGE:
ENGLISH
Com Selection
Language Settings
Users Information
Company
Instrument Model
Serial No
Test Operator
Notes
Nu...
Date/Time
Wave(nm)
Reference
Reading
Result
Notes
DOWNLOAD DATA
DELETE
DELETE ALL
SAVE
INSTRUMENT TIME SET
20
Year
Month
Day
Hour
Minute
TIME SET
CALIBRATE
POWER CALIBRATE
dBm
RESET
EXIT

LANGUAGE: ENGLISH

Software Interface

6. Software panel will open.
   If text appears as non-English characters, select the dropdown menu on the upper far right and change the language to English.


COM OPERATE
Open COM
CONNECT
DISCONNECT

COM3

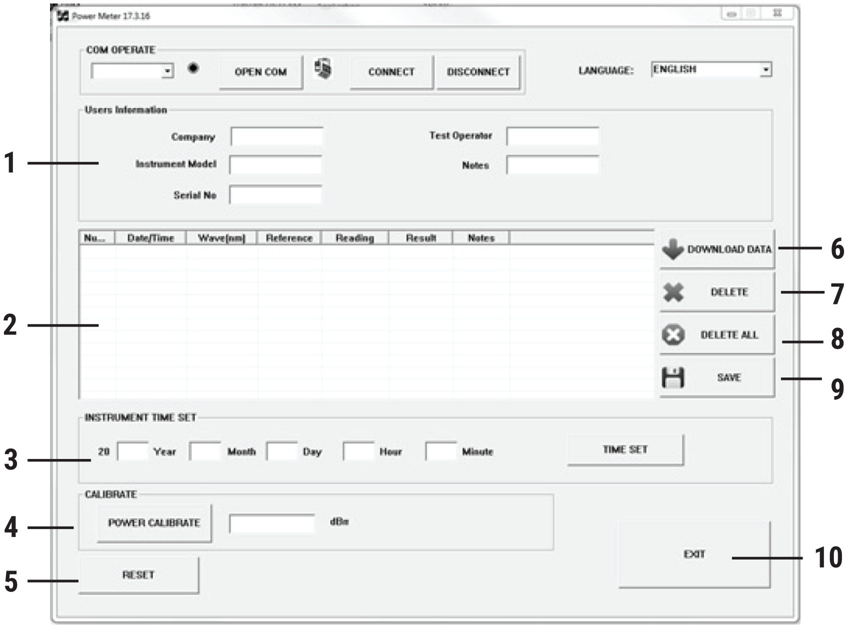
7. Under the Com Operate menu, select the Com (generally Com3). If an option does not appear, it indicates that the Power Meter driver has not installed correctly.

Troubleshooting

- To troubleshoot, first turn off the Power Meter and disconnect from the computer. Reattached USB cable and turn Power Meter back on. "Add new hardware" dialog should appear
- If this is unsuccessful, restart computer and attempt the step above
- Should this not allow connection, attempt reinstalling the software

8. Once Com has been selected, click "Open Com" button followed by "Connect." "Connect Success" message indicates success.

Using Test Kit Software


Power Meter 17.3.16
COM OPERATE
OPEN COM
CONNECT
DISCONNECT
LANGUAGE:
ENGLISH
Users Information
Company
Test Operator
Instrument Model
Notes
Serial No
Nu...
Date/Time
Wave[nm]
Reference
Reading
Result
Notes
DOWNLOAD DATA
DELETE
DELETE ALL
SAVE
INSTRUMENT TIME SET
20
Year
Month
Day
Hour
Minute
TIME SET
CALIBRATE
POWER CALIBRATE
dBm
RESET
EXIT
1
2
3
4
5
6
7
8
9
10

1	**Users Information fields**: These fields allow report data to be customized with operator information
2	**Data field**: Data downloaded from the Power Meter will appear in this field
3	**Instrument Time Set**: To set the time shown with the data records, fill out Year, Month, Day, Hour, and Minute. Click “Time Set” to save.
4	**Power Calibrate**: Set the dBm on the device from within the software. Enter the dBm and choose ‘Power Calibrate’.
5	**Reset**: Resets device
6	**Download Data**: Download test records from the Power Meter
7	**Delete**: To delete a record, click into the row with the desired data to select and click the delete button
8	**Delete All**: Deletes all records
9	**Save**: Automatically exports data to a .CSV file
10	**Exit**: Exits interface

Maintenance and Troubleshooting

1. Always keep the connector ports of the power meter clean.
2. Use the regulated optical connector for testing.
3. Use the adapters supplied with the kit only
4. Connect/disconnect fiber connectors/adapters carefully to avoid scratches on the port of the power meter.
5. Clean the optical port of power meter regularly. Clean using cotton swabs supplied and isopropyl alcohol as directed.
6. When using AC adapter, ensure power supply is within the required voltage range.
7. Remove the batteries when light source not in use for extended periods of time.

Troubleshooting

Issue	Possible Reason	Solution
Faint screen display	Low battery power	Charge or replace the battery.
Inaccurate Measurements	(A) Optical Connector is not clean (B) Incorrect fiber connection	(A) Clean optical connectors (B) Reconnect the fiber

Warning

1. Ensure the connector is clean before testing.
2. Only use the supplied adapter.
3. Do not look into the laser when unit is on.
4. Charge the batteries before use. Do not charge in unit.
5. Cover optical port with dust-proof cap when not in operation.
6. Clean the optical port of the power meter regularly.

Warranty

Caution: Do not attempt to repair as doing so will void warranty.
This Optical Power Meter is covered by an 18 month warranty.

1. We warrant that this power meter will be free from defects in material and workmanship for 18 months. Should the device fail at any time during this warranty period, we will, at our sole discretion, replace and repair or refund the purchase price of the product. The worth of the repair or replacement will not be higher than purchasing price of this unit.
2. If device issues cannot be solved by the troubleshooting methods, please contact us or the local distributor directly.
3. We will repair or replace the unit free of charge in case of defects in production, workmanship or material. This warranty only applies to the unit under normal operation without any damage or misuse/abuse.
4. The shipping costs incurred by repair or replacement for the unit under warranty will be shared by both parties.