

Light Source Hub

2012 Ver C

Table of Contents

1. Description and Features.....	3
2. Specification.....	4
3. Element & Operating Instructions.....	6
4. Maintenance	7
5. Warranty.....	8
6. Ordering Information	8
7. Service Contacts.....	10

1.1 Description

Light Source Hub is a handy tool and instrument to provide you several different wavelengths in the same time to test the fiber equipment in the optical network and FTTx construction. Light Source Hub is ideal for field or laboratory testing of optical communication system at 1310 nm / 1550 nm / CWDM 1270 nm ~ 1610 nm (20 nm spans) for all CWDM testing , as well as 1490 nm for FTTx testing by changing interchangeable SFP module. Light Source Hub features zero warm up, superb productivity and is easy to use with box size and rugged design.



Internally there is also a specifically designed power circuit included; the APC (Auto Power Control) circuit provides steady power which avoids unstable laser output power. By selecting Power Control Switch you can easily change the Optical Output Power into -3 dBm / 0 dBm / +3 dBm.

And LD output power could be obtained three levels by adjusting power switch. The LD output signal can be switched CW or Pulse Mode 270 Hz / 2 KHz Modulated Mode to simulate signal transmission.

1.2 Features

- Box-size design and needless to pre-warm-up time.
- SFP Plug-In Module design with LC or SC connector and it is very easy and flexible to change any wavelength for applications.
- High stability optical output power and three Levels -3 dBm, 0 dBm, + 3 dBm LD Output Power.
- Reliable optical output power and stable wavelength.
- Operates in CW (Continuous Wave) or Pulse Mode 270 Hz / 2 KHz
- LED indicator for Power on indicators.

1.3 Application

- Maintenance CATV / Telecom / FTTH in Singlemode or Multimode fiber optical fiber network.
- Standard laboratories.
- High throughput quality assurance.

2. Specification

Laser Class	Class 1
Wavelength (nm)	1310, 1550 , 1625 , 1650 1270, 1290, 1310, 1330, 1350, 1370, 1390, 1410, 1430, 1450, 1470, 1490, 1510, 1530, 1550, 1570, 1590, 1610 (18-ch CWDM)
Mode	CW / Pulse Mode 270 Hz / 2 KHz
Power Supply	110V AC to 5V DC Adapter
Output Power Accuracy	+/- 0.2 dB
Output Power Stability (1 HR)	+/- 0.05 dB
Operating Temp.	0°C ~ 50°C
Storage Temp.	0°C ~ 70°C

S200503X1310	Min.	Typ.	Max.	Unit	Note
FP LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ c	1290	1310	1330	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δ λ			4	nm	@ 25°C 9 / 125 μm fiber

S200503X1550	Min.	Typ.	Max.	Unit	Note
FP LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ c	1520	1550	1570	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δ λ			4	nm	@ 25°C 9 / 125 μm fiber

S200504X1310	Min.	Typ.	Max.	Unit	Note
DFB LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ _c	1290	1310	1330	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δλ			1	nm	@ 25°C 9 / 125 μm fiber

S200504X1550	Min.	Typ.	Max.	Unit	Note
DFB LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ _c	1530	1550	1570	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δλ			1	nm	@ 25°C 9 / 125 μm fiber

S200504X1625	Min.	Typ.	Max.	Unit	Note
DFB LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ _c	1620	1625	1630	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δλ			1	nm	@ 25°C 9 / 125 μm fiber

S200504X1650	Min.	Typ.	Max.	Unit	Note
DFB LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ _c	1645	1650	1655	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δλ			1	nm	@ 25°C 9 / 125 μm fiber

S200505Xxxxx	Min.	Typ.	Max.	Unit	Note
CWDM LD Output Power	-3	0	+3	dBm	@ 25°C 9 / 125 μm fiber
Center Wavelength λ _c	λ _c *- 3	λ _c *	λ _c *+3	nm	@ 25°C 9 / 125 μm fiber
Spectral Width Δλ			1	nm	@ 25°C 9 / 125 μm fiber

