

## BW10-907A-SR-KC



### Description:

Bandwidth10's, BW10-907A swept source is based on a family of wavelength tunable vertical cavity surface-emitting lasers (VCSEL) with innovative High Contrast Grating (HCG). The swept source consists of a single mode tunable 1060 nm VCSEL and an optical semiconductor amplifier (SOA), driving electronics for A-Scan trigger and a K-Clock module.

### Applications:

- Optical Coherence Tomography (OCT)
- Medical Imaging
- Biometry
- Optical Sensing



### Features:

- 150 mm \* 106 mm \* 54 mm case
- Center wavelength between 1025 nm and 1070 nm
- Wavelength sweep range: 30 nm or 50 nm.
- High optical output power of 18 mW
- Integrated K-Clock
- FC/APC fiber connector with HI1060 fiber
- Linearized wavelength sweep at 10 kHz, 20 kHz or 30 kHz  
– or –
- Non-linear sweep rate at 10 KHz, 30 KHz, 50 KHz, 100KHz or 200KHz. Please specify sweep rate in purchase order. Other rates on request.
- Laser class 3B

## Absolute Maximum Ratings

Parameter	Symbol	Min	Unit
Storage Temperature	Tstg	-20 to +70	°C
Operating Case Temperature	Tc	10 to +45	°C

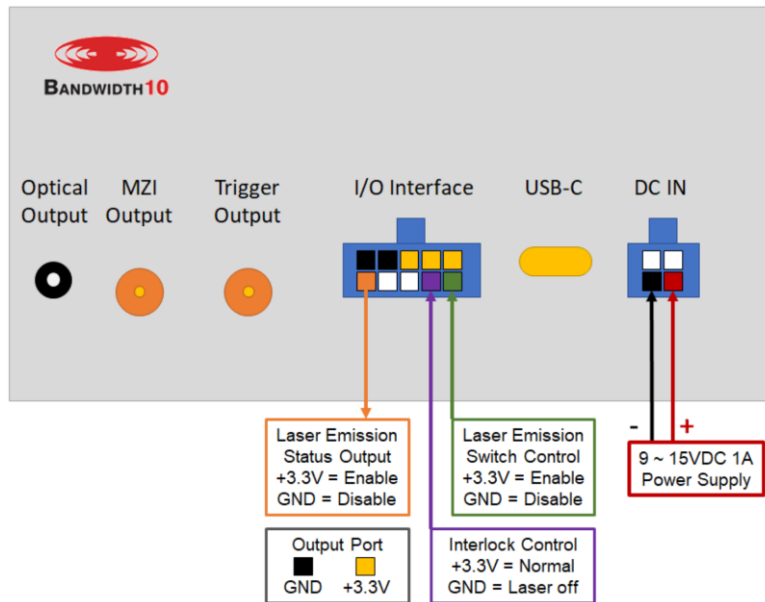
## Optical specification

Parameter	Values			Unit
	Min	Typical	Max	
Center wavelength	1025		1070	nm
Wavelength tuning range * determined by RC value in model number	30			nm
	50			nm
Output power over tuning range	18	20		mW
Linear Uni-directional sweep rate * Please specify in purchase order		10		kHz
		20		kHz
		30		kHz
Non-Linear Uni-directional sweep rate * Please specify in purchase order		10		kHz
		30		kHz
		50		kHz
		100		kHz
		200		kHz
MZI free spectral range of K-Clock * determined by KC value		10		GHz
		30		GHz
		50		GHz
Duty Cycle	50%	60%	65	
Spectral Flatness (min/max power)		10%		

**Electrical Specification**

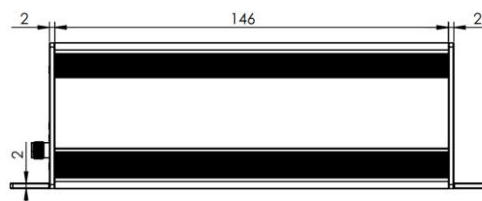
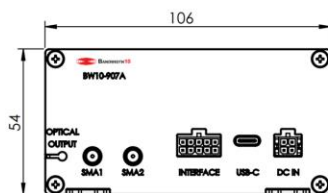
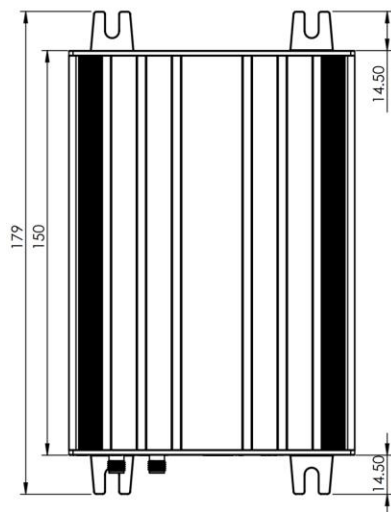
Parameter	Symbol	Resolution	Values			Unit
			Min	Typical	Max	
Power supply			9	12	15	V <sub>DC</sub>
Power supply			1.0			A
K-Clock output Voltage			0.6		3.3	V
A-Scan trigger Voltage @50Ω			1.0	1.5	2.0	V

