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Swept Light Source Desktop

Part Number: IPSWM15xx-0316

Date: October 11, 2013

1. Configuration

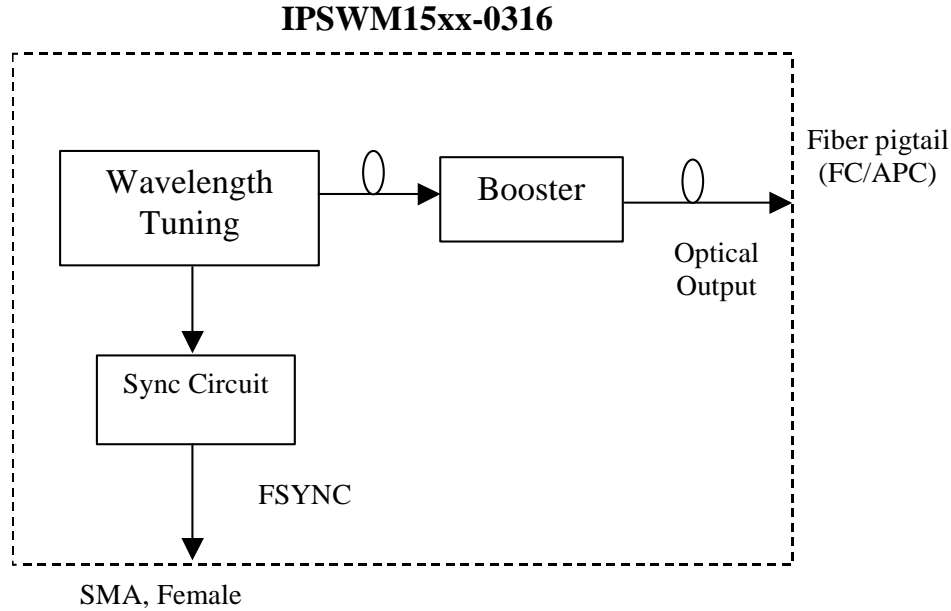


Figure 1 Configuration of Swept Light Source Desktop

2. General Conditions

Parameter	Min.	Typ.	Max.	Unit
Power Supply Voltage	100	-	240	VAC
Power Consumption	-	-	30	W
Operating Temperature	10	25	35	°C
Operating Humidity	30	60	75	%
Storage Temperature	-40	-	+70	°C
Humidity	10	-	100	%

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3. Optical and Electrical Characteristics

Items	Specifications			Unit	Notes
	Min.	Typ.	Max.		
Optical Characteristics					
Center Wavelength (nm)	1540	1550	1560	nm	@25°C. Connectors are included.
Wavelength Scanning Width (-10dB cut off)	100	-	-	nm	
Average Optical Output Power	10 ~ 30			mW	
Scan rate	8 ~ 50			KHz	One sweep period includes forward and backward wavelength scans as shown Figure 4
Wavelength Repetition Rate	16 ~ 100			KHz	
Coherence Length*	5 ~ 20			mm	
Optical Output type	FC Adaptor			-	
Connector Type	FC/APC			-	
Fiber Type	SM-28 or equivalent			-	
Electrical Characteristics					
Scan Trigger (FSYNC)	8 ~ 50			KHz	
VH for TTL input/output	3.80	-	-	V	
VL for TTL input/output	-	-	1.02	V	
Trigger Connector Type	SMA connector, Female			-	

* Coherence length is defined as the path length mismatch at a single sided displacement (from match to mismatch point only) in Mach-Zehnder interferometer that results in the fringe visibility being reduced by 6dB.