X=1 , LC Connector

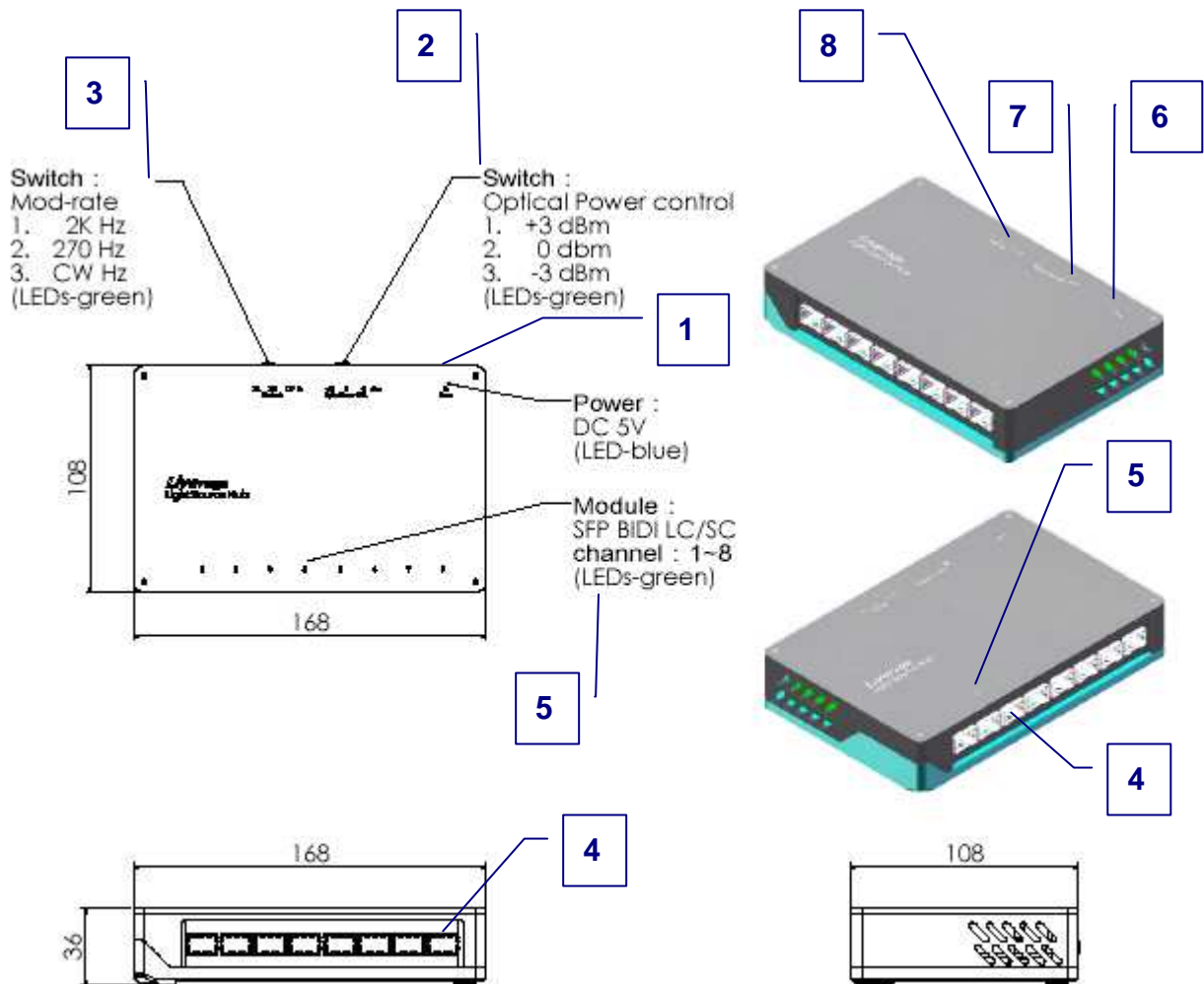
X=2 , SC Connector

*CWDM LD λ_c :

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

3. Elements & Operating Instructions



■ **Elements:**

1. **DC Power Connector** : provide DC 5V Power Supply.
2. **Optical Output Control Switch** : changing the Optical Output Power into three levels , that is + 3 dBm / 0 dBm / -3 dBm*
3. **Mode Switch** : changing the mode into three Optical Output Mode , that is 2 KHz (Pulse Mode) / 270 Hz (Pulse Mode) / CW (Continuous Wave Mode)
4. **SFP Plug-In Cage**: hot pluggable to plug into any wavelength SFP Plug-In Light Source Module.
5. **SFP Plug-In LED Indicator**: In Operation indicator is shown GREEN.
6. **DC Power Supply LED Indicator**: In Operation indicator is shown BLUE.

7. **Optical Output Control LED Indicator:** In Operation indicator is shown GREEN.
8. **Mode LED Indicator:** In Operation indicator is shown GREEN.

■ **Operating Instructions:**

1. The Light Source Hub is powered by DC 5 V.
2. To initiate Light Source Hub to plug-in the DC 5.0V Power supply and check if the LED indicator is BLUE.
3. Power Control switch : to select the Output Power into -3 dBm / 0 dBm / +3 dBm. The LED indicator is GREEN.
4. Modulation Switch: to select to CW Mode or Pulse Mode 270 Hz / 2 KHz. The LED indicator is GREEN.
5. To plug the SFP Light Source Module and the LED Indicator now is GREEN while the Light Source is in operation.
6. Do not touch the Light Source Hub connector to avoid dirt into the connector.
7. With proper cleaning tools to clean the Light Source Hub SFP connector before testing so that to obtain best results and keep the Light Source service longer life.

4. Maintenance

Like any other electronic equipment, this Light Source Hub should be kept away from water, high damp, dust, electricity, and environments of extreme temperature. Do not drop this tool on hard surface. Modifying internally any of this Light Source Hub components can cause a malfunction and will invalid the manufacturer's warranty.

