OZ Optics LIMITED

OZ Optics
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BENCHTOP CORRELATED PHOTON PAIR SOURCES: SAPPHIRE

PRELIMINARY

Features:

- Customized wavelength selection
- Separated signal / Idler output
- Rugged aluminum housing

Applications:

- Fundamental quantum information science
- Quantum key distribution
- Quantum computing
- Quantum metrology

Product Description:

The OZ Optics correlated photon pair source produces time/energy entangled photon pairs via the process of spontaneous parametric down conversion (SPDC). After creating photon pairs, the pump light is removed from the output and the remaining pairs are split into single photons and sent to separate signal / idler outputs. Similar to their polarization entangled photon pair counterparts, OZ correlated pair sources come equipped with a stabilized pump laser and temperature stabilized phase matching along with pump power control via an internal variable optical attenuator.

Operating And Storage Conditions:

Parameter	Min.	Max.
Operating temperature	15°C	25°C
Operating relative humidity (% RH)	5	60
Storage temperature	-40°C	40°C
Storage relative humidity (% RH)	0	90

Benchtop Correlated Photon Pair Sources: Sapphire

Performance Specifications[1]:

Part number: CPG-1000-3A3A-$W_s W_i$-a_s/b_s,a_i/b_i					
Parameter		**Max.**	**Typical**	**Min.**	**Unit**
Signal/Idler degeneracy wavelength[2]		810, 1550			nm
Signal/Idler degeneracy wavelength accuracy		–	±2	–	nm
Biphoton bandwidth (3 dB)		Phase matching dependent			nm
Pair-generation rate		$4x10^6$–$1x10^5$			Pairs/ second
Coincidence-to-accidental ratio[3]		–	1000	100	
Physical dimensions	Width x depth x height (cm)	35 x 16.5 x 12.5			
	Weight (kg)	~6			
Power requirements		5–12 V, 6–8 A			

Note:
1 Under continuous-wave (CW) operation.
2 Customized degeneracy wavelengths can be specified on request.
3 Coincidence counts are measured over 0.65 ns window, with free-run SPAD detectors having dark counts of ~5 kHz or better.

Description: Benchtop Correlated Photon Pair Sources: Sapphire

Part Number: **CPG-1000-*XY*-*W*-*a/b*-*F***

F = Fiber Type:
S = Single mode fiber
P = Polarization maintaining fiber

X,Y = Output Connector Codes:
3S = Super NTT-FC/PC
3U = Ultra NTT-FC/PC
3A = Angled NTT- FC/PC
SC = SC
SCA = Angled SC
8 = AT&T-ST
MU = MU type connector
LC = LC type connector

a/b = Core/Cladding sizes:
5/125 for 810 nm Singlemode or PM
8/125 for 1550 nm PM
9/125 for 1550 nm Singlemode

W = Wavelength: 1550 = 1550 nm, 810 = 810 nm