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4. Typical Spectra

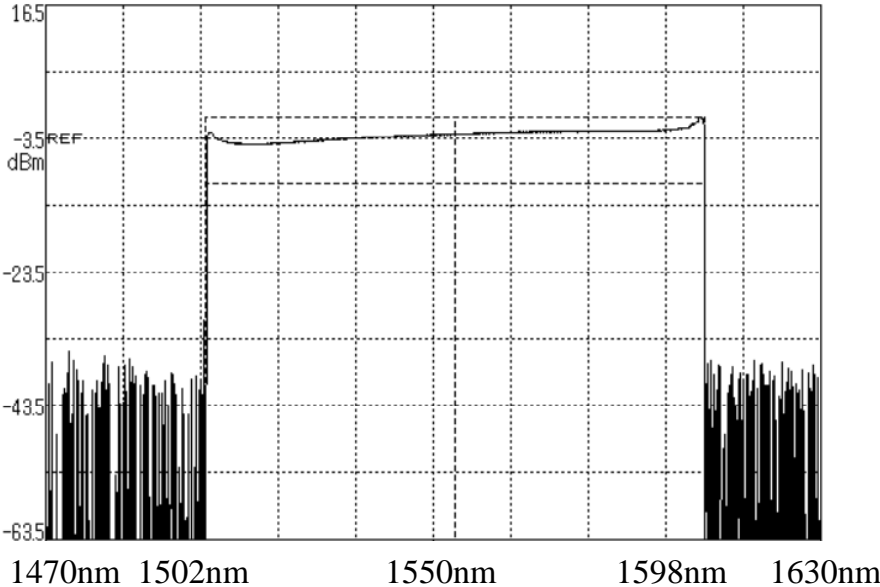


Figure 2 Typical optical spectrum of 1550nm SWLS desktop

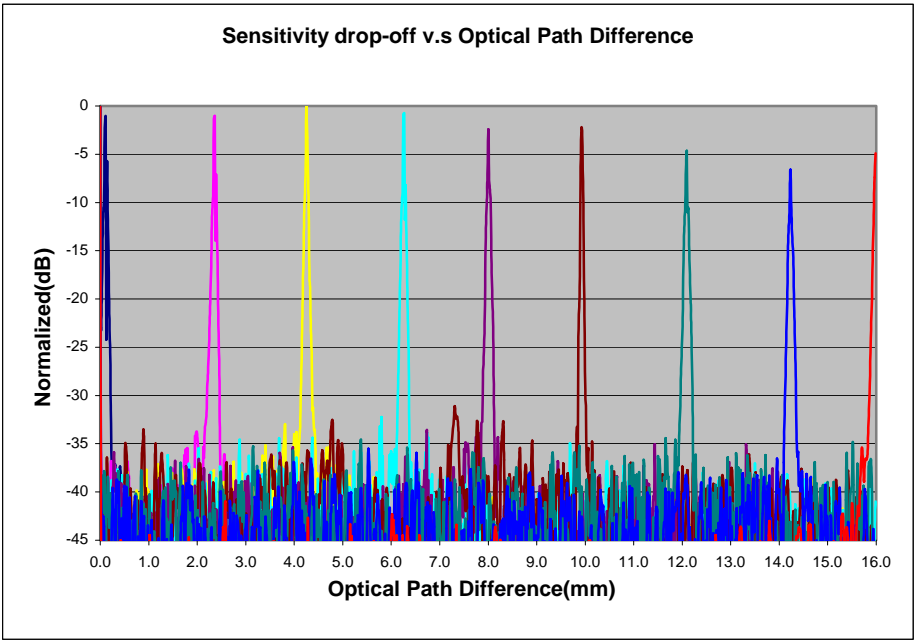


Figure 3 Optical path difference dependent loss in signal sensitivity tested in Mach-Zehnder interferometer. Coherence length is defined as the path length mismatch at a single sided displacement (from match to mismatch point only) in Mach-Zehnder interferometer that results in the fringe visibility being reduced by 6dB.

Scan Period

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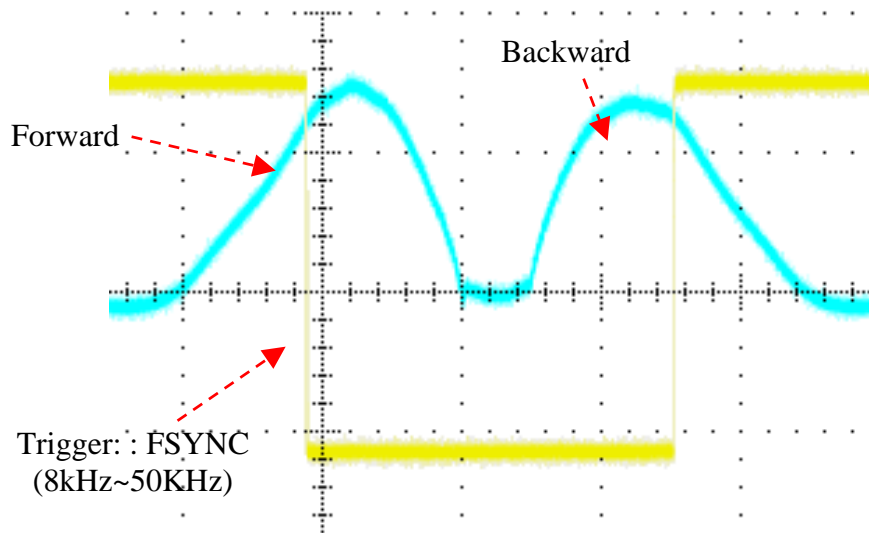
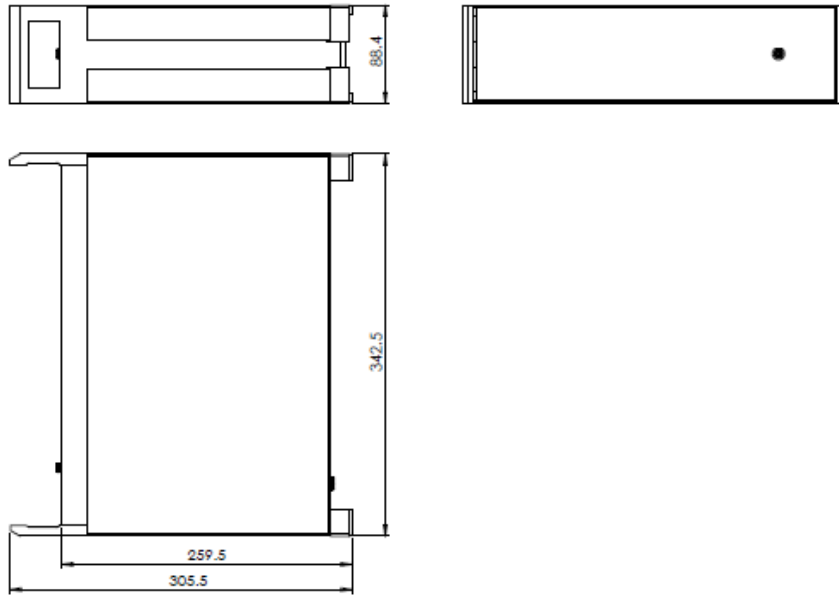


Figure 4 Forward and backward spectra detected by photo diode in one swept period. Rise-Fall edges of frame trigger signal (FSYNC) have fixed phase delay with respect to forward and backward waves.

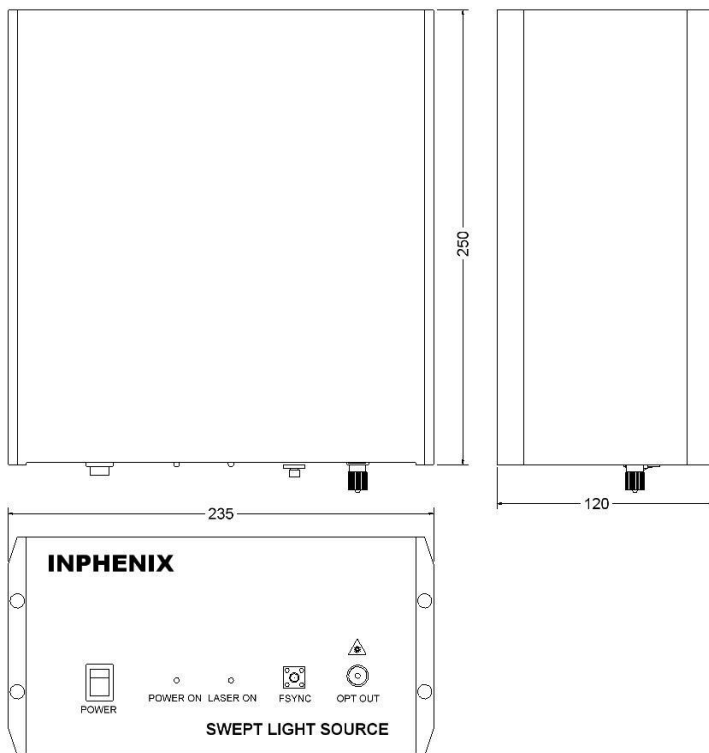
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5. Mechanical Specifications