**Electrical interface**



- MZI and trigger output: 50Ohms SMA female connector.
- I/O interface connector: RECEPTACLE for Molex 43025-10xx, MICRO-FIT (3.0), DUAL ROW 10 CIRCUIT
- DC in connector: RECEPTACLE for Molex 43025-04xx, MICRO-FIT (3.0), DUAL ROW 4 CIRCUIT

**Mechanical dimensions**



**Order and Contact Information**

Model Number			
BW10 - 907A - SR - KC			
Parameter	Description	Value	Explanation
SR	Sweep range	30	30 nm wavelength sweep range
		50	50 nm wavelength sweep range
KC	K-Clock option	00	No integrated K-clock
		10	K-Clock MZI with 10GHz FSR
		30	K-Clock MZI with 30GHz FSR
		50	K-Clock MZI with 50GHz FSR

**Order and Contact Information**

Model Number	Contact Information
BW10-907A-SR-KC  Please specify the sweep rate in the purchase order	Bandwidth 10 Ltd. 2080 Addison Street, Suite 2 Berkeley, CA 94704, USA <a href="mailto:info@bandwidth10.com">info@bandwidth10.com</a>

<b>Implementation</b> 執行	<i>Filled by Author</i> 由作者填寫
<input type="checkbox"/> ECN required 必需的 <input type="checkbox"/> Web Publication 網絡出版 <input type="checkbox"/> Inform Customer 客戶信息 <input checked="" type="checkbox"/> Preliminary DS 初步的 Comments:	

<b>Approval</b> 贊同		
<i>Distributed by Applicant. Author/Approvers, modify list as applicable.</i> 由申請人分發。作者/批准人，根據需要修改列表。		
<i>Approvers, if you are not right person to approve, please respond with comment.</i> 審批人，如果你不是合適的審批人，請回覆評論。		
Approvers 審批人	Date 日期 [m/d/yyyy]	Decision 決定
Product Line Manager Mike Huang		<input type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見:
Application Engineering Selina Liu		<input type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見:
Sales Stefano Prandoni		<input checked="" type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見: minor changes to text pg 1 and header pg 2
Product Engineering Chris Chase		<input type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見:
Product Engineering TW Dennis Hsieh		<input type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見:
Quality Thomas Käßemodel		<input type="checkbox"/> Approval 核准 <input type="checkbox"/> Disapproval 不核准 <input type="checkbox"/> N/A 不適用* <input type="checkbox"/> Comment 意見:

Legend: \* Not Applicable (no approval from pre-listed Approver required).

Revision No. 修訂號	Purpose of and Changes 目的和變化	Author of Change 變更作者	Date of Change 變更日期
1.0	Initial draft based on BW10-907A-30-30-S08	Murat Serbay	2/08/2023
1.1	Updated draft with new drawing and linear / non-linear sweep options	Murat Serbay	04/03/2023

Notifications 贊同	<i>Distributed by Applicant. Author/Approvers, edit Notifications list as applicable.</i> 由申請人分發。作者/批准者，根據需要編輯通知列表。		
Dept./Function 部門/職能	Person 人	Date 日期 [m/d/yyyy]	Checklist 清單
Sales	Michael Cheng William Tsai		<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: For information only
Application Engineering	Murat Serbay		<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: For information only
Web Publication	Leitha Thrall	n/a	<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: Not for web release
Manufacturing	Harry Hao Andy Hung		<input type="checkbox"/> Done 完畢 <input type="checkbox"/> Comment:
Process Engineering	Mike Huang	n/a	<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: See approver list
QA	Oscar Chang		<input type="checkbox"/> Done 完畢 <input type="checkbox"/> Comment:
Director of Quality	Thomas Käßemödel	n/a	<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: See approver list
Swept source PLM [1060 nm]	Mike Huang	n/a	<input type="checkbox"/> Done 完畢 <input checked="" type="checkbox"/> Comment: See approver list
Transceiver PLM [1550 nm]	[Name]	n/a	<input type="checkbox"/> Done 完畢 <input type="checkbox"/> Comment:
TBD	[Name]		<input type="checkbox"/> Done 完畢 <input type="checkbox"/> Comment: