

TPS_1550_TYPE_S

Entangled photon source

High brightness polarization photon source
[Quantum Communication]



The TPS_1550_TYPE_S is a new generation of entangled photon source working at room temperature generating Polarization and Time Energy entangled photons in the C and L band. Based on a 1U rack design, the TPS_1550_TYPE_S generates entangled photons with high visibility optimized for Quantum Communication and Quantum Internet Network applications.

Pairs of photons are produced by Spontaneous Parametric Down Conversion (SPDC) in Periodically Poled Lithium Niobate PPLN waveguide (Quasi Phase Matching-QPM) using a ultra stable pump laser.

Very well-designed and remotely controllable, the compactness and the modern interfaces of the TPS_1550_TYPE_S makes it your essential analytical tool for the most demanding optical quantum applications !

Features

- Photon pair generation at 1550 nm
- Broad bandwidth
- Time Energy and Polarization Entanglement
- High pair generation rate
- High visibility
- Adjustable pumping power
- Software for remote control

Applications

- Quantum Internet Network
- Quantum Key Distribution
- Compatible with any QKD protocols
- Quantum Communications

Pairing products

- NIR Photon Counter : SPD_OEM_NIR
- Time Tagging electronics : CHRONOXEA

TECHNICAL SPECIFICATIONS

SPECIFICATIONS ¹	Minimum	Typical
Central wavelength @ degeneracy	-	1560.6 nm
Output bandwidth ²	10 nm	40 nm
Pair-generation rate	50x10 ⁶ pairs/s/nm	200x10 ⁶ pairs/s/nm
CAR ³	1000	2000
Polarization visibility ⁴	97%	99%

¹ All specifications are given after photon-pairs splitting under CW operation.

² Output bandwidth for each channel.

³ At 300 kpairs/s generation rate. Effective CAR after processing correction of the photon counters performances.

⁴ Measured with DWDM filter at receiver.

INPUT/OUTPUT- MECHANICAL - ENVIRONMENTAL

Optical outputs	FC/APC for PMF
Computer connection	USB 2.0 or UART
Power consumption	< 40 W
Mechanical housing	19" 1U rack
Weight	< 5 kg
Operating temperature	+ 10°C to + 30°C

QUANTUM PLATFORM

Build your custom quantum communication system now !
AUREA Technology provides a complete quantum platform :

- TPS_1550 : The Entangled photon Source
- CHRONOXEA : The picosecond Time Tagger
- SPD_OEM_NIR : The best- in-class NIR Photon Counter

For an easy integration, all these instruments are provided with their GUI and DLL for remote control !

CUSTOMER SUPPORT

Integration of high-end technologies can be challenging but AUREA Technology is here to help you reach your objectives !

Work with AUREA Technology and benefit from the help of our dedicated technical support team. Our team of experts in entangled photon sources and quantum communication can be reached any time !

Contact our technical support team and receive an answer within a day at sales@aureatechnology.com

ORDERING INFORMATION

TPS_1550_TYPE_S

Contact us at sales@aureatechnology.com
for more information

ACCESSORIES

- +5V, 60 W, AC/DC power adapter, with AC power cord

WARRANTY

Any warranty is void if the Product has been damaged, disassembled, modified, misused, used in applications which exceed the Product specifications or rating, neglected, improperly installed or otherwise abused or is used in hazardous activities

DISCLAIMER

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