5. Warranty

The manufacturer warrants this product to be free of defects in workmanship and materials for a period of 1 year after purchase. This warranty (excluding batteries) is solely limited to the repair and replacement of original parts, which are defective in workmanship of materials. All other costs should be the sole responsibility of the owner. This warranty does not cover any defects, damage, and deterioration due to misuse, alteration, or negligence.

6. Ordering Information:

Part Number	Source	Wavelength	Remark
S20053009999	NONE	NONE	Light Source Hub Main Frame
S20050311310	FP LD	1310 nm	SFP LC Receptacle
S20050321310	FP LD	1310 nm	SFP SC Receptacle
S20050311550	FP LD	1550 nm	SFP LC Receptacle
S20050321550	FP LD	1550 nm	SFP SC Receptacle
S20050411310	DFB LD	1310 nm	SFP LC Receptacle
S20050421310	DFB LD	1310 nm	SFP SC Receptacle
S20050411550	DFB LD	1550 nm	SFP LC Receptacle
S20050421550	DFB LD	1550 nm	SFP SC Receptacle
S20050411625	DFB LD	1625 nm	SFP LC Receptacle
S20050421625	DFB LD	1625 nm	SFP SC Receptacle
S20050411650	DFB LD	1650 nm	SFP LC Receptacle
S20050421650	DFB LD	1650 nm	SFP SC Receptacle
S20050511270	CWDM LD	1270 nm	SFP LC Receptacle
S20050521270	CWDM LD	1270 nm	SFP SC Receptacle
S20050511290	CWDM LD	1290 nm	SFP LC Receptacle
S20050521290	CWDM LD	1290 nm	SFP SC Receptacle
S20050511310	CWDM LD	1310 nm	SFP LC Receptacle
S20050521310	CWDM LD	1310 nm	SFP SC Receptacle
S20050511330	CWDM LD	1330 nm	SFP LC Receptacle
S20050521330	CWDM LD	1330 nm	SFP SC Receptacle
S20050511350	CWDM LD	1350 nm	SFP LC Receptacle
S20050521350	CWDM LD	1350 nm	SFP SC Receptacle
S20050511370	CWDM LD	1370 nm	SFP LC Receptacle

Part Number	Source	Wavelength	Remark
S2005052 <u>1370</u>	CWDM LD	1370 nm	SFP SC Receptacle
S2005051 <u>1390</u>	CWDM LD	1390 nm	SFP LC Receptacle
S2005052 <u>1390</u>	CWDM LD	1390 nm	SFP SC Receptacle
S2005051 <u>1410</u>	CWDM LD	1410 nm	SFP LC Receptacle
S2005052 <u>1410</u>	CWDM LD	1410 nm	SFP SC Receptacle
S2005051 <u>1430</u>	CWDM LD	1430 nm	SFP LC Receptacle
S2005052 <u>1430</u>	CWDM LD	1430 nm	SFP SC Receptacle
S2005051 <u>1450</u>	CWDM LD	1450 nm	SFP LC Receptacle
S2005052 <u>1450</u>	CWDM LD	1450 nm	SFP SC Receptacle
S2005051 <u>1470</u>	CWDM LD	1470 nm	SFP LC Receptacle
S2005052 <u>1470</u>	CWDM LD	1470 nm	SFP SC Receptacle
S2005051 <u>1490</u>	CWDM LD	1490 nm	SFP LC Receptacle
S2005052 <u>1490</u>	CWDM LD	1490 nm	SFP SC Receptacle
S2005051 <u>1510</u>	CWDM LD	1510 nm	SFP LC Receptacle
S2005052 <u>1510</u>	CWDM LD	1510 nm	SFP SC Receptacle
S2005051 <u>1530</u>	CWDM LD	1530 nm	SFP LC Receptacle
S2005052 <u>1530</u>	CWDM LD	1530 nm	SFP SC Receptacle
S2005051 <u>1550</u>	CWDM LD	1550 nm	SFP LC Receptacle
S2005052 <u>1550</u>	CWDM LD	1550 nm	SFP SC Receptacle
S2005051 <u>1570</u>	CWDM LD	1570 nm	SFP LC Receptacle
S2005052 <u>1570</u>	CWDM LD	1570 nm	SFP SC Receptacle
S2005051 <u>1590</u>	CWDM LD	1590 nm	SFP LC Receptacle
S2005052 <u>1590</u>	CWDM LD	1590 nm	SFP SC Receptacle
S2005051 <u>1610</u>	CWDM LD	1610 nm	SFP LC Receptacle
S2005052 <u>1610</u>	CWDM LD	1610 nm	SFP SC Receptacle

7. Service Contacts

Please contact us :

**Liverage Technology Inc.
3F-5, No. 30 Taiyuan Street,
Chupei City, Hsinchu County 302,
Taiwan**

TEL: +886-3-5525268

FAX: +886-3-5525388

e-mail: sales@liverage.com.tw

<http://www.liverage.com.tw>