Mechanical Drawing of 340mm (W) x 260mm (D) x 90mm (H) Case Type

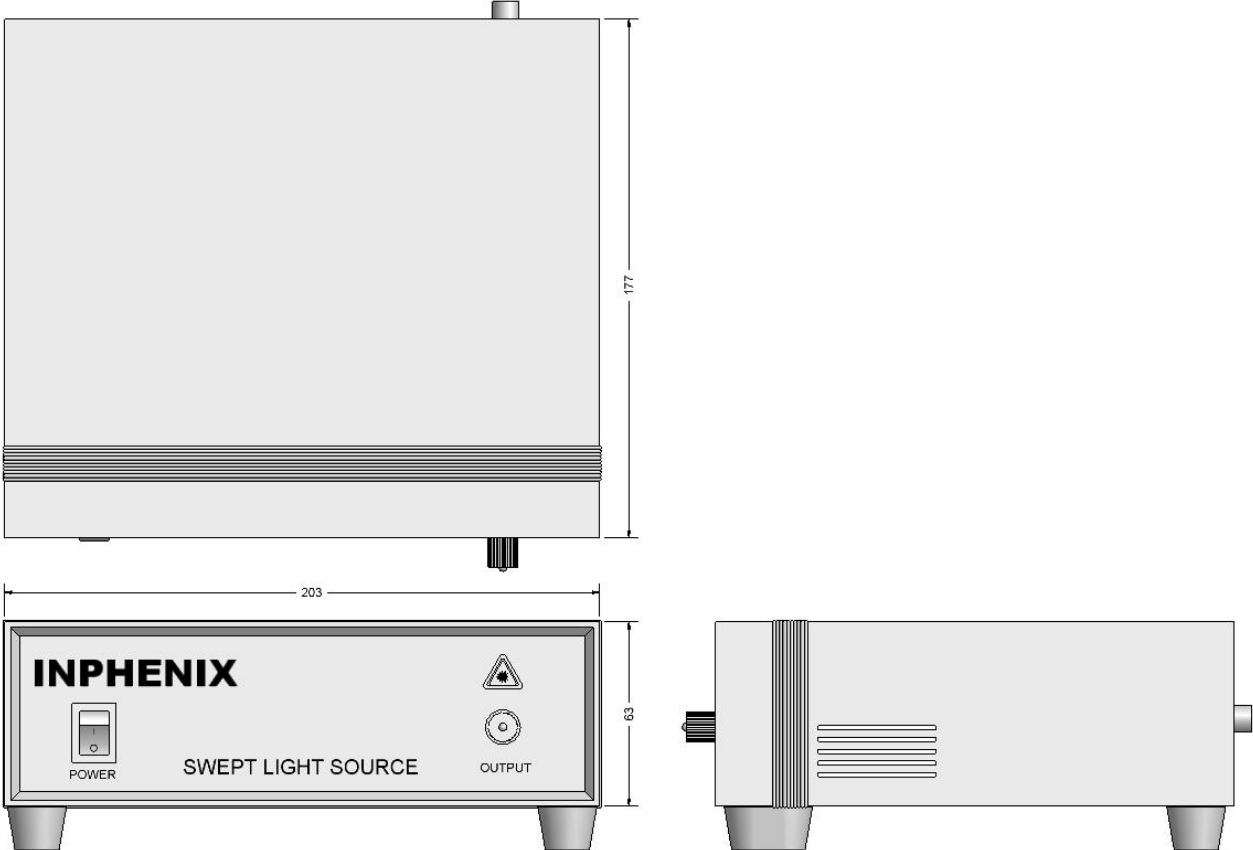


Mechanical Drawing of 235mm (W) x 250mm (D) x 120mm (H) Case Type



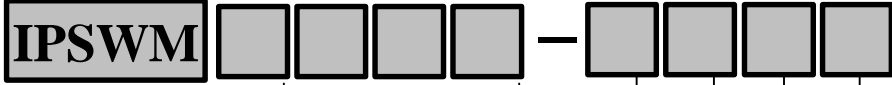
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Mechanical Drawing of 205mm(W)×60mm(H)×175mm(D) Case Type



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6. Part Numbering Structure of Swept Light Source desktop



Model Number —————

08**: 800~890nm window
 10**: 1010~1090nm window
 13**: 1300~1390nm window
 15**: 1500~1590nm window

Output Type —————

0-FC Adaptor
 1-Pigtail fiber

Connector Type —————

0-No Connectors
 3-FC/APC 4-FC/UPC
 7-SC/APC 8-SC/UPC

Fiber Type —————

1-900 μm SM Fiber
 2-900 μm PM Fiber

Case Size —————

6- 235×250×120mm case
 7- 205×175×60mm case
 8- 340×260×90mm case
 9- 450×300×90mm case

Example: IPSWM15xx-0316: 1550nm-type Swept Light Source desktop in 235×250×120mm case with FC adaptor output, 900um SM fiber with FC/APC